Revised Draft

November 25, 2024 | # Hazard Mitigation Plan

TOWN OF YUCCA VALLEY, CALIFORNIA • INC. NOV. 27, 1991 •

Credits

Q&A | ELEMENT A: PLANNING PROCESS | A1-a.
Q: Does the plan document how the plan was prepared, including the schedule or time frame and activities that made up the plan's development, as well as who was involved? (Requirement 44 CFR § 201.6(c)(1)) **A:** See **Hazard Mitigation Planning Team** below.

Hazard Mitigation Planning Team:

Name	*Department*	*Position*
Town of Yucca Valley		
Debra Breidenbach-Sterling	Human Resources and Risk Management Division	Manager
Lesley Copeland	Town Clerk's Office	Town Clerk and Public Information Officer
Sue Earnest	Community Services Department	Manager
Jordan Gumbish	Finance Division	Manager
Alex Qishta	Public Works/Engineering Department	Director
Jessica Rice, Chair	Emergency Preparedness Department	Senior Management Analyst
Shane Stueckle	Community Development and Public Works	Deputy Town Manager
John Scalise	San Bernardino County Sheriff	Administrative Sergeant
Floyd Stone	San Bernardino County Sheriff	Operations Sergeant
Scott Tuttle	San Bernardino County Fire Department	Interim Deputy Chief - Operations
Donnie Viloria	San Bernardino County Fire Department	Battalion Chief
Curtis Yakimow	Town Manager's Office	Town Manager
Emergency Planning Consultants		
Carolyn J. Harshman	Emergency Planning Consultants	President

Acknowledgements

Yucca Valley Town Council

- ✓ Rick Denison, Mayor
- ✓ Robert Lombardo, Mayor Pro Tem
- ✓ Jeff Drozd, Council Member
- ✓ Merl R. Abel, Council Member
- ✓ Jim Schooler, Council Member

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Consulting Services

Emergency Planning Consultants

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- ✓ Lead Research & Mapping Analyst: Jill N. Caputi, CEM

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Mapping

The maps in this plan were provided by the Town of Yucca Valley, County of San Bernardino, Federal Emergency Management Agency (FEMA), or were acquired from public Internet sources. Care was taken in the creation of the maps contained in this plan, however they are provided "as is". The Town of Yucca Valley cannot accept any responsibility for any errors, omissions or positional accuracy, and therefore, there are no warranties that accompany these products (the maps). Although information from land surveys may have been used in the creation of these products, in no way does this product represent or constitute a land survey. Users are cautioned to field-verify information on this product before making any decisions.

Mandated Content

In an effort to assist the readers and reviewers of this document, the jurisdiction has inserted "markers" emphasizing mandated content as identified in the Disaster Mitigation Act of 2000 (Public Law – 390). See sample marker below:

EXAMPLE

Q&A | ELEMENT A: PLANNING PROCESS | A1-a.
Q Does the plan document how the plan was prepared, including the schedule or time frame and activities that made up the plan's development, as well as who was involved? (Requirement 44 CFR § 201.6(c)(1)) **A:**

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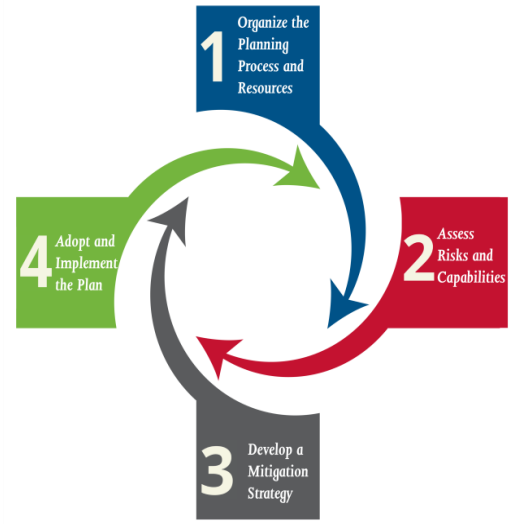
Executive Summary

Hazard Mitigation Plans (HMP) are strategic frameworks designed to reduce the loss of life and property by lessening the impact of disasters. The primary goal of the HMP is to identify potential hazards, assess their risks, and implement long-term strategies to mitigate their effects on a community. This comprehensive plan involves a systematic process of identifying hazards, evaluating vulnerabilities, and developing actions to minimize the damage and disruption caused by natural hazard events.

Before we go into the details of the planning process, it's important to define hazard mitigation as actions taken to minimize or eliminate threats associated with hazards.

In 2019, the National Institute of Building Sciences issued an update to its landmark report "Natural Hazard Mitigation Saves". The study analyzed the benefit cost ratio of a range of mitigation activities including mitigation planning and building retrofits. The findings revealed a dramatic return on investment. For mitigation activities, every dollar spent yielded a six dollar return on avoided losses in the future. For building retrofits, every dollar spent yielded a four dollar return on avoided losses in the future.



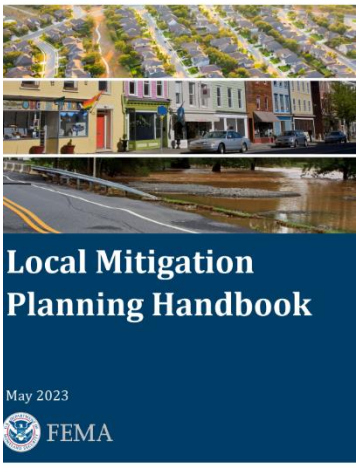
FEMA's mitigation website recommends 4 steps in the overall planning process: Step #1 is to organize the planning process and resources which includes creation of a Planning Team to assist with research and writing as well as the development of a Community Outreach Strategy. Step #2 is to assess risks and capabilities including a Risk and Vulnerability Assessment as well as a review of the city's capability to respond and recover from a major disaster. Step #3 is to develop a Mitigation Strategy which includes a comprehensive list of mitigation actions and projects. Step #4 is to Adopt and Implement the Plan which includes a formal review by Cal OES and FEMA and adoption by the Town Council.

The tool used to judge the adequacy of a plan is referred to as the Plan Review Tool (PRT). Within the PRT, the plan requirements are divided into elements including planning process, hazard identification and Risk Assessment, mitigation strategy, plan maintenance, plan update, plan adoption, high hazard potential dams.

The Town of Yucca Valley's plan is displayed in an executive summary and seven chapters: planning process, community profile, risk assessment, vulnerability and impact assessment, mitigation strategy, plan maintenance, and plan review-adoption-approval. The chapters on risk, vulnerability and impact focus on hazard events posing the greatest threat to the community. The chapter on mitigation strategy identifies current and future policies and projects to minimize or

eliminate threats associated with the prioritized hazards including earthquake, flood, wildfire, diseases, extreme weather, and utility related hazards (power, drought).

Yucca Valley's geographical setting, climate, demographic trends, economic conditions, transportation infrastructure, community assets, and efforts to address climate change and environmental justice were taken into consideration during the planning and writing of the hazard mitigation plan. Yucca Valley is considered to be the economic hub of the Morongo Basin. With major financial institutions and a broad base of retail operations, the community serves both the commercial and retail needs of the Morongo Basin. Also, the town serves as a residential suburb with low-density housing. The largest employers in the town include Morongo Unified School District, Walmart, and Home Depot. Another distinguishing feature is that Yucca Vally is just 20 to the west of the Marine Corps Air Ground Combat Center which employees 20,000 civilian and members of the military.



The development of the plan was guided by FEMA's 2023 Local Mitigation Planning Policy Guide and 2023 Local Mitigation Planning Handbook. The documents contained updated official policy on and interpretation of applicable statues and mitigation planning regulations in 44 Code of Federal Regulations (CFR) Part 201, more commonly referred to as the Disaster Mitigation Act of 2000. FEMA is the sole entity allowed to approve a mitigation plan.

In developing the HMP, a Planning Team was formed to undertake a detailed analysis of the community's unique risks and challenges. The Team included department representatives from Emergency Preparedness, Public Works/Engineering, Community Services, Finance, Human Resources and Risk Management, Town Manager's Office, Town Clerk's Office, Community Development, and San Bernardino Sheriff, and San Bernardino Fire Department. The Team met a total of four times with the consultant and contributing to the Initial Draft Plan. In addition to the planning document itself, the Team developed and was actively involved in an aggressive community outreach strategy. As pointed out in the plan, people are the most important asset in need of protection.

The planning process involved collaboration among adjoining local governments and special districts, businesses organization, residents, and other stakeholders to gather data, assess vulnerabilities, and prioritize mitigation actions. The process ensured that the community is better prepared to respond to and recover from disasters, while enhancing overall resilience. Stakeholder Morongo Unified School District contributed to the plan's development. Our thanks for their contributions.

The risk assessment and vulnerability/impacts assessment involved a comprehensive evaluation of the hazard events that could result in significant damage and loss of life. The assessment process involves four key steps: identifying hazards, profiling hazard events, inventory of assets, and estimation of potential human and economic losses.

Overall, the assessment underscores the importance of understanding and preparing for various hazards to mitigate their impact on the community's people, structures, economy, and valued resources. This comprehensive approach ensures that Yucca Valley will be better equipped to handle potential emergencies and protect its residents and businesses from future hazard events.

Additionally, the assessment discusses social vulnerability populations and underserved communities in Yucca Valley. Studies on this topic commonly identify six categories as indicators of social vulnerability: socioeconomic status, age, gender, race and ethnicity, English language proficiency and medical issues and disability. These are the factors chosen by the Planning Team for consideration in the plan.

Key demographic vulnerabilities include the elderly population, which is concentrated in the mid-west portion of Yucca Valley in the North Park neighborhood. Only 1% of the population speaks a language other than English and does not speak English well. Furthermore, only 2.6% of the population speak Spanish or Indo-European but English not well. Together, only 3% of the population may have communication challenges during a hazard event.

Throughout the entire planning process, the Planning Team kept the public and stakeholders informed of the Team's progress and opportunities to provide input. These outreach activities began with the Town Council in 2022, followed in September 2023 with press releases, social media postings, public opinion survey, hazard mitigation overview video, briefings at various public forums including the Emergency Preparedness Fair on May 11, 2024.

The plan will go through a formal review by Cal OES and FEMA capped by FEMA's issuance of Approvable Pending Adoption. Once the plan is adopted by the Town Council, FEMA will issue a Letter of Approval which will grant the town's eligibility for mitigation-related grants for a period of five years. The Planning Team will immediately begin the process of plan implementation which will continue with the tradition of sharing and incorporating input from the public and stakeholders.

Chapter 1: Planning Process and Resources

Introduction

This Hazard Mitigation Plan (Mitigation Plan) was prepared in response to the Disaster Mitigation Act of 2000 (DMA 2000). DMA 2000 (also known as Public Law 106-390) since 2005 has required state and local governments (including special districts and joint powers authorities) to prepare mitigation plans to document their mitigation planning process, and identify hazards, potential losses, mitigation needs, goals, and strategies. This type of planning supplements the town's comprehensive land use planning and emergency management planning programs. The town's most recent Hazard Mitigation Plan was approved by FEMA in 2018. The plan is required to be updated every five years. Once adopted by the Town Council and approved by FEMA, the Plan will ensure eligibility for Hazard Mitigation Grant Program (HMGP) and other mitigation-related funding.

DMA 2000 was designed to establish a national program for pre-disaster mitigation, streamline disaster relief at the federal and state levels, and control federal disaster assistance costs. Congress believed these requirements would produce the following benefits:

- ✓ Reduce loss of life and property, human suffering, economic disruption, and disaster costs.
- ✓ Prioritize hazard mitigation at the local level with increased emphasis on planning and public involvement, assessing risks, implementing loss reduction measures, and ensuring critical facilities/services survive a disaster.
- ✓ Promote education and economic incentives to form community-based partnerships and leverage non-federal resources to commit to and implement long-term hazard mitigation activities.

The following FEMA definitions are used throughout this plan (Source: FEMA, 2023, *Local Mitigation Planning Handbook*):

Hazard Mitigation is any sustained action taken to reduce or eliminate long-term risk to life and property from hazards.

Mitigation Planning is a community-driven process to help state, local, tribal and territorial governments plan for hazard risk. By planning for risk and setting a strategy for action, governments can reduce the negative impacts of future disasters.

Community Resilience is a community's ability to prepare for anticipated hazards, adapt to changing conditions and withstand and recover rapidly from disruptions. Activities such as disaster preparedness (which includes prevention, protection, mitigation, response and recovery) and reducing community stressors (the underlying social, economic and environmental conditions that can weaken a community) are key steps to resilience.

Community Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function. The integrated network of assets, services and capabilities that make up community lifelines are used day-to-day to support recurring needs. Lifelines enable the continuous operation of critical government and business functions and are

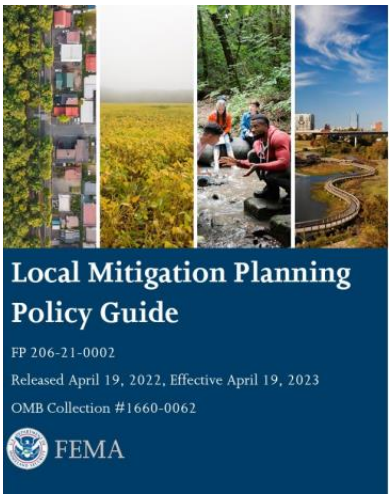
essential to human health and safety or economic security, as described in the National Response Framework, 4th Edition (October 28, 2019).

Q&A | ELEMENT E: PLAN UPDATE | E2-c.
Q: Does the plan describe how jurisdictions integrated the mitigation plan, when appropriate, into other planning mechanisms? (Requirement 44 CFR § 201.6(d)(3)) **A:** See **Authority** below.

Authority

Federal Authority

The town is not required to prepare a Mitigation Plan, but state and federal regulations encourage it with financial incentives. The federal Robert T. Stafford Disaster Relief and Emergency Act, amended by the Disaster Management Act of 2000, creates a federal framework for local hazard mitigation planning. It states that jurisdictions that wish to be eligible for federal hazard mitigation grant funding must prepare a hazard mitigation plan that meets a certain set of guidelines and submit this plan to FEMA for review and approval. The following regulations and guidelines apply to this plan:



Federal Laws

- Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), as amended.

Federal Regulations

- 44 CFR Part 201 Mitigation Planning.
- 44 CFR, Part 60, Subpart A, including § 60.3 Floodplain management criteria for flood-prone areas.
- 44 CFR Part 77 Flood Mitigation Grants.
- 44 CFR Part 206 Subpart N. Hazard Mitigation Grant Program.

Federal Guidance

- FEMA Local Mitigation Planning Policy Guide (FP 206-21-0002), effective April 19, 2023.
- FEMA Local Mitigation Planning Handbook, May 2023

State Authority

California Government Code Sections 8685.9 and 65302.6

California Government Code Section 8685.9 (also known as Assembly Bill 2140) limits the State of California's share of disaster relief funds paid out to local governments to 75 percent of the funds not paid for by federal disaster relief efforts unless the jurisdiction has adopted a valid hazard mitigation plan consistent with the Disaster Management Act of 2000 and has incorporated the hazard mitigation plan into the jurisdiction's general plan. In these cases, the State may cover more than 75 percent of the remaining disaster relief costs.

All local governments in California must prepare a General Plan, including a Safety Element that addresses various hazard conditions and other public safety issues. The Element may be a stand-alone chapter or incorporated into another section, as the community wishes. California Government Code Section 65302.6 indicates that a community may adopt a mitigation plan into its Safety Element if the mitigation plan meets applicable state requirements. This allows communities to use the mitigation plan to satisfy state requirements for Safety Elements. As the General Plan is an overarching long-term plan for community growth and development,

incorporating the mitigation plan into it creates a stronger mechanism for implementing the mitigation plan.

California Government Code Section 65302 (G)(4)
California Government Code Section 65302 (g)(4), also known as Senate Bill (SB) 379, requires that the General Plan Safety Element address the hazards created or exacerbated by climate change. The Element must identify how climate change is expected to affect hazard conditions in the community and include measures to adapt and be more resilient to these anticipated changes. Because the mitigation plan can be incorporated into the Safety Element, including these items in the mitigation plan can satisfy the state requirement. SB 379 requires that climate change be addressed in the Safety Element when the mitigation plan is updated after January 1, 2017, for communities that already have a mitigation plan, or by January 1, 2022, for communities without a FEMA-approved mitigation plan.

Passed in 2006, Assembly Bill No. 2140 (AB 2140) allows California counties and cities to be considered for additional state cost-share on eligible Public Assistance projects by adopting their current, FEMA-approved local hazard mitigation plans into the Safety Element of their General Plan. This adoption, along with other requirements, makes the county or city eligible to be considered for part or all of its local-share costs on eligible Public Assistance projects to be provided by the state through the California Disaster Assistance Act (CDAA).

AB 2140 compliance is not a requirement; however, if the city is compliant, it is eligible to be considered for up to an additional 6.25% local share to be funded by the state, essentially covering the entire local-share cost for eligible Public Assistance projects in the future. It's important to note that AB 2140 compliance expires when the 2018 HMP expired and in order to continue compliance, the Town of Yucca Valley must re-adopt the 2024 HMP itself and adopt the HMP into the General Plan Safety Element when the HMP is updated. Each time, the jurisdiction must provide the necessary documentation when seeking AB 2140 compliance – e.g. resolution(s) and direction to the appropriate section(s) of the General Plan Safety Element.

In order to issue a letter of AB 2140 compliance, Cal OES will review and verify that Yucca Valley has performed the following:

- ✓ Has a current, FEMA-approved or approvable pending adoption (APA) HMP.
- ✓ Formally adopted the HMP via resolution.
- ✓ Formally adopted the most current, approved HMP into the General Plan Safety Element via resolution.
- ✓ Included language within the General Plan Safety Element that references the HMP.
- ✓ Included a web link, appendix, or language within the Safety Element that directs the public to the most current, approved HMP in its entirety.
- ✓ E-mailed the link to the updated General Plan Safety Element web page along with the signed, adoption resolution(s) to the Cal OES AB 2140 inbox ab2140@caloes.ca.gov for review and approval.

In closing, the Town's 2024 HMP is consistent with current standards and regulations, as outlined by the California Office of Emergency Services (Cal OES) and FEMA. It uses the best available science, and its mitigation actions/strategies reflect best practices and community values. It meets the requirements of current state and federal guidelines and makes the town eligible for all appropriate benefits under state and federal law and practices. Note that while FEMA is responsible for reviewing and approving this mitigation plan, and Cal OES is responsible for conducting a preliminary review, it does not grant FEMA or Cal OES any increased role in the governance of the town or authorize either agency to take any specific action in the community.

Q&A | ELEMENT A: PLANNING PROCESS | A1-a.
Q: Does the plan document how the plan was prepared, including the schedule or time frame and activities that made up the plan's development, as well as who was involved? (Requirement 44 CFR § 201.6(c)(1)) **A:** See **Planning Approach** below.

Planning Approach

Graphic 1.1: Planning Approach
Source: FEMA's Hazard Mitigation Planning Website

The four-step planning approach followed by the Yucca Valley Planning Team is outlined in the FEMA Local Mitigation Planning Handbook (Handbook).

Step 1: Organize the Planning Process and Resources
At the start, a state, local, tribal nation, or territorial government (entity) should focus on assembling the resources needed for a successful mitigation planning process. This includes securing technical expertise, defining the planning area, and identifying key individuals, agencies, neighboring jurisdictions, businesses, and/or other stakeholders to participate in the process. The planning process for local and tribal governments must include opportunities for the public to comment on the plan during the drafting process.

Step 2: Assess Risks and Capabilities
Next, the entity needs to identify the characteristics and potential consequences of hazards. It is important to understand what geographic areas the hazards might impact and how people, property, or other assets might be vulnerable. The four basic components of a risk assessment are:

- Hazard identification
- Profiling of hazard events
- Inventory of assets
- Estimation of potential human and economic losses based on the exposure and vulnerability of people, buildings, and infrastructure

Step 3: Develop a Mitigation Strategy
The entity then sets priorities and develops long-term strategies for avoiding or minimizing the undesired effects of disasters. The strategy is based on an assessment of the unique set of regulatory, administrative, and financial capabilities to undertake mitigation. The mitigation strategy also includes a description of how the mitigation actions will be implemented and administered.

Step 4: Adopt and Implement the Plan
Once FEMA receives proof of adoption from the entity's governing body and FEMA approves the plan, the entity can bring the mitigation plan to life in a variety of ways, ranging from implementing specific mitigation actions to changing aspects of day-to-day organizational operations. To ensure success, the plan must remain a relevant, living document through routine maintenance. The entity needs to conduct periodic evaluations to assess changing risks and priorities and make revisions as needed.

Q&A | ELEMENT C: Mitigation Strategy | C2-a.
Q: Does the plan contain a narrative description or a table/list of their participation activities? (Requirement 44 CFR § 201.6(c)(3)(ii)) **A:** See **NFIP Participation** below.

National Flood Insurance Program

Established in 1968, the NFIP provides federally backed flood insurance to homeowners, renters, and businesses in communities that adopt and enforce floodplain management ordinances to reduce future flood damage. The Town of Yucca Valley adopted a floodplain management ordinance and has Flood Insurance Rate Maps (FIRM). The Deputy Town Manager is designated as the City's floodplain administrator. NFIP is maintained and the floodplain ordinance is enforced through the development and permitting processes. For information relating to Substantial Improvement/Substantial Damage, please see **Attachments: Floodplain Ordinance**.

NFIP Participation

According to the General Plan Safety Element (2022), the Town of Yucca Valley participates in NFIP and the FEMA FIRM maps for the Town are dated September 2, 2016. These studies and maps represent flood risk at the point in time when FEMA completed the studies and does not incorporate planning for floodplain changes in the future due to new development. Although FEMA is considering changing that policy, it is optional for local communities. According to FEMA, the Town of Yucca Valley is designated a Non-Special Flood Hazard Area (NSFHA). A Non-Special Flood Hazard Area (NSFHA) is an area that is in a moderate- to low-risk flood zone (Zones B, C, X Pre- and Post- FIRM). The NSFHA is not in any immediate danger from flooding caused by overflowing rivers or hard rains. However, it's important to note that structures within NSFHA are still at risk. In fact, over 20% of all flood insurance claims occur in these moderate- to -low risk areas. The Town of Yucca Valley also contains A, AE, and X flood zones.

Q&A | ELEMENT B: RISK ASSESSMENT | B2-c.
Q: Does the Plan address NFIP-insured structures within each jurisdiction that have been repetitively damaged by floods? (Requirement 44 CFR § 201.6(c)(2)(ii)) **A:** See **Repetitive Loss Properties** below.

Repetitive Loss Properties

Repetitive Loss Properties (RLPs) are most susceptible to flood damages; therefore, they have been the focus of flood hazard mitigation programs. Unlike a countywide program, a Floodplain Management Plan (FMP) for repetitive loss properties involves highly diversified property profiles, drainage issues, and property owner's interest. It also requires public involvement processes unique to each RLP area. The objective of an FMP is to provide specific potential mitigation measures and activities to best address the problems and needs of communities with repetitive loss properties. A repetitive loss property is one for which two or more claims of $1,000 or more have been paid by the National Flood Insurance Program (NFIP) within any given ten-year period. According to FEMA resources, none of the properties within the Town of Yucca Valley are designated as Repetitive Loss Property (RLPs).

Planning Process

Q&A | ELEMENT A: PLANNING PROCESS | A1-a.
Q: Does the plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement 44 CFR § 201.6(c)(1)) **A:** See **Planning Process, Tables 1.1-1.4** below.
Q&A | ELEMENT A: PLANNING PROCESS | A1-b.
Q: Does the plan list the jurisdiction(s) participating in the plan that seek approval, and describe how they participated in the planning process? (Requirement 44 CFR § 201.6(c)(1)) **A:** See **Planning Area** below.

Planning Area

Initial considerations included agreeing that the boundary of the Town of Yucca Valley would constitute the planning area and the Town government itself served as what FEMA refers to as the "planning participant." Therefore, this is a single-jurisdiction plan. Another important consideration is that the 2024 Plan will be an update to the Town's 2018 FEMA-approved Hazard Mitigation Plan. An update to any strategic plan demands a look back to consider the possibility of improvements. In that regard, it was important for the Planning Team to review the previous plan with particular attention to the 2018 Plan Review Tool prepared by FEMA. The strengths and weaknesses identified by FEMA in the 2018 plan were discussed by the Planning Team at Meeting #2.

Organizing Resources

FEMA suggests that resources are the town's partners, data resources, plans and studies, and technical assistance. The planning process is powered by the town's staff, members of the public and stakeholders across the private, public and non-governmental sectors.

Data resources, plans, and studies are discussed later in this chapter under **Using Existing Data**. Also, FEMA's HAZUS loss projection software was utilized in the earthquake risk assessment. See the Risk Assessment – Earthquake Profile for HAZUS information and mapping.

The town's capabilities to support mitigation activities are discussed in this Chapter under **Capability Assessment**.

Q&A | ELEMENT A: PLANNING PROCESS | A2-a.

Q: Does the plan identify all stakeholders involved or given an opportunity to be involved in the planning process, and how each stakeholder was presented with this opportunity? (Requirement 44 CFR § 201.6(b)(2))

A: See Planning Team below.

Planning Team

The Town's Hazard Mitigation Planning Team was formed to serve as the core group of stakeholders responsible for:

- Developing and reviewing drafts of the plan
- Developing a community outreach strategy
- Informing the risk assessment
- Developing the mitigation goals and strategy
- Submitting the plan for local adoption

Yucca Valley chose to build a Planning Team from department and county staff with expertise about the community's assets as defined by FEMA to include people, structures, economy, natural/historic/cultural resources, and activities that bring value to the community. The table below aligns the departments on the Planning Team with the asset categories:

Table 1.1: Planning Team Technical Expertise

	Assets				
	People	Structures (facilities, lifelines, and critical infrastructure)	Economy	Natural, historic, and cultural resources	Activities that bring value to the community
Town of Yucca Valley					
Town Manager's Office	X	X	X	X	X
Town Clerk's Office			X		
Community Services Department	X	X		X	X
Community Development	X	X	X		
Finance Division	X	X			
Emergency Preparedness Department		X			
Public Works / Engineering Department		X			
San Bernardino County					
Sheriff	X				X
Fire Department	X	X			

The Planning Team worked with Emergency Planning Consultants to create the updated plan. Planning Team members were sent email invitations on June 21, 2023, announcing the purpose of the Team and overall schedule. The department and county representatives on the Planning Team served as active stakeholders and contributors to the plan update. Throughout the plan development process, the Team confirmed the planning approach, drafted and reviewed content, made revisions, and engaged members of the public and other stakeholders. As indicated below, the meetings were designed to maximize contributions from the Team. Insights, opinions, and facts were gathered ranging from hazard history and rankings, capabilities, ongoing and future mitigation activities, and opportunities to engage the public through existing venues and meetings.

Planning Team members participated in a total of 4 Planning Team meetings.

- Planning Team Meeting #1 was facilitated by the consultant who provided an overview of hazard mitigation planning and an initial hazard assessment. The meeting included a PowerPoint with hazard-related information from the General Plan Safety Element and earthquake simulation videos. Also, the Planning Team identified the hazards to be included in the HMP and completed the Calculated Priority Risk Index for those hazards. The consultant introduced the requirements for community outreach and began discussions on existing venues including Town Council, Commission meetings, Senior Center events, and scheduled street fairs.

- Planning Team Meeting #2 was facilitated by the consultant who introduced the HAZUS maps and reports. Also, a PowerPoint was shared with the Planning Team on the categories of mitigation activities. A scoring system was shared with the Team for ranking "priority, benefit, and cost". The consultant led the Team through the 2018 Mitigation Action Items to capture updates and status. Consultant also shared draft of the "Capability Assessment" which was gathered from the town's website and budget. Additionally, the draft "Hazard Proximity to Critical Facilities" table was shared showing the hazard ratings for each facility. The consultant requested assistance on gathering information for each facility including number of buildings, staff assigned, as well as property and content values. The Team also discussed the desire for a Survey Monkey to gather information on knowledge of hazards and levels of preparedness. The final task was to review the FEMA's Plan Review Tool - "Strengths and Opportunities for Improvement" for the 2018 HMP. Consideration was given to each comment and agreements made on the best steps forward.

- Planning Team Meeting #3 was facilitated by the consultant who shared the updated Mitigation Actions Matrix in advance of the meeting. The Planning Team continued in its update to the 2018 action items. Also, the consultant shared policies and actions out of the Town's Capital Improvement Program and General Plan Safety Element that relate to hazard mitigation. The Planning Team selected the policies and actions they wanted included in the 2024 Mitigation Actions Matrix.

- Planning Team Meeting #4 was facilitated by the consultant who shared a copy of the Initial Draft Plan in advance of the meeting. In that transmission, the Team was encouraged to read the document – particularly the Mitigation Action Matrix items assigned to their own department. During the meeting, the consultant encouraged comments, corrections, and overall thoughts on the Initial Draft Plan. The Team was informed that the information gathered during the meeting would be included in the First Draft Plan which would be made available to the public and stakeholders through the community outreach process.

Table 1.2 below documents the project tasks and level of participation of each of the Planning Team members.

Table 1.2: Planning Team Level of Participation

	Research and Writing of Plan	Planning Team Meeting 1: July 27, 2023	Planning Team Meeting 2: August 2, 2023	Planning Team Meeting 3: August 9, 2023	Planning Team Meeting 4: August 30, 2023	Planning Team Comment on Initial Draft Plan	Distribute First Draft Plan and Survey to Public and Stakeholders	Incorporated input into Second Draft Plan	Submit Second Draft Plan to Cal OES	Post and Email Second Outreach	Submit Third Draft Plan to Cal OES	Present Final Draft Plan to Town Council at Public Meeting for Plan Adoption	Submit Proof of Adoption to FEMA for Final Approval	Incorporate FEMA Approval into Final Plan
Town of Yucca Valley														
Debra Breidenbach-Sterling	X	X	X		X	X								
Lesley Copeland	X	X	X	X	X	X								
Sue Earnest	X	X	X		X	X								
Jordan Gumbish	X	X	X	X	X	X								
Alex Qishta	X	X	X	X	X	X								
Jessica Rice, Chair	X	X	X	X	X	X	X	X		X				
Shane Stueckle	X	X	X	X	X	X								
John Scalise	X	X	X	X	X	X								
Floyd Stone	X	X	X	X	X	X								
Scott Tuttle	X	X		X	X	X								
Donnie Viloria	X		X											
Curtis Yakimow	X	X	X		X	X								
Emergency Planning Consultants														
Carolyn Harshman	X	X	X	X	X	X		X	X		X			

Q&A | ELEMENT A: PLANNING PROCESS | A1-a.

Q: Does the plan document how the plan was prepared, including the schedule or time frame and activities that made up the plan's development, as well as who was involved? (Requirement 44 CFR § 201.6(c)(1))

A: See **Table 1.3** below.

Table 1.3: Project Timeline

Tasks	June 2023	July	August	September	October-December	January 2024	February-	October	November	December	January-April 2025	May	June
Research													
Research for Risk Assessment	X												
Prepare HAZUS		X											
Plan Writing													
Initial Draft, First Draft, Second Draft, Final Draft, Final	X	X	X	X	X	X	X	X					
Planning Team Meetings													
Meeting #1 HMP Overview and Initial Hazard Briefing		X											
Meeting #2 HAZUS and Update Mitigation Action Items			X										
Meeting #3 Develop Mitigation Action Items			X										
Meeting #4 Input to Initial Draft Plan			X										
Community Outreach													
First Round - Share and Seek Input from Public and Stakeholders on the First Draft Plan and Survey				X									
Second Round – Share and Seek Input on Updated Survey, Mitigation Overview Video, and Second Draft Plan										X			
Approval and Adoption of Plan													
Submit Second Draft Plan to Cal OES. Complete Mandated Revisions					X								
Submit Third Draft Plan to Cal OES.											X		
Receive FEMA's Approval Pending Adoption												X	
Post and Participate in Town Council Meeting to Adopt the Final Draft Plan, Submit Proof of Adoption to FEMA													X
Receive FEMA Final Approval													X
Incorporate FEMA Final Approval into Final Plan													X

Plan Writing

An Initial Draft Plan was prepared by the consultant with considerable input from the Planning Team. The Initial Draft Plan was distributed in advance of the fourth meeting of the Planning Team. The day of the meeting, the consultant facilitated a discussion of the Initial Draft Plan while soliciting input, corrections, and other suggestions from the Planning Team.

With amendments gathered from Planning Team Meeting #4, the First Draft Plan was ready for notice and distribution to the public and stakeholders. Input was gathered during the community outreach phase which took place during the planning process. The Planning Team felt it was critical to ensure as many perspectives as possible. Also, sharing and gathering input served as an excellent means to enlist local champions interested in mitigation opportunities regarding their own homes and businesses.

After documenting the community outreach efforts and information gathered on the First Draft Plan, the Second Draft Plan was ready for submission to Cal OES and FEMA along with a request for a formal review and a determination of "approvable pending adoption". Throughout the formal review process, the Planning Team and consultant completed amendments to the Plan as mandated by Cal OES and FEMA. Based on guidance received during the formal review, a second community outreach was initiated which involved posting of a hazard mitigation overview video, an updated survey, and an updated Second Draft Plan. The results of those activities were added to the Third Draft Plan and re-submitted to Cal OES for review.

Once FEMA's Approvable Pending Adoption notice is received, the Final Draft Plan will be posted in advance of the Town Council public meeting. The purpose of the meeting will be to provide a public forum where additional comments can be gathered from the Town Council and attendees. The public meeting will include the presentation of a staff report and PowerPoint outlining the planning process and benefits of hazard mitigation. Following discussion and adoption by the Council, proof of adoption will be forwarded to FEMA along with a request for a Letter of Approval. The FEMA Letter of Approval will be included in the Final Plan. The planning process described above is portrayed below in **Table 1.4**:

Q&A | ELEMENT A: PLANNING PROCESS | A2-a.
Q: Does the plan identify all stakeholders involved or given an opportunity to be involved in the planning process, and how each stakeholder was presented with this opportunity? (Requirement 44 CFR § 201.6(b)(2)) **A:** See **Table 1.4** below.

Table 1.4: Summary of Plan Writing, Adoption, Approval, and Implementation

PLAN WRITING, ADOPTION, APPROVAL, AND IMPLEMENTATION				
Plan Writing (Initial Draft Plan & First Draft Plan)	**Plan Formal Review (Second and Third Draft Plan)**	**Plan Adoption Phase (Final Draft Plan)**	**Plan Approval Phase (Final Plan)**	**Plan Implementation Phase**
• Based on research and input gathered during Planning Team meetings, consultant prepared the Initial Draft Plan • Input to the Initial Draft Plan from the Planning Team meeting #4 incorporated into the First Draft Plan • Public and stakeholders invited to provide input to the First Draft Plan and Survey via mail, email, web posting, and social media • Input from public and stakeholders incorporated into the Second Draft Plan	• Second Draft Plan was sent to Cal OES for formal review • Consultant and Planning Team addressed revisions mandated by Cal OES • Public and stakeholders invited to engage again via posting of video, updated survey, and the updated Second Draft Plan • Information gathered incorporated into the Third Draft Plan. • Cal OES conducts review of Third Plan and forwards to FEMA for review • FEMA issues Approvable Pending Adoption	• Post public notice of Town Council meeting along with the access to the Final Draft Plan • Final Draft Plan distributed to Town Council in advance of meeting • Staff Presents Final Draft Plan to Town Council along with resolution for adoption • Town Council adopts Final Draft Plan	• Submit Proof of Adoption to FEMA with request for final approval • Receive FEMA Letter of Approval • Incorporate FEMA approval and Town Council resolution into the Final Plan	• Conduct annual Planning Team implementation meetings • Integrate mitigation action items into budget and other funding and strategic documents

Q&A | ELEMENT A: PLANNING PROCESS | A3-a.

Q: Does the plan document how the public was given the opportunity to be involved in the planning process and how their feedback was included in the plan? (Requirement 44 CFR § 201.6(b)(1))
A: See **Public Outreach, Table 1.5** below.

Public Outreach

Throughout the entire planning process, the departments represented on the Planning Team served as stakeholders while also making a concerted effort to gather input and ideas from other stakeholders and the public. Additionally, the Planning Team went out of its way to identify and include the needs of the Town's underserved communities and socially vulnerable populations. Furthermore, special attention during the hazard research and mapping analysis was given to climate vulnerability and impacts on underserved communities and socially vulnerable populations.

The Planning Team developed a comprehensive Community Outreach Strategy that included a broad range of engagement venues and informative materials to gather information critical to the planning process and the writing of the plan. Below in Table 1.5 indicates opportunities provided to stakeholders and the public to participate in various community outreach activities.

Q&A | ELEMENT A: PLANNING PROCESS | A2-a.

Q: Does the plan identify all stakeholders involved or given an opportunity to be involved in the planning process, and how each stakeholder was presented with this opportunity? (Requirement 44 CFR § 201.6(b)(2))
A: See **Stakeholder Outreach, Stakeholder Opportunities for Input by Category, Table 1.5, Table 1.6** below.

Stakeholder Outreach

The planning process was powered by the Planning Team, public, and stakeholders from the private, public and non-governmental sectors. These resources were needed to assist with technical expertise, historical knowledge, and to provide insights relating to hazards and mitigation strategies.

Stakeholder Opportunities for Input by Category

Below, the stakeholder categories are defined as in the Handbook. As they apply to Yucca Valley, the specific engagements are indicated in *italics*:

- **Local and Regional Agencies Involved in Hazard Mitigation activities**. Examples include public works, emergency management, local floodplain administration and Geographic Information Systems (GIS) departments.
  Planning Team invitations were sent to applicable Town and County departments. The invitation included an overview of the role of the Team and the time requirements of 4 meetings as well as reviewing the Initial Draft Plan. Team members reviewed and contributed to the First Draft Plan and were informed of the posted video and survey. Also, during the plan approval, they were encouraged to attend the public forum at the Town Council.

- **Agencies that have the Authority to Regulate Development**. Examples include zoning, planning, community and economic development departments, building officials, planning commission, and other elected officials.
  Planning Team invitations were sent to applicable town and county departments. Also, the Planning Commission (residents of Yucca Valley), Parks, Recreation, and Culture Commission (residents of Yucca Valley), and Elected Officials (residents of Yucca Valley) were provided updates on the planning process via the community outreach activities including invitations to provide input to the First and Second Draft Plan, view the video, and participate in two surveys. The same entities will be invited to provide input during the Town Council adoption meeting.
- **Neighboring Communities**. Examples include adjacent local governments, including special districts, such as those that are affected by similar hazard events or may share a mitigation action or project that crosses jurisdictional boundaries. Neighboring communities may be partners in hazard mitigation and response activities, or maybe where critical assets, such as dams, are located.
  All neighboring communities and special districts were informed of the planning process through the community outreach activities with invitations to watch the video, participate in the surveys, and provide input on the First and Second Draft Plan. The same entities will be invited to attend and provide input during the Town Council adoption meeting.
- **Businesses, Academia and other Private Interests**. Examples include chambers of commerce, institutions of learning, and major employers or private utilities that sustain community lifelines (providers of vital services in a community that when stabilized enable all other aspects of society to function). More information on "community lifelines" is available in this Chapter under **Capabilities Assessment**.
  These entities were informed of the planning process through the community outreach activities with invitations to view the video, participate in the surveys as well as to provide input on the First and Second Draft Plan prior to submission for formal review by Cal OES and FEMA. The same entities were also invited to attend and provide input prior to the Town Council adoption meeting.
- **Nonprofit Organizations and Community-Based Organizations.** These organizations work directly with and/or provide support to underserved communities and socially vulnerable populations, among others. It is key to bring partners to the table who can speak to the unique needs of these groups. Examples include housing, healthcare and social services agencies.
  Throughout the planning process, Planning Team representatives from the Town's Emergency Preparedness Department provided insights and issues pertinent to vulnerable populations. The NPOs and CBOs were informed of the planning process through the community outreach activities and invited to provide input to the First and Second Draft Plan prior to submission for formal review by Cal OES and FEMA. Also, the Town's Park, Recreation and Cultural Commission members (residents of Yucca Valley) were stakeholders and had opportunities to influence and provide input to the planning process.

Community Outreach Strategy

Table 1.5: Outreach Methods and Activities

Outreach Methods and Activities	Stakeholders					Public	Socially Vulnerable & Disadvantaged
	Local and Regional Agencies Involved in Hazard Mitigation	Agencies with Authority to Regulate Development	Neighboring Communities (including adjacent local governments and special districts)	Businesses, Academia, Community Lifelines	Nonprofit Organizations, Community-Based Organizations working with Vulnerable Populations		
Town Council Meetings regarding grant application, hiring contractor, and project status. Began on May 30, 2023, followed by occasional briefings.	X	X	X	X	X	X	X
Press Release – September 15, 2023 announcing web posting.	X	X	X	X	X	X	X
Public Venue – Emergency Preparedness Fair (May 11, 2024),	X	X	X	X	X	X	X
Social Media – September 2023 and, May 2024, December 2024 posted on Facebook, X, Instagram, Nextdoor including announcement of the project and opportunities for input on surveys, video, draft plans..	X	X	X	X	X	X	X
Town Website – Dedicated website with project materials including links to surveys, video, First Draft Plan, and updated Second Draft Plan. The website included introduction to the project, background on socially vulnerable populations, and provided contact information.	X	X	X	X	X	X	X
Video and Surveys – Video described planning process while	X	X	X	X	X	X	X

Outreach Methods and Activities	Stakeholders					Public	Socially Vulnerable & Disadvantaged
	Local and Regional Agencies Involved in Hazard Mitigation	Agencies with Authority to Regulate Development	Neighboring Communities (including adjacent local governments and special districts)	Businesses, Academia, Community Lifelines	Nonprofit Organizations, Community-Based Organizations working with Vulnerable Populations		
surveys provided information on socially vulnerable populations and questions relating to preparedness and mitigation							
Email and Mail to stakeholders inviting to participate in outreach activities.	X	X	X	X	X	X	X
Flyer promoted the outreach activities. Posted at Town Hall and other locations. Available electronically on website and links on social media.	X	X	X	X	X	X	X

Public and Stakeholder Input

Table 1.5: Public and Stakeholder Input Table

Date Invited to Provide Input	Agency, Recipient's Name, Position Title	Information Received and Incorporated into Plan
	PUBLIC	
September 18, 2023	Received via website comment card on September 18, 2023 - Anonymous	**Information Received**: The Town of Yucca Valley needs to reconsider the height of some of the current curbs. Recent storms have shown that curb height is insufficient to redirect rainwater in residential neighborhoods so as not to damage homes and property. After recent storms, water overflowed city streets onto our property causing massive amounts of erosion and damage to our property. When we inquired with the town about increasing curb height to eliminate this in the future, we were told it is not the town's responsibility; however, the town is the entity that approved street development and when a downhill street ends in someone's yard, it is obviously going to cause water damage during a storm. **Response to Information**: Considerable discussion took place among Planning Team members concerning threats associated with urban flooding. Most of the flood-related recommendations in the Mitigation Actions Matrix relate to storm drain improvements. However, the point is well taken and an action items has been added to the Matrix to examine the possibility of raising the curb heights.
September 18, 2023	Received via website comment card on September 18, 2023 - Ida Marienschek	**Information Received**: Communications with the public is key in order to reduce / eliminate long term risk. Effective communication with citizens can save lives and limit property damage in the case of hazard threat. Yucca Valley does not currently seem to have a central platform for town-wide information distribution. Communication platforms are inconsistent and numerous. They span email, Facebook, Twitter accounts and are distributed between Statewide accounts, private accounts, county accounts, National Park accounts and town accounts. A central platform (app?), consistently managed and monitored, that collates the various information platforms that are relevant to the public, ordered by topic (fire, flood, Sheriff, etc.) could go very far in keeping the public informed in a timely manner, and create alignment among the public and town / county services. An effective flow of information will save lives. **Response to Information**: The Town's website is the existing "hub" for all information. It does not require any type of pre-registration and is already maintained.

Date Invited to Provide Input	Agency, Recipient's Name, Position Title	Information Received and Incorporated into Plan
September 18, 2023	Received via email on September 18, 2023 – Marjorie Smith, Morongo Basin VOAD	**Information Received**: Numerous suggestions and amendments to Mitigation Actions Matrix. **Response to Information**: Edits and amendments made to the Mitigation Actions Matrix as appropriate.
STAKEHOLDERS		
Local and Regional Agencies Involved in Hazard Mitigation Activities		
	Town of Yucca Valley Planning Team	
September 18, 2023	Name: Debra Breidenbach-Sterling Agency: YV Human Resources and Risk Management Division Position Title: Manager	Comments gathered during Planning Team meetings.
September 18, 2023	Name: Lesley Copeland Agency: YV Town Clerk's Office Position Title: Town Clerk and Public Information Officer	Comments gathered during Planning Team meetings.
September 18, 2023	Name: Sue Earnest Agency: YV Community Services Department Position Title: Manager	Comments gathered during Planning Team meetings.
September 18, 2023	Name: Jordan Gumbish Agency: YV Finance Division Position Title: Manager	Comments gathered during Planning Team meetings.
September 18, 2023	Name: Alex Qishta Agency: YV Public Works/Engineering Department Position Title: Director	Comments gathered during Planning Team meetings.
September 18, 2023	Name: Jessica Rice, Planning Team Chair Agency: YV Emergency Preparedness Department Position Title: Senior Management Analyst	Comments gathered during Planning Team meetings.
September 18, 2023	Name: Shane Stueckle Agency: YV Community Development and Public Works Position Title: Deputy Town Manager	Comments gathered during Planning Team meetings.
September 18, 2023	Name: John Scalise Agency: San Bernardino County Sheriff Position Title: Administrative Sergeant	Comments gathered during Planning Team meetings.
September 18, 2023	Name: Floyd Stone Agency: San Bernardino County Sheriff Position Title: Operations Sergeant	Comments gathered during Planning Team meetings.
September 18, 2023	Name: Scott Tuttle Agency: San Bernardino County Fire Department Position Title: Former Interim Deputy Chief - Operations	Comments gathered during Planning Team meetings.
September 18, 2023	Name: Donnie Viloria Agency: San Bernardino County Fire Department Position Title: Battalion Chief	Comments gathered during Planning Team meetings.
September 18, 2023	Name: Curtis Yakimow Agency: YV Town Manager's Office Position Title: Town Manager	Comments gathered during Planning Team meetings.

Date Invited to Provide Input	Agency, Recipient's Name, Position Title	Information Received and Incorporated into Plan
	Local Response Agencies	
September 18, 2023	Name: Bill Villarano Agency: San Bernardino County Fire Department Position Title: Assistant Fire Chief	
September 18, 2023	Name: Robert Warrick Agency: San Bernardino County Sheriff's Department Position Title: Captain	
September 18, 2023	Name: Michael Radford Agency: California Highway Patrol Position Title: PIO Officer	
	Local Regional Agencies	
September 18, 2023	Name: James Addison Agency: San Bernardino County Department of Public Works Position Title: District Supervisor	
September 18, 2023	Name: Ashley Flores Agency: San Bernardino County Department of Public Health Position Title: Supervising Medical Emergency Planning Specialist	
September 18, 2023	Name: Sharon Mitchell Agency: San Bernardino County Department of Public Works/Solid Waste Management Position Title: Staff Analyst II	
	Local Utility Agencies/Service Providers	
September 18, 2023	Name: Shane Massoud Agency: Southern California Edison Position Title: Government Relations Manager	
September 18, 2023	Name: Deborah McGarrey Agency: SoCal Gas Position Title: Public Affairs Manager	
September 18, 2023	Name: Ron Wortham Agency: Hi Desert Water District Position Title: Director of District Services	
September 18, 2023	Name: Kathleen Radnich Agency: Joshua Basin Water District Position Title: Public Outreach, Education & Marketing Mgr.	
September 18, 2023	Name: Frank Orlett Agency: Burrtec Waste Position Title: Vice President	
Agencies with Authority to Regulate Development		
	See Planning Team members listed above.	
	Elected Officials (Town Residents)	
September 18, 2023	Name: Robert Lombardo Agency: Town of Yucca Valley Position Title: Mayor	

Date Invited to Provide Input	Agency, Recipient's Name, Position Title	Information Received and Incorporated into Plan
September 18, 2023	Name: Jeff Drozd Agency: Town of Yucca Valley Position Title: Mayor Pro Tem	
September 18, 2023	Name: Rick Denison Agency: Town of Yucca Valley Position Title: Council Member	
September 18, 2023	Name: Merl Abel Agency: Town of Yucca Valley Position Title: Council Member	
September 18, 2023	Name: Jim Schooler Agency: Town of Yucca Valley Position Title: Council Member	
	Planning Commission (Town Residents)	
September 18, 2023	Name: Gerard Noonan, Chair Agency: YV Planning Commission Position Title: Planning Commission Chair	
September 18, 2023	Name: Alejandro Vasconcelos Agency: YV Planning Commission Position Title: Planning Commission Vice Chair	
September 18, 2023	Name: Mathew Thomas Agency: YV Planning Commission Position Title: Planning Commissioner	
September 18, 2023	Name: James Henderson Agency: YV Planning Commission Position Title: Planning Commissioner	
	Name: Clint Stoker Agency: YV Planning Commission Position Title: Planning Commissioner	
	Park, Recreation and Cultural Commission (Town Residents)	
September 18, 2023	Name: Jeff Brady Agency: PRCC Commission Position Title: PRC Commission Acting Chair	
September 18, 2023	Name: Ed Keesling Agency: PRC Commission Position Title: PRC Commissioner	
September 18, 2023	Name: Matthew Rauch Agency: PRC Commission Position Title: PRC Commissioner	
September 18, 2023	Name: Andrea Staehle Agency: PRC Commission Position Title: PRC Commissioner	
Districts and Neighboring Communities		
	Districts	

Date Invited to Provide Input	Agency, Recipient's Name, Position Title	Information Received and Incorporated into Plan
September 18, 2023	Name: David Daniels Agency: Morongo Unified School District Position Title: Director of Maintenance and Operations, Facilities, and Risk Management	**Information Received** from MUSD Albert Kent on 9.26.2023: Several edits/corrections/modifications in topic areas. Most significantly adding Southern California Gas Company and communications/internet providers to the list of Community Lifelines. **Response to Information**: Adding recommended providers to Community Lifelines.
September 18, 2023	Name: Daren Otten Agency: Copper Mountain College Position Title: President	
	Neighboring Communities	
September 18, 2023	Name: Stone James Agency: City of 29 Palms Position Title: City Manager	
September 18, 2023	Name: Elijah Marshall Agency: City of 29 Palms Position Title: Emergency Manager	
September 18, 2023	Name: Michael Burns Agency: MAGTFTC, MCAGCC (29 Palms Marine Base) Position Title: Deputy Director, Mission Assurance Division	
September 18, 2023	Name: Myles Landry Agency: Joshua Tree National Park Position Title: Emergency Manager	
Nonprofit Organization and Community-based Organizations Working Directly with Underserved Communities and Socially Vulnerable Populations		
	Places of Worship	
September 18, 2023	Agency: Joshua Springs Calvary Chapel Name: Mike Kellier Position Title: Pastor	
September 18, 2023	Agency: At the Cross Christian Fellowship Name: Alfred Aceves Position Title: Pastor	
September 18, 2023	Agency: Calvary Baptist Church Name: Casey Kuhlman Position Title: Pastor	
September 18, 2023	Agency: Church of Jesus Christ of Latter-Day Saints Name: Suzy Dick Position Title: Public Affairs	
September 18, 2023	Agency: Crossview Bible Church Name: Dan Hanna Position Title: Pastor	
September 18, 2023	Agency: Desert Hills Presbyterian Church Name: Wayne Morrow Position Title: Pastor	
September 18, 2023	Agency: Living Hope Church Name: Bill Wilcox Position Title: Pastor	

Date Invited to Provide Input	Agency, Recipient's Name, Position Title	Information Received and Incorporated into Plan
September 18, 2023	Agency: First Christian Church Name: Mark Tometz Position Title: Pastor	
September 18, 2023	Agency: Seventh-Day Adventist Church Name: Curtis Wright Position Title: Pastor	
September 18, 2023	Agency: St. Joseph of Arimathea Episcopal Church Name: Bishops Warden Position Title: Pastor	
September 18, 2023	Agency: St. Mary of the Valley Catholic Church Name: Mark Kotlarczyk Position Title: Pastor	
September 18, 2023	Agency: The Door Christian Fellowship Name: Louie Lobato Position Title: Pastor	
September 18, 2023	Agency: Valley Community Chapel Name: Jeff Huntington Position Title: Pastor	
September 18, 2023	Agency: Yucca Valley United Methodist Church Name: Thomas Ziegert Position Title: Pastor	
September 18, 2023	Agency: Gateway Assembly of God Name: Jerry Adams Position Title: Pastor	
	Disability services agencies or non-governmental organizations (NGOs).	
	N/A	
	Health and social services departments	
	N/A	
	Housing agencies and housing advocacy groups	
	N/A	
	Community-Based Organizations	
September 18, 2023	Agency: Morongo Basin ARCH Name: Astrid Johnson Position Title: Executive Director	
September 18, 2023	Agency: Morongo Unified School District Name: Wayne Hamilton Position Title: Community Outreach Coordinator	

Q&A | ELEMENT C. MITIGATION STRATEGY | C1-a.

Q: Does the plan describe how the existing capabilities of each participant are available to support the mitigation strategy? Does this include a discussion of the existing building codes and land use and development ordinances or regulations? (Requirement 44 CFR § 201.6(c)(3))

A: See **Table 1.6** below.

Capability Assessment – Existing Processes and Programs

The Town of Yucca Valley will incorporate mitigation planning as an integral component of daily operations. This will be accomplished by the Planning Team working with their respective departments to integrate mitigation strategies into the planning documents and the Town's operational guidelines. In addition to the Capability Assessment below, the Planning Team will strive to identify additional policies, programs, practices, and procedures that could be created or modified to address mitigation activities.

The Town will incorporate mitigation planning as an integral component of daily operations. This will be accomplished by the Planning Team members with their respective departments to integrate mitigation strategies into their planning documents and operational guidelines. FEMA identifies four types of capabilities: Planning and Regulatory, Administrative and Technical, Financial, and Education and Outreach. Following are explanations drawn from "Beyond The Basics" a website developed as part of a multi-year research study funded by the U.S. Department of Homeland Security, Coastal Resilience Center and led by the Center for Sustainable Community Design within the Institute for the Environment at the University of North Carolina at Chapel Hill and the Institute for Sustainable Coastal Communities at Texas A&M University. This excellent resource ties FEMA regulations together with best practices in hazard mitigation.

Planning and Regulatory

Planning and regulatory capabilities are based on the implementation of ordinances, policies, local laws and State statutes, and plans and programs that relate to guiding and managing growth and development. Examples of planning capabilities that can either enable or inhibit mitigation include comprehensive land use plans, capital improvements programs, transportation plans, small area development plans, disaster recovery and reconstruction plans, and emergency preparedness and response plans. Plans describe specific actions or policies that support community goals and drive decisions. Likewise, examples of regulatory capabilities include the enforcement of zoning ordinances, subdivision regulations, and building codes that regulate how and where land is developed and structures are built. Planning and regulatory capabilities refer not only to the current plans and regulations, but also to the community's ability to change and improve those plans and regulations as needed.

Administrative and Technical

Administrative and technical capability refers to the community's staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions. It also refers to the ability to access and coordinate these resources effectively. Think about the types of personnel employed by each jurisdiction, the public and private sector resources that may be accessed to implement mitigation activities in your community, and the level of knowledge and technical expertise from all of these sources. These include engineers, planners, emergency managers, GIS analysts, building inspectors, grant writers, floodplain managers, and more. For jurisdictions with limited staff resources, capacity should also be considered; while staff members may have specific skills, they may not have the time to devote themselves to additional work tasks.

The Planning Team can identify resources available through other government entities, such as counties or special districts, which may be able to provide technical assistance to communities with limited resources. For example, a small town may turn to county planners, engineers, or a regional planning agency to support its mitigation planning efforts and provide assistance. For large jurisdictions, reviewing administrative and technical capabilities may involve targeting specific staff in various departments that have the expertise and are available to support hazard mitigation initiatives. The degree of intergovernmental coordination among departments also affects administrative capability.

Financial

Financial capabilities are the resources that a jurisdiction has access to or is eligible to use to fund mitigation actions. The costs associated with implementing mitigation activities vary. Some mitigation actions, such as building assessment or outreach efforts, require little to no costs other than staff time and existing operating budgets. Other actions, such as the acquisition of flood-prone properties, could require substantial monetary commitment from local, state, and federal funding sources. Some local governments may have access to a recurring source of revenue beyond property, sales, and income taxes, such as stormwater utility or development impact fees. These communities may be able to use the funds to support local mitigation efforts independently or as the local match or cost-share often required for grant funding.

Education and Outreach

This type of capability refers to education and outreach programs and methods already in place that could be used to implement mitigation activities and communicate hazard-related information. Examples include fire safety programs that the Fire Department delivers to students at local schools; and participation in community programs, such as Firewise.

Table 1.6 below includes a broad range of capabilities within the Town of Yucca Valley to successfully accomplish mitigation.

Table 1.6: Capability Assessment - Existing Processes and Programs (Source: Town of Yucca Valley Website, 2023)

Type of Capability				Capability Name	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
Town of Yucca Valley Departments/Divisions					
X	X		X	Town Clerk's Office	The Town Clerk is responsible for preserving important documents such as resolutions, ordinances and contracts. Other duties include the preparation of agendas and minutes and executing notary services. The Clerk's office also performs assignments at the request of the Mayor and Town Council, in addition to providing liaison services to Yucca Valley residents, community groups, and other agencies.
X	X	X	X	Town Manager's Office	The Town Manager serves as the Chief Executive Officer of the Town and is appointed by and reports to the Town Council. The Town Manager is appointed to enforce municipal law, execute the Town's policy direction as established by the Town Council, submit the annual Town budget, hire all Town department heads and employees, and oversee the operation of all Town functions. Specifically, the Town Manager's Office is responsible for public safety, financial oversight, public information, legislative advocacy, and citizen response. Additionally, the Town Manager serves as an advisor to the Town Council on policy items impacting the community and assists the Town Council in their development of the Town's Strategic Planning efforts.
X	X	X	X	Community Development Department	The Community Development Department is responsible for implementing policies with regard to land use and the overall development of the Town. The Department assists the community in determining and planning the most effective means for improving the physical environment of the Town and provides land use and development information as well as provides management of development regulations and maintenance of public improvements.
	X		X	Community Services Department	The Community Services Department plans and conducts a broad range of recreational and cultural programs to enhance the quality of life for Yucca Valley residents. The divisions within the Community Services Department include Recreation, the Hi-Desert Nature Museum, Senior Center, and Facility Reservations. The department also provides staff liaison to the Town's Parks, Recreation and Cultural Commission and Youth Commission
	X			Human Resources Division	The Human Resources Division is responsible for the recruitment and selection of employees; position classification, employee compensation, benefits, and development. Risk Management functions are also handled through the Human Resources Division.
	X		X	Public Works/Engineering Department	The Public Works/Engineering Department facilitates capital improvements, inspections, traffic engineering programs, and provides engineering support for public and private projects including residential and commercial development, streets, storm drains, facilities maintenance, and park facilities. The various divisions within the department help improve the public safety and

Type of Capability				Capability Name	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
					physical appearance of the community by maintaining and improving the physical condition of the streets, parks, public buildings and other facilities.
		X		Finance Department	The Finance Department is charged with maintaining the financial and accounting system of the Town in a manner consistent with the highest professional standards in accordance with legal requirements and generally accepted accounting principles. Additionally, the department is responsible for the safeguarding of Town financial assets through continuous review to ensure that the Town is abiding by the financial policies and practices established by the Council. The Department provides the Council and Town Departments with timely financial information designed to support the decision-making process and coordinates the preparation of the annual budget and comprehensive annual financial report.
X	X		X	Building & Safety Division	Building & Safety regulates construction and occupancy of all residential, commercial and industrial structures and enforces the building, electrical, plumbing and mechanical codes adopted by the Town Council and State. Also, plan check applications, review reports and calculations, issue permits, and field-inspect construction projects to assure compliance with structural, fire and safety standards.
X	X		X	Code Compliance Division	The Code Compliance Division works to protect public health, safety, and welfare by enforcing compliance with local, state and federal code standards. Our oversight responsibilities include (but are not limited to Land use, Zoning, Housing, Property maintenance, Solid waste, Water conservation, Public Nuisances, Vehicle Abatement, and Fire Hazard Abatement.
X	X		X	Emergency Preparedness Department	The Emergency Preparedness Department is responsible for the planning, coordination and management of disaster preparedness, mitigation, response, and recovery.
Town of Yucca Valley Commissions					
X		X		Planning Commission	The Planning Commission advises the Town Council and Community Development Department on matters concerning future development and land use within the Town of Yucca Valley.
X		X	X	Parks, Recreation & Cultural Commission	The Parks, Recreation and Cultural Commission works in an advisory capacity to the Town Council and other relevant agencies to help shape public recreation, development of open spaces, parks, playgrounds, and other recreational facilities and programs.
Town of Yucca Valley Plans and Policies					
X		X		Capital Improvement Program	The Town of Yucca Valley's Capital Improvement Program (CIP) is a planning tool for the expenditure of resources for public infrastructure. The CIP identifies existing and proposed public improvement projects, special projects, and on-going maintenance programs as well as addressing the implementation strategies. The Capital Improvement categories include Street and Highway, Parks and Recreation, Public Facilities, and Town-owned properties.

Type of Capability				Capability Name	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
	X	X	X	Annual Budget	The annual budget establishes the Town's spending plan, along with applicable funding resources, in our effort to meet the service requirements of Yucca Valley's residents, businesses, and institutions. Equally important, the budget addresses a variety of community priorities, as defined by the Town Council, residents and staff through the most recent Strategic Plan adoption and resident priority surveys. (Adopted Budget Fiscal year 2022-2024)
X	X			Building Code	The Town regulates construction and occupancy of all residential, commercial and industrial structures and enforces the building, electrical, plumbing and mechanical codes adopted by the Town Council and State.
X	X	X	X	General Plan	The General Plan is used to set long-term goals and policies that will guide growth and development in the Town of Yucca Valley for decades to come. It develops strategies for growing prosperity while protecting the quality of life that makes the high desert community incomparably special. The General Plan addresses a variety of issues to set a vision for the future, including the Safety Element which outlines the hazards posing significant threats as well as goals and policies to manage the threats.
Town of Yucca Valley External Agency Providers					
X	X		X	San Bernardino County Sheriff	The Town's public safety resources are maximized through cooperation with San Bernardino County's professional agencies to provide the highest quality law enforcement and fire protection for our residents, visitors and businesses.
X	X		X	San Bernardino County Fire	The Town's public safety resources are maximized through cooperation with San Bernardino County's professional agencies to provide the highest quality law enforcement and fire protection for our residents, visitors and businesses
X	X		X	San Bernardino County OES	Strengthens countywide emergency management capabilities to ensure the protection of life and property before, during and after disasters. The County's EOC provides centralized coordination for all government entities within the County.
X			X	Army Corps of Engineers	Corps projects are carried out at the request of local and state agencies and authorized by Congress, so prior to the global environmental awakening, the USACE mission was steered by flood control, water supply, navigation and national defense. The Corps has always been a lead partner in the plan to preserve and protect our nation. As a partner rich in engineering and scientific know-how, no other federal agency is better equipped as a significant partner in this nation's efforts to restore and preserve the environment, while ensuring continued economic viability and national defense.
Community Lifelines					
	X		X	South California Gas Company	Provider of natural gas.
	X		X	Amerigas Propane	Provider of propane.
	X		X	Ferrell Gas (Propane)	Provider of propane.

Type of Capability				Capability Name	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
	X		X	Hi Desert Propane	Provider of propane.
X	X		X	Southern California Edison (SCE)	Provider of electricity.
X	X		X	Hi-Desert Water District	The District's water service area spans 57 square miles and includes over 300 miles of pipeline which provides water to the Town of Yucca Valley and a portion of the unincorporated area of San Bernardino County. Also provide sewer/sewage services.
	X		X	Spectrum	Provider of internet services.
	X		X	Frontier	Provider of internet services.

Q&A | ELEMENT C: MITIGATION STRATEGY | C1-b.

Q: Does the plan describe each participant's ability to expand and improve the identified capabilities to achieve mitigation? (Requirement 44 CFR § 201.6(c)(3))

A: See **Expanding and Improving Capabilities** below.

Expanding and Improving Capabilities

Planning and Regulatory Capabilities – The Town builds and maintains its own buildings and infrastructure and regulates all construction within the community as per the International Building Code. Future plans are laid out in the General Plan and Capital Improvement Program. Some of the funding of future construction relies on successful bond measures where plans and justifications are shared with the public. Because of previous hazard mitigation plans and projects, the Town is very experienced in adhering to federal and state mandates. Also, departmental protocols are in place that ensure future development projects satisfy "substantial conformance" requirements with the General Plan and Zoning Ordinance. See **Mitigation Actions Matrix** column "Expanding and Improving on Capabilities".

Administrative and Technical - Existing capabilities are typical for a small-sized local government. The Town already has grant writing but seeks to develop GIS capabilities along with mutual aid agreements, and a warning/notification system. Grant writing capabilities will continue to be especially important once the mitigation plan is approved by FEMA. That approval will trigger eligibility for a range of federal and state grants. Also, the Town Council could form a subcommittee dedicated to land use matters and mitigation plan implementation. The Plan's opportunities for success will be increased by the Council's involvement. See **Mitigation Actions Matrix** column "Expanding and Improving on Capabilities".

Finance - All local governments have a broad range of funding sources. Taxation, impact fees, bonds, grants, in-kind donations, and philanthropic donations are included in the spectrum. As such, the Town needs to keep these resources in mind for future mitigation activities. See **Mitigation Actions Matrix** column "Expanding and Improving on Capabilities".

Education and Outreach – Continue to utilize existing community groups such as CERT and Chamber of Commerce to support and encourage mitigation as well as home and business mitigation. Enlist the Town Manager and Town Clerk/Public Information Officer in learning and talking about the Hazard Mitigation Plan. See **Mitigation Actions Matrix** column "Expanding and Improving on Capabilities".

Q&A | ELEMENT A: PLANNING PROCESS | A4-a.
Q: Does the plan document what existing plans, studies, reports, and technical information were reviewed for the development of the plan, as well as how they were incorporated into the document? (Requirement 44 CFR § 201.6(b)(3))
A: See **Use of Existing Data** below.

Use of Existing Data

The Planning Team gathered and reviewed existing data and plans during plan writing and specifically noted as "sources". Numerous documents were used to support the planning process:

Town of Yucca Valley Website
www.yucca-valley.org
Applicable Incorporation: Department Information for Capability Assessment.

Town of Yucca Valley General Plan Safety Element, 2022
Applicable Incorporation: Information about hazards contributed to the hazard-specific sections. Also contains environmental justice content used in Chapter 2: Community Profile.

Town of Yucca Valley Comprehensive Financial Report, 2022
Applicable Incorporation: Chapter 2: Community Profile

Town of Yucca Valley Housing Technical Report (Draft)
Applicable Incorporation: Chapter 2: Community Profile

Celebrating 20 Years of Community, 2011
Applicable Incorporation: Chapter 2: Community Profile

County of San Bernardino Multi-Jurisdictional Hazards Mitigation Plan, 2022
https://www.sbcounty.gov/uploads/SBCFire/documents/EmergencyServices/Hazard-Mitigation-Plan-202212.pdf
Applicable Incorporation: Information about hazards in the County contributed to the hazard-specific sections.

State of California Hazard Mitigation Plan, 2023
https://www.caloes.ca.gov/wp-content/uploads/Hazard-Mitigation/Documents/2023-California-SHMP_Volume-1-TOC_11.10.2023.pdf
Applicable Incorporation: Chapter 3: Risk Assessment – Hazard Identification.

HAZUS Maps and Reports
Created by Emergency Planning Consultants
Applicable Incorporation: Chapter 3: Risk Assessment - HAZUS maps and reports (separately) have been included in the Earthquake profile.

National Flood Insurance Program
https://www.fema.gov/national-flood-insurance-program
Applicable Incorporation: Chapter 1: Planning Process – NFIP Participation and Chapter 3: Risk Assessment - Community status used in the Flood profile.

California Department of Forestry and Fire Protection
https://www.fire.ca.gov/
Applicable Incorporation: Chapter 3: Risk Assessment – Wildfire profile includes fire hazard map.

California Department of Conservation
www.conservation.ca.gov/cgs
Applicable Incorporation: Chapter 3: Risk Assessment – Earthquake profile includes seismic hazards maps.

U.S. Geological Survey
www.usgs.gov
Applicable Incorporation: Chapter 3: Risk Assessment - Earthquake profile includes records and statistics.

Using HAZUS for Mitigation Planning, 2018
https://www.fema.gov/sites/default/files/documents/fema_using-hazus-mitigation-planning.pdf *Applicable Incorporation: Chapter 3: Risk Assessment – Earthquake profile includes HAZUS Information.*

Weather Spark
https://weatherspark.com/
Applicable Incorporation: Chapter 2: Community Profile includes weather information.

The Fifth National Climate Assessment, 2023
Applicable Incorporation: Chapter 3: Risk Assessment includes climate considerations.

Planning for an Emergency: Strategies for Identifying and Engaging At-Risk Groups, 2015
Applicable Incorporation: Social vulnerability information used in Chapter 2: Community Profile.

Guide to Expanding Mitigation: Making the Connection to Equity, 2020
Applicable Incorporation: Chapter 4: Vulnerability and Impacts includes information on social vulnerability Index.

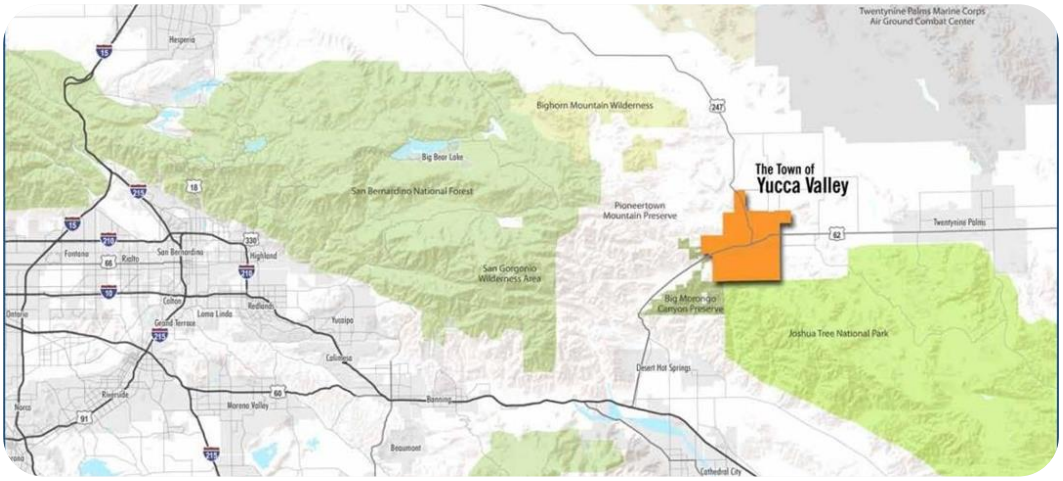
How Climate Change Impacts Each Type of Natural Disaster, 2022
Applicable Incorporation: Chapter 3: Risk Assessment includes climate considerations.

Chapter 2: Community Profile

Geography and the Environment

According to the Yucca Valley 20 Year Community Profile (2011), Yucca Valley is near the southern border of San Bernardino County, about 10 miles north of Riverside County and 115 miles west of the Arizona border. Nearby cities include San Bernardino (55 miles to the west), Palm Springs (27 driving miles to the south), and Barstow (89 miles to the north). Yucca Valley is located in the Mojave Desert approximately 3,300 feet above sea level. The San Bernardino Mountains are to the west and Joshua Tree National Park abuts the Town's southern border. The Town encompasses approximately 39 square miles.

Map 2.1: Regional Location Map
(Source: Yucca Valley Community Profile – 20 Years, 2011)



Major Employers

According to the Town's Annual Comprehensive Financial Report (2022), the following are the major employers:

Table 2.1: Town of Yucca Valley Major Employers
(Source: Town's Annual Comprehensive Financial Report, 2022)

Employer	Number of Employees (2022)
Morongo Unified School District	328
Walmart	272
Home Depot	150
Stater Bros.	70
Applebee's	99
Vons	91

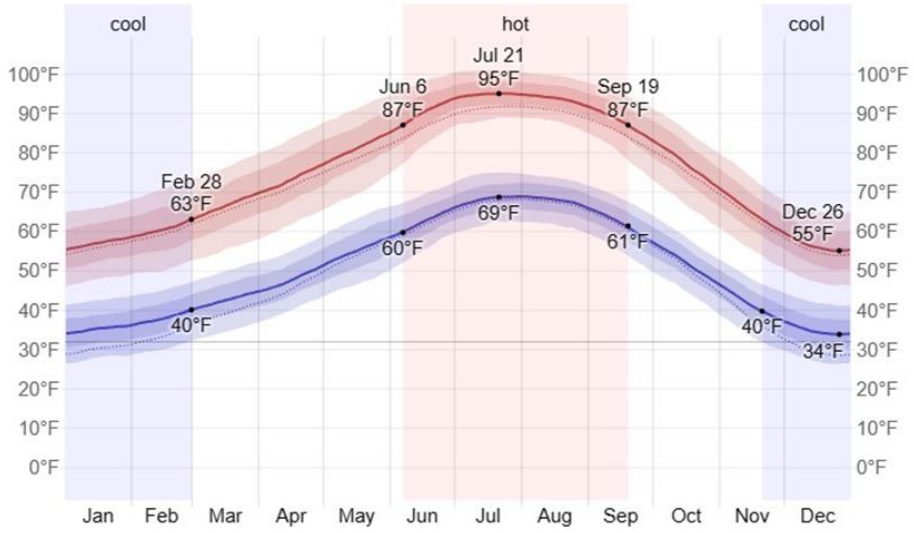
Climate

According to Weather Spark, the Town of Yucca Valley has a moderate climate, including hot, dry summers with an average high temperature of about 95°F and cool, wet winters with an average temperature of 56°F. Winter temperatures in some areas can range near zero, the cold often compounded by the wind-chill factor. The average annual rainfall for the region is less than 10 inches.

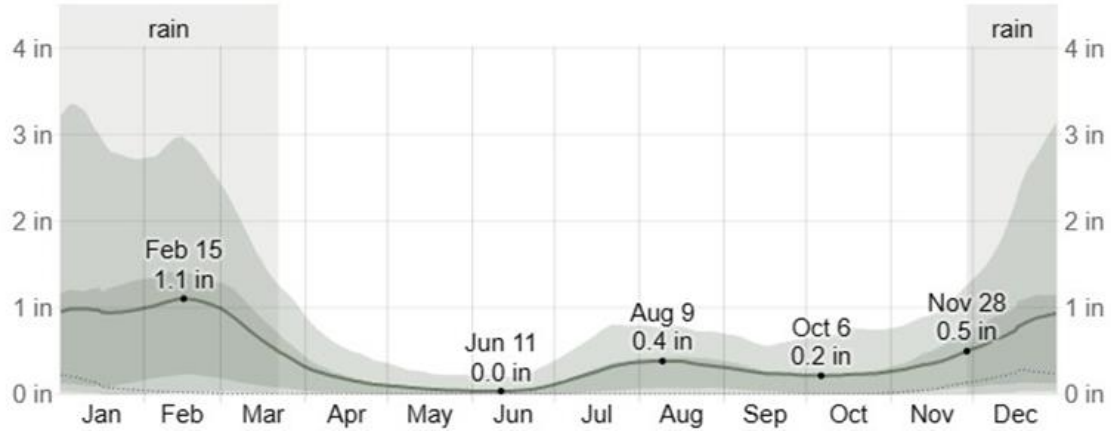
As the State of California and the San Bernardino region has undergone a several-year drought, rainfall has been much lower in the Town.

Furthermore, actual rainfall in the Southern California region tends to fall in large amounts during sporadic and often heavy storms rather than consistently over storms at somewhat regular intervals. In short, rainfall in Southern California might be characterized as feast or famine within a single year.

Graph 2.1: Average High and Low Temperature for Yucca Valley (Source: ©WeatherSpark.com 2023)



Graph 2.2: Average Monthly Rainfall for Yucca Valley (Source: ©WeatherSpark.com 2023



Population and Demographics

According to the Town's Housing Technical Report (draft version), the Town's population was 16,865 in 2000 and increased to 20,700 persons in 2010. Based on California Department of Finance population estimates, the population of the town increased to 22,236 in 2020, an increase of 7.4 percent over 10 years and an estimated annual growth rate of 1.4 percent during those 10 years. As a point of comparison, the SCAG region grew from a population of 18,051,534 in 2010 to 19,021,787 in 2020, an increase of 5.4 percent for that 10-year period.

Yucca Valley's population growth rate (6.7 percent) exceeded the growth rate for San Bernardino County, which only saw a growth of 5.8 percent from 2010 to 2018. According to DOF's modeling, Twentynine Palms and Yucaipa had the largest growth since 2010; each had a growth rate of 7.3 percent. Conversely, Big Bear Lake grew by less than 100 residents since 2010, a growth rate of 3.2 percent. Overall, Yucca Valley and its neighboring jurisdictions experienced limited growth since 2010, similar to San Bernardino County as a whole.

Table 2.2: Regional Population Trends
(Source: Town of Yucca Valley Housing Technical Report, 2023 Draft)

	2010	2018	% Change
Yucca Valley	20,700	22,082	6.7%
Twentynine Palms	25,048	26,872	7.3 %
Yucaipa	51,367	55,138	7.3 %
Big Bear Lake	5,019	5,178	3.2 %
San Bernardino County	2,035,210	2,152,845	5.8 %

According to SCAG projections, Yucca Valley's population is estimated to grow to 25,800 in 2045, an increase of 20.6 percent since 2016. Yucca Valley is expected to have the slowest growth rate of other nearby jurisdictions in San Bernardino County. Yucaipa and Big Bear Lake are projected to grow by at least a third of their 2016 population, with Yucaipa expected to grow by nearly 40 percent. Twentynine Palms does not exceed the County's expected growth rate (31.5 percent) but is expected to grow by over a quarter. In 2019, the Town reported that the area experienced an unusual level of growth which has been attributed to the COVID-19 pandemic. It is unclear at this time whether the population increase will be temporary or sustained in the long term.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-e.

Q: Does the plan include the probability of future events for each identified hazard? Does the plan describe the effects of future conditions, including climate change (e.g., long-term weather patterns, average temperature and sea levels), on the type, location and range of anticipated intensities of identified hazards? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Climate Change Vulnerability and Adaptation** below.

Climate Change Vulnerability and Adaptation

The Town of Yucca Valley recognizes that climate change affects public safety and disaster management. According to "California's Fourth Climate Change Assessment" developed by the State of California, continued climate change will have a severe impact on California. Increased temperatures, drought, wildfires, and sea level rise are several of the main concerns related to climate change in the Southwest. Other impacts anticipated from climate change include food

insecurity, increases in vector-borne diseases, degradation of air quality, reduced ability to enjoy the outdoors, and potential economic impacts due to uncertainty and changing conditions.

Climate change disproportionately affects those with existing disadvantages. Low-income communities and communities of color often live in areas with conditions that expose them to more severe hazards, such as higher temperatures and worse air quality. These communities also have fewer financial resources to adapt to these hazards. For instance, low-income populations may reduce air conditioning usage out of concerns about cost. Outdoor workers, individuals with mobility constraints, and sensitive populations such as the very young, elderly, and poor, as well as those with chronic health conditions, are particularly at risk from climate change hazards.

The Southern California Climate Adaptation Guide (SoCal APG) prepared by the Southern California Association of Governments (SCAG) in 2020, and the Climate Vulnerability Assessment (CVA) prepared by San Bernardino County in 2021, are valuable resources for assessing the town's vulnerability and identifying policies and actions to adapt to changing conditions and build resiliency. The SoCal APG describes the range of climate change hazards the SCAG region is likely to face in the coming decades, describes adaptation principles geared to the region, and outlines a general process of adaptation planning.

The County of San Bernardino CVA addresses both physical infrastructure and social vulnerabilities. In summary, the CVA:

- Climate change may increase the frequency or severity of eight primary hazards in the County: extreme heat, wildfire, drought, flooding, air quality and other health and ecological hazards, severe weather, extreme wind, and mud- and landslides.
- The report represents an assessment of these hazards on communities, assets, and ecosystems within the County.
- The Climate Change in the County section provides information on the scientific projections for the climate hazards in the County. The Priority Vulnerability Sectors section discusses the potential impact these hazards might have on priority sectors in the County, such as disadvantaged communities, natural resources, and transportation and infrastructure. This vulnerability assessment provides information to develop possible adaptation strategies for addressing these impacts.

Q&A | ELEMENT E: PLAN UPDATE | E1-a.
Q: Does the plan describe the changes in development that have occurred in hazard-prone areas that have increased or decreased each community's vulnerability since the previous plan was approved? (Requirement 44 CFR § 201.6(d)(3))
A: See **Changes** below.

Changes

Changes in Climate

Climate change impacts people in Yucca Valley in various ways, including through extreme heat events, changes in air quality, increased risk of wildfires, and potential impacts on water supply and infrastructure. These effects can lead to health issues, such as heat-related illnesses and respiratory problems, as well as challenges related to water availability and infrastructure resilience, highlighting the importance of adaptation and mitigation strategies to protect the well-being of the community.

Changes in Population

Changes in population in Yucca Valley can significantly impact residents by influencing the demand for services, housing affordability, cultural diversity, traffic congestion, economic opportunities, and community services. A growing population may strain existing infrastructure and services, leading to longer waiting times and crowded facilities. Additionally, population changes can affect the availability of affordable housing and create challenges related to cultural integration and inclusivity. However, population growth can also bring new job opportunities and enrich the cultural fabric of the community. Effective urban planning and community development strategies are crucial to addressing these impacts and ensure the well-being of residents in Yucca Valley.

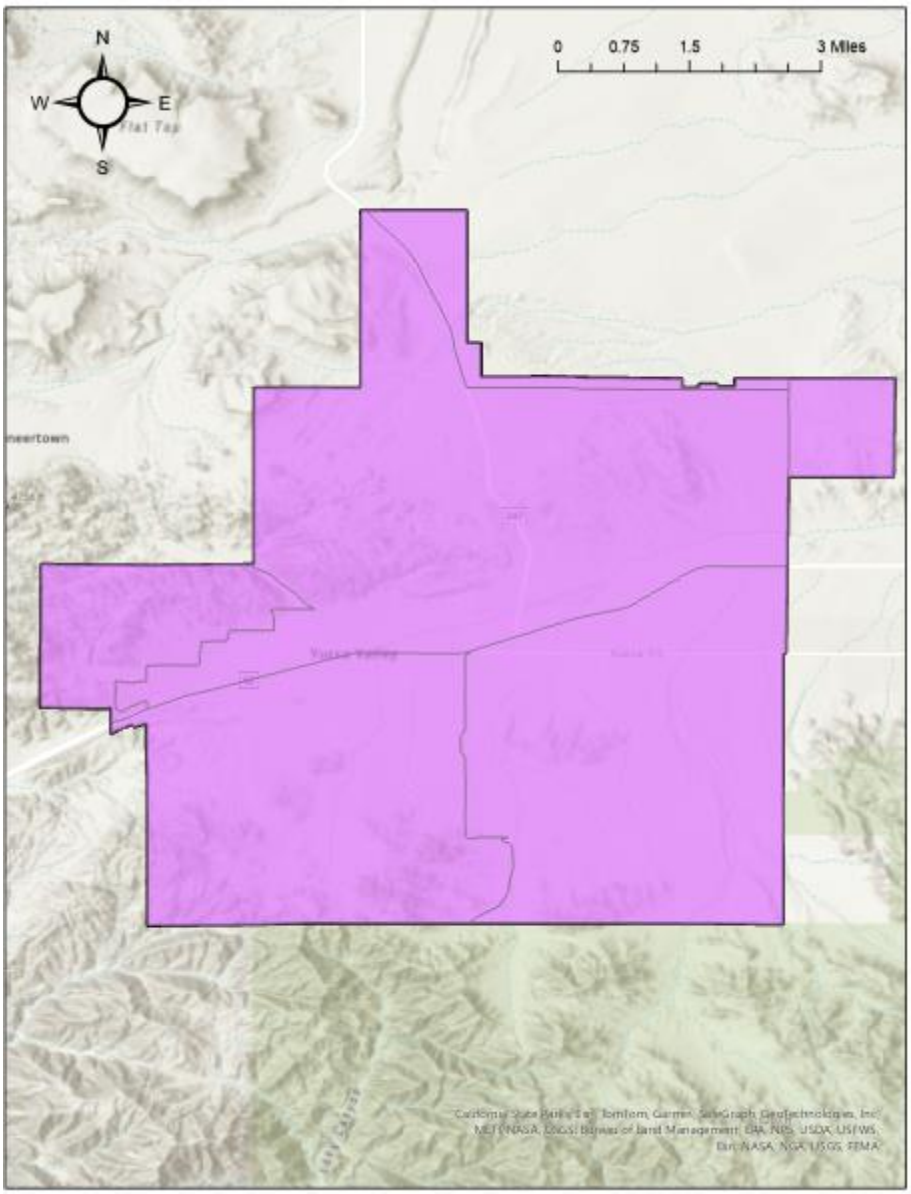
Changes in Land Use Development

Land use development in Yucca Valley can impact residents by affecting housing availability and affordability, access to services such as healthcare and education, quality of life factors like access to green spaces and community amenities, economic opportunities through job creation and local business growth, and environmental considerations such as traffic congestion and pollution. Thoughtful planning and community engagement are crucial to ensure that development meets the needs of residents and enhances the overall quality of life in the Town.

Underserved Communities

Underserved communities are defined by federal Executive Order 13985 On Advancing Racial Equity and Support for Underserved Communities Through the Federal Government. They are “populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life.”

Map 1.1: Yucca Valley Underserved Communities
Source: Climate and Economic Justice Screening Tool



Chapter 3: Risk Assessment

What is a Risk Assessment?

Conducting a risk assessment can provide information regarding: the types of hazards a jurisdiction is exposed to; the location where the hazard might occur; the history of the hazard in the Town of Yucca Valley and surrounding area; and the future risk they pose. Specifically, the four levels of a risk assessment are as follows:

1. *Asset Identification**
2. *Hazard Identification*
3. *Profiling Hazard Events*
4. *Estimation of Potential Human and Economic Losses Based on the Exposure and Vulnerability of People, Buildings, and Infrastructure*

*Note: Asset Identification is located in Chapter 4: Vulnerability and Impact Assessment

Q&A | ELEMENT B: RISK ASSESSMENT | B1-a.
Q: Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area? (Requirement 44 CFR § 201.6(c)(2)(i)) **A:** See **Hazard Identification, Table 3.1, Table 3.2** below.

Hazard Identification

This section is the description of the geographic extent, potential intensity, and the probability of occurrence of a given hazard. Maps are used in this plan to display hazard identification data. To determine the hazard with significant potential to impact the Planning Team examined four resources: California's 2023 State Hazard Mitigation Plan, 2022 County of San Bernardino Multi-Jurisdictional Hazard Mitigation Plan, Town's 2022 General Plan Safety Element, and the Town's 2018 Hazard Mitigation Plan.

The Planning Team reviewed existing documents to determine which of the hazards posed the most significant threat to the planning area and its ability to deliver services. In other words, which hazard would likely result in a local declaration of emergency. The Planning Team also reviewed Federal Disaster Declarations for San Bernardino County. Since the approval of the Town's 2018 Mitigation Plan, San Bernardino County experienced 11 federal disaster declarations from 2018 – 2023. **Table 3.1** outlines those disaster declarations.

Table 3.1: Federal Disaster Declarations 2018-2023 San Bernardino County
(Source: FEMA website State and County Disaster Declarations, 2024; Cal OES Open State of Emergency Proclamations, 2024)

Year	Declaration Number	Declaration Title
2023	EM-3591-CA	Severe Winter Storms, Flooding, And Mudslides
2023	EM-3592-CA	Severe Winter Storms, Flooding, Landslides, And Mudslides
2023	DR-4699-CA	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, And Mudslides
2021	FM-5381-CA	Blue Ridge Fire
2021	DR-4569-CA	Wildfires
2020	FM-5350-CA	El Dorado Fire
2020	FM-5325-CA	Apple Fire
2020	FM-5301-CA	Hillside Fire
2020	EM-3428-CA	Covid-19
2020	DR-4482-CA	Covid-19 Pandemic
2019	EM-3415-CA	Earthquakes

Below are the hazards the planning team reviewed. The table outlines the hazard source (reference) that included the hazard, whether the hazard is included in the 2024 Hazard Mitigation Plan, and the reason for inclusion/omission.

Table 3.2: Hazard Source Review and Inclusion by Planning Team
(Source: National Risk Index [NRI], California State Hazard Mitigation Plan [SHMP]; San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan, [MJHMP]; Yucca Valley General Plan Safety Element [SE]

Hazard	Source	Included in HMP	Reason for Not Including
Avalanche	NRI, SHMP	N	Based on the SE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Coastal Flooding	NRI	N	Based on the SE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Cold Wave	NRI, SHMP, SE	N	Based on the SE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Drought	NRI, SHMP, MJHMP, SE	Y*	The Planning Team ranked this hazard as a “medium” threat to the community.
Earthquake	NRI, SHMP, MJHMP, SE	Y*	The Planning Team ranked this hazard as a “high” threat to the community.
Hail	NRI	N	Based on the SE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Heat Wave	NRI, SHMP	Y*	The Planning Team ranked this hazard as a “low” threat to the community.
Hurricane	NRI	N	Based on the SE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Ice Storm	NRI	N	Based on the SE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Landslide	NRI, SHMP, MJHMP	N	Based on the SE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Lighting	NRI	N	Based on the SE, the Planning Team determined that this hazard does not pose a significant threat to the community.

Hazard	Source	Included in HMP	Reason for Not Including
Riverine Flooding	NRI, SHMP, MJHMP	Y*	The Planning Team ranked this hazard as a "high" threat to the community. Includes Urban Flooding.
Strong Wind	NRI, SE	Y*	The Planning Team ranked this hazard as a "low" threat to the community.
Tornado	NRI	N	Based on the SE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Tsunami	NRI, SHMP	N	Based on the SE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Volcanic Activity	NRI, SHMP	N	Based on the SE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Wildfire	NRI, SHMP, MJHMP, SE	Y*	The Planning Team ranked this hazard as a "medium" threat to the community.
Winter Weather	NRI, SE	N	Based on the SE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Dam Failure	SHMP	N	Based on the SE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Levee Failure	SHMP	N	Based on the SE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Subsidence	SHMP	N	Based on the SE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Climate Change	SHMP, MJHMP, SE	Y	
Epidemic / Pandemic Vector-borne Diseases		Y*	The Planning Team ranked this hazard as a "low" threat to the community.
Utility-Related Event – Power Outage		Y*	The Planning Team ranked this hazard as a "low" threat to the community.
***Hazard Priority Ranking is a combination of probability and magnitude. See Tables 3.3 and 3.4 for an explanation of the hazard priority process.**			

Q&A | ELEMENT B: RISK ASSESSMENT | B2-a.
Q: Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards? (Requirement 44 CFR § 201.6(c)(2)(ii)) **A:** See **Table 3.3** and **Table 3.4** below.
Q&A | ELEMENT B: RISK ASSESSMENT | B2-b.
Q: For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction? (Requirement 44 CFR § 201.6(c)(2)(ii)) **A:** See **Table 3.3** and **Table 3.4** below.

Next, the Team utilized FEMA's Calculated Priority Risk Index (CPRI) ranking technique to quantify the probability, magnitude/severity, warning time and duration for each of the hazards. The hazard ranking system is described below.

Table 3.3: Calculated Priority Risk Index
(Source: Federal Emergency Management Agency)

CPRI Category	Degree of Risk			Assigned Weighting Factor
	Level ID	Description	Index Value	
Probability	Unlikely	Extremely rare with no documented history of occurrences or events. Annual probability of less than 1 in 1,000 years.	1	45%
	Possibly	Rare occurrences. Annual probability of between 1 in 100 years and 1 in 1,000 years.	2	
	Likely	Occasional occurrences with at least 2 or more documented historic events. Annual probability of between 1 in 10 years and 1 in 100 years.	3	
	Highly Likely	Frequent events with a well-documented history of occurrence. Annual probability of greater than 1 every year.	4	
Magnitude/ Severity	Negligible	Negligible property damage (less than 5% of critical and non-critical facilities and infrastructure. Injuries or illnesses are treatable with first aid and there are no deaths. Negligible loss of quality of life. Shut down of critical public facilities for less than 24 hours.	1	30%
	Limited	Slight property damage (greater than 5% and less than 25% of critical and non-critical facilities and infrastructure). Injuries or illnesses do not result in permanent disability, and there are no deaths. Moderate loss of quality of life. Shut down of critical public facilities for more than 1 day and less than 1 week.	2	
	Critical	Moderate property damage (greater than 25% and less than 50% of critical and non-critical facilities and infrastructure). Injuries or illnesses result in permanent disability and at least 1 death. Shut down of critical public facilities for more than 1 week and less than 1 month.	3	
	Catastrophic	Severe property damage (greater than 50% of critical and non-critical facilities and infrastructure). Injuries and illnesses result in permanent disability and multiple deaths. Shut down of critical public facilities for more than 1 month.	4	
Warning	> 24 hours	Population will receive greater than 24 hours of warning.	1	15%

Time	12–24 hours	Population will receive between 12-24 hours of warning.	2	
	6-12 hours	Population will receive between 6-12 hours of warning.	3	
	< 6 hours	Population will receive less than 6 hours of warning.	4	
Duration	< 6 hours	Disaster event will last less than 6 hours.	1	10%
	< 24 hours	Disaster event will last less than 6-24 hours.	2	
	< 1 week	Disaster event will last between 24 hours and 1 week.	3	
	> 1 week	Disaster event will last more than 1 week.	4	

Table 3.4: Calculated Priority Risk Index Ranking for the Town of Yucca Valley (Source: Yucca Valley Planning Team)

Hazard	Probability	Weighted 45% (x.45)	Magnitude/Severity	Weighted 30% (x.30)	Warning Time	Weighted 15% (x.15)	Duration	Weighted 10% (x.10)	CPRI Total	Hazard Priority Ranking (H-High, M-Medium, L-Low) *
Earthquake	3	1.34	4	1.20	4	0.60	1	0.10	3.25	H
Epidemic / Pandemic / Vector-Borne Diseases	2	0.90	1	0.30	1	0.15	4	0.40	1.75	L
Extreme Weather – Windstorm, Extreme Temperatures	2	0.90	1	0.30	1	0.15	4	0.40	1.75	L
Flooding	4	1.80	2	0.60	2	0.30	2	0.20	2.90	H
Drought	3	1.34	2	0.60	1	0.15	4	0.40	2.84	M
Utility Related – Power Outage	2	0.90	1	0.30	1	0.15	4	0.40	1.75	L
Wildfire	3	1.34	2	0.60	4	0.60	2	0.20	2.74	M

***Hazard Priority Ranking**
High=CPRI score for probability + magnitude/severity (impact) = 6 or higher
Medium=CPRI score for probability + magnitude/severity (impact) = 5
Low=CPRI score for probability + magnitude/severity (impact) = 3 or 4
N/A=CPRI score for probability + magnitude/severity (impact) = 2

Q&A | ELEMENT B: RISK ASSESSMENT | B1-a.

Q: Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area? (Requirement 44 CFR § 201.6(c)(2)(i))
A: See **Hazard Profile, Table 3.5** below

Hazard Profiles

Table 3.4 (Calculated Priority Risk Index) included all of the natural hazards that can affect the jurisdiction. **Table 3.3** (CPRI Key) emphasizes the importance of considering the "scope and scale" of a possible event. In other words, the planning team members were reminded to envision an event of such significance that a local declaration of emergency would likely be issued. The planning team chose to profile only those hazards with a medium or high Priority Ranking

(probability + magnitude/severity). In total, these hazards include earthquakes, urban flooding, and wildfire. Each of the profiled hazards are discussed on the next page in **Table 3.5**. The Table indicates a generalized perspective of the community's vulnerability of the profiled hazards according to extent (or degree), location, and probability, and previous significant event for Yucca Valley.

Table 3.5: Hazard Profile of Location, Extent, Probability, Previous Significant Event (Source: Safety Element, Planning Team)

Hazard	Location (Where)	Extent (How Big an Event)	Probability (How Often) *	Previous Significant Event
Earthquake	Townwide	The Southern California Earthquake Center (SCEC) in 2007 concluded that there is a 99.7 % probability that an earthquake of M6.7 or greater will hit California within 30 years. Earthquake would most likely originate from the San Andreas fault.	Likely	June 28, 1992, M 7.3 Landers Earthquake
Flooding	SR 62 and other low-lying roadways. Mainly central and southern portions of the Town.	Floodplain and urban flooding to streets and roads. Flooding along the creeks and other waterways from heavy rain and melting snow.	Likely	August 19-20, 2023, Tropical Storm Hilary dropped 3" of rain. Town distributed 25,000 sandbags and opened 1 shelter.
Wildfire	Mid-section	CAL FIRE rating varies from moderate to very high fire hazard severity zone.	Likely	May 2022 Elk Fire
Drought	Townwide	Droughts vary considerably in scope and intensity. Minimal events could require emergency water shortage regulations to restrict such activities as watering of landscape, washing of cars, and other non-safety related activities. Severe events could mean loss of imported water, requiring the need for temporary distribution of emergency water supplies.	Possibly	Water providers to Yucca Valley are following Governor Newsom's Executive Order N-7-22 on March 22, 2022, calling on urban water suppliers to implement actions to reduce water usage by 20-30%, depending on local conditions.
* Probability is defined as: Unlikely = 1:1,000 years, Possibly = 1:100-1:1,000 years, Likely = 1:10-1:100 years, Highly Likely = 1:1 year				
[1] Uniform California Earthquake Rupture Forecast				

Estimation of Potential Human and Economic Losses Based on the Exposure and Vulnerability of People, Buildings, and Infrastructure

The last of the four steps in a Risk Assessment is the estimation of potential harm and economic losses based on the exposure and vulnerability of people, buildings, and infrastructure. This step is referred to as a vulnerability assessment, which in its simplest form, is a simultaneous look at the geographical location of hazards and an inventory of the underlying land uses (populations, structures, etc.). Facilities that provide critical and essential services following a major emergency

are of particular concern because these locations house staff and equipment necessary to provide important public safety, emergency response, and/or disaster recovery functions. Each of the hazard profiles later in Chapter 2 includes an estimation of damage to Town-owned facilities. The earthquake profile is the only one with detailed estimates on injuries and deaths, delays in services, and a broad range of other characteristics. HAZUS is the software program used to prepare detailed maps and reports for scenario-specific earthquake events. See the discussion below for details on HAZUS and the Earthquake Profile with 3 scenario-specific earthquake events.

HAZUS

The hazard maps in the mitigation plan were generated by Emergency Planning Consultants using FEMA's Hazards United States – Multi Hazard (HAZUS-MH) software program. Below are the maps generated by HAZUS. The associated reports are available separately. Once the location and size of a hypothetical earthquake are identified, HAZUS-MH estimates the intensity of the ground shaking, the number of buildings damaged, the number of casualties, the amount of damage to transportation systems and utilities, the number of people displaced from their homes, and the estimated cost of repair and clean up. It's important to note that the "project are" is based on Census tracts not jurisdictional boundaries.

Earthquake

Q&A | ELEMENT B: RISK ASSESSMENT | B1-a.
Q: Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area? (Requirement 44 CFR § 201.6(c)(2)(i))
A: See **Description** below.

Description

An earthquake is a sudden motion or trembling that is caused by a release of strain accumulated within or along the edge of the Earth's tectonic plates. The effects of an earthquake can be felt far beyond the site of its occurrence. They usually occur without warning and, after just a few seconds, can cause massive damage and extensive casualties. Common effects of earthquakes are ground motion and shaking, surface fault ruptures, ground failure, landslides, and liquefaction. See **Earthquake Related Hazards** below.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-c.
Q: Does the plan describe the extent for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))
A: See **Table 3.6** below.

Mercalli Scale and Peak Ground Acceleration Comparison

One tool used to describe earthquake intensity is the Magnitude Scale. The Magnitude Scale is sometimes referred to as the Richter Scale. The two are similar but not exactly the same. The Magnitude Scale was devised as a means of rating earthquake strength and is an indirect measure of seismic energy released. The Scale is logarithmic with each one-point increase corresponding to a 10-fold increase in the amplitude of the seismic shock waves generated by

the earthquake. In terms of actual energy released, however, each one-point increase on the Richter scale corresponds to about a 32-fold increase in energy released. Therefore, a Magnitude 7 (M7) earthquake is 100 times (10 X 10) more powerful than an M5 earthquake and releases 1,024 times (32 X 32) the energy. **Table 3.6** summarizes the Mercalli Scale and Peak Ground Acceleration Comparison.

Table 3.6: Mercalli Scale and Peak Ground Acceleration Comparison (Source: USGS)

Modified Mercalli Scale	Perceived Shaking	Potential Structure Damage		Estimated PGA[a] (%g)
		Resistant Buildings	Vulnerable Buildings	
I	Not Felt	None	None	<0.17%
II-III	Weak	None	None	0.17% - 1.4%
IV	Light	None	None	1.4% - 3.9%
V	Moderate	Very Light	Light	3.9% - 9.2%
VI	Strong	Light	Moderate	9.2% - 18%
VII	Very Strong	Moderate	Moderate/Heavy	18% - 34%
VIII	Severe	Moderate/Heavy	Heavy	34% - 65%
IX	Violent	Heavy	Very Heavy	65% - 124%
X – XII	Extreme	Very Heavy	Very Heavy	>124%

a. PGA = peak ground acceleration. Measured in percent of g, where g is the acceleration of gravity

Sources: USGS, 2008; USGS, 2010

Q&A | ELEMENT B: RISK ASSESSMENT | B1-b.

Q: Does the plan include information on the location of each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Local Conditions, Map 3.1, Map 3.2** below.

Local Conditions

According to the Yucca Valley 20 Year Community Profile (2011), Yucca Valley is in an area of high seismic activity and several faults have the potential to cause damage in the community. The Pinto Mountain Fault extends in an easterly direction through the central part of Town. The Eureka Peak, Burnt Mountain, Johnson Valley, and Homestead Valley Faults run north–south through various portions of the community. The southern San Andreas Fault passes about eight miles southwest of the Town. These and several other seismically active faults are within about 60 miles of the community, posing a significant seismic shaking hazard. The faults that extend through the town also have the potential to cause a surface fault rupture, the displacement of the ground surface when a fault moves. Deformation associated with movement along the Pinto Mountain fault could impact several buildings and infrastructure in downtown Yucca Valley. The State of California regulates development in seismically active areas through the Alquist-Priolo Earthquake Fault Zoning Act and Seismic Hazards Mapping Act. The 2022 General Plan Safety Element outlines the following faults the pose a risk to Yucca Valley: Morongo Valley, Pinto Mountain, Johnson Valley, Burnt Mountain, and Eureka Peak. Development within the zones can occur following geologic investigations that identify development standards and requirements for development projects that are designed to mitigate potential earthquake-related hazards. California's Unreinforced Masonry Law requires all cities and counties in Seismic Zone 4, as identified in the California Building Code, to identify potentially hazardous unreinforced masonry buildings in their jurisdictions. The number of unreinforced masonry structures is unknown and warrants study.

Pinto Mountain Fault and Morongo Valley Fault

The Pinto Mountain fault bisects the middle of Town and runs parallel to Highway 62. The Pinto Mountain Fault Zone is an east-trending left-lateral strike-slip fault that extends from the Morongo Valley region to beyond Twentynine Palms. This fault most recently experienced a triggered sip in 1992, due to the shaking from the Landers earthquake. The Morongo Valley Fault splits just south from the Pinto Mountain Fault and continues through Morongo Valley.

Johnson Valley Fault

The Johnson Valley Fault exists within the northern Town limits. The 1992 M7.3 Landers earthquake rupture propagated from the Johnson Valley fault to the Homestead Valley Fault across Homestead Valley. Rupture was concentrated along the Kickapoo fault (a.k.a., Landers fault), a previously unrecognized north-south-striking, 5-km-long fault in Homestead Valley, and along small secondary fault traces east of the Kickapoo Fault. Seismic activity on the Johnson Valley Fault is expected to have a maximum magnitude of 7.3.

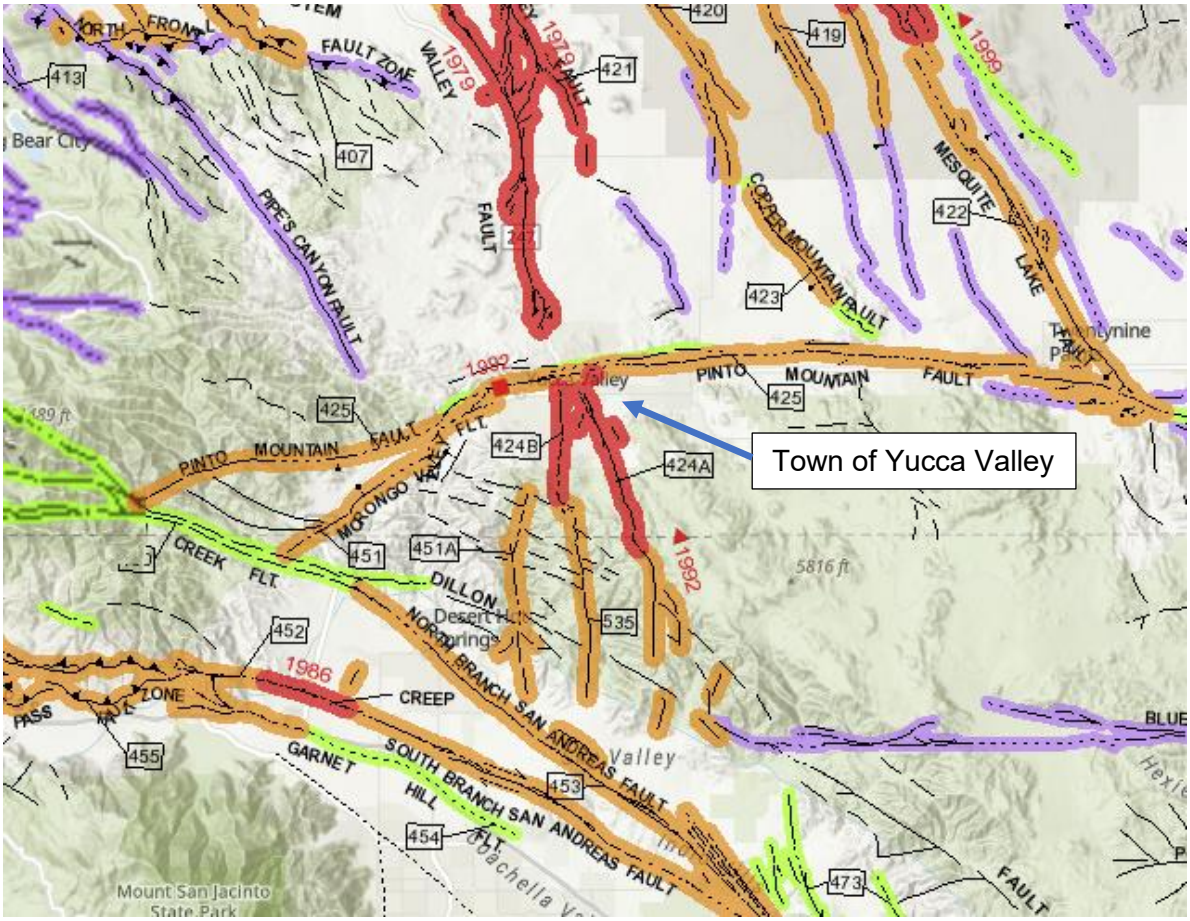
Burnt Mountain Fault

The Burnt Mountain Fault runs north and south along the southern portion of Yucca Valley. Like its neighbor to the east (the Eureka Peak Fault), the Burnt Mountain Fault was unknown until the Landers earthquake sequence brought it to the attention of geologists by breaking about 5 kilometers of the total length of this fault at the surface. Once this discovery was made, subsequent mapping determined the existence of roughly 16 kilometers more surface trace. While the offset displayed along the Burnt Mountain Fault in 1992 was only about 6 cm (and nearby Eureka Peak fault was offset only 21 cm), these faults are probably quite significant over geologic time in transferring slip from the San Andreas Fault Zone to the Eastern California Shear Zone.

Eureka Peak Fault

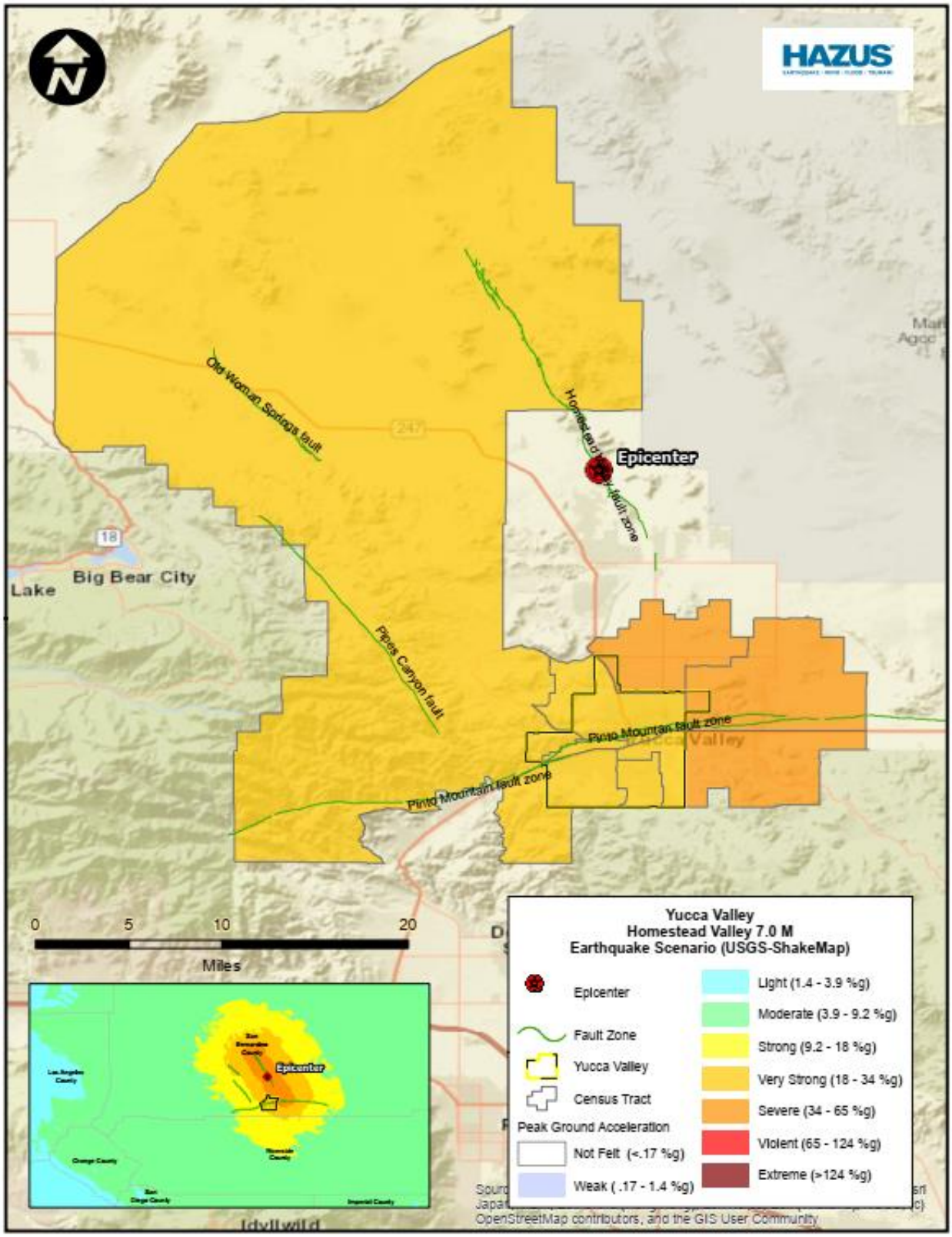
The Eureka Peak Fault is located in the southeast corner of the Town. Although a fairly short fault, it has a few significant claims to fame. First, the southernmost surface rupture during the Landers earthquake of 1992 occurred on this fault, breaking about 10 kilometers of the fault with a maximum surface offset of 21 centimeters. While a seemingly trivial point to note (compared to the offsets of several meters experienced elsewhere), this rupture actually marked the discovery of the Eureka Peak Fault, as similar rupture revealed the existence of the nearby Burnt Mountain Fault. Second, this fault probably handles a significant portion of the slip transferred from the San Andreas fault zone -- the Pacific/North American plate boundary -- to the Eastern California Shear Zone, northward across the Mojave, and may have been the fault responsible for the Joshua Tree earthquake in April 1992, which almost certainly prompted the Landers rupture to occur in June 1992. Seismic activity on the Eureka Peak Fault is expected to have a maximum magnitude of 6.8, potentially larger when combined with other faults.

Table 3.1: Proximity of Earthquake Faults
(Source: California Department of Conservation)

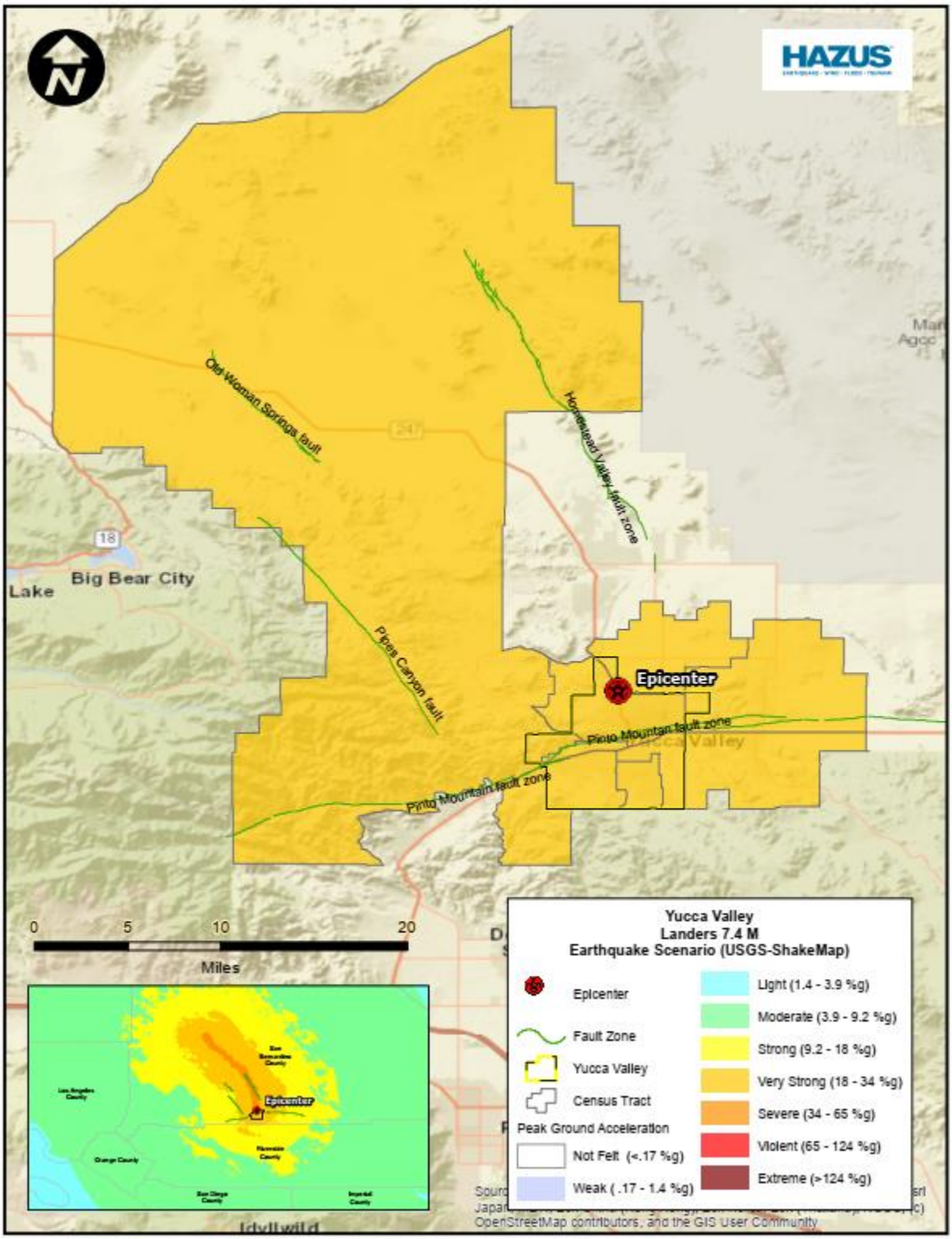


Q&A | ELEMENT B: RISK ASSESSMENT | B1-c.
Q: Does the plan describe the extent for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))
A: See **Map 3.3-3.5** below.

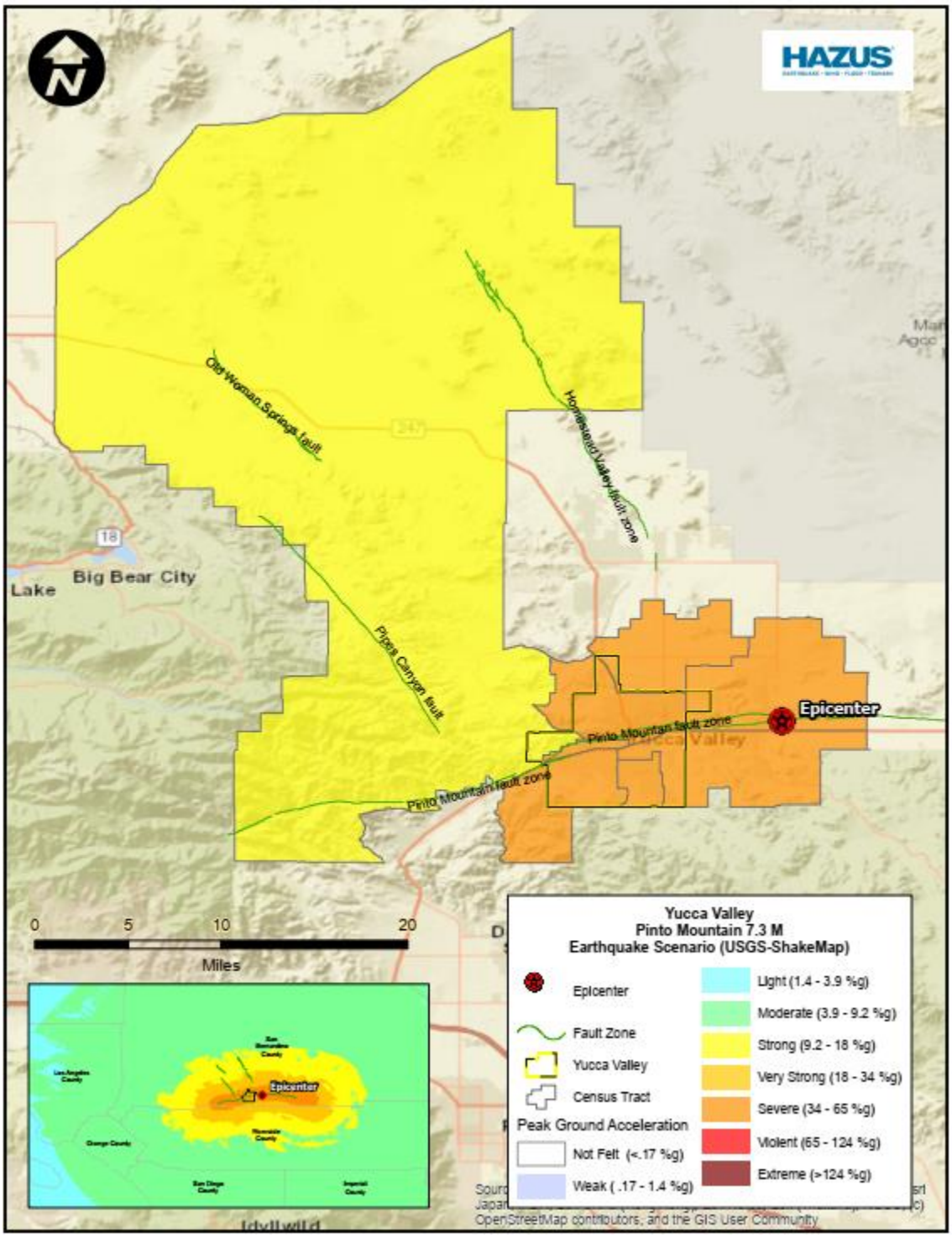
Map 3.3: Homestead Valley Fault M7.0
(Source: Emergency Planning Consultants)



Map 3.4: Landers Fault M7.4
(Source: Emergency Planning Consultants)



Map 3.5: Pinto Mountain Fault M7.3
(Source: Emergency Planning Consultants)



Earthquake Related Hazards

Ground shaking, landslides, and liquefaction are the specific hazards associated with earthquakes. The severity of these hazards depends on several factors, including soil and slope conditions, proximity to the fault, earthquake magnitude, and the type of earthquake.

Ground Shaking

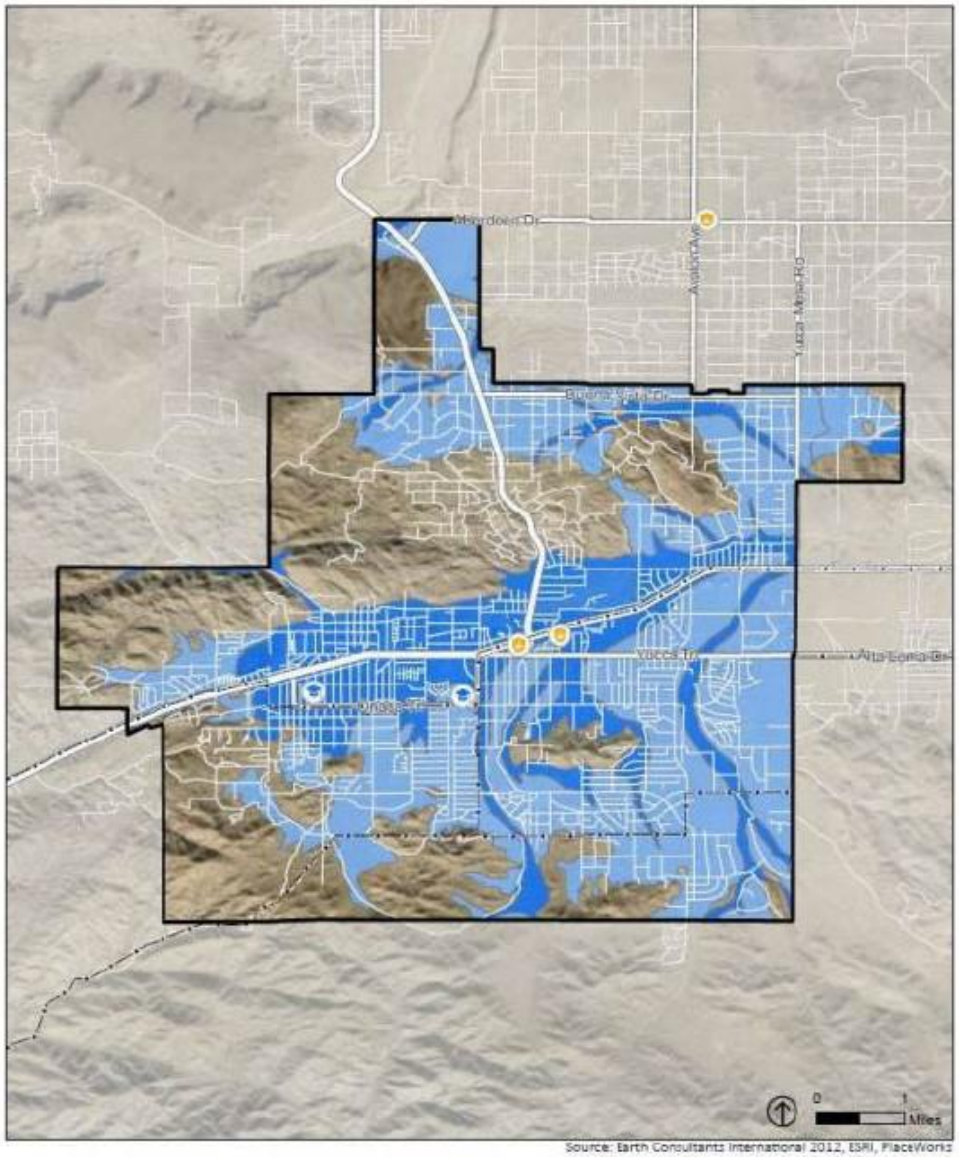
Ground shaking is the motion felt on the earth's surface caused by seismic waves generated by the earthquake. It is the primary cause of earthquake damage. The strength of ground shaking depends on the magnitude of the earthquake, the type of fault, and distance from the epicenter (where the earthquake originates). Buildings on poorly consolidated and thick soils typically see more damage than buildings on consolidated soils and bedrock.

Liquefaction

Liquefaction is a phenomenon in which the strength and stiffness of soil is reduced by earthquake shaking or other events. Liquefaction occurs in saturated soils, which are soils in which the space between individual soil particles is completely filled with water. This water exerts pressure on the soil particles that influences how tightly the particles themselves are pressed together. Prior to an earthquake, water pressure is relatively low. However, earthquake shaking can cause water pressure to increase to the point where the soil particles can readily move with respect to each other. Because liquefaction only occurs in saturated soil, its effects are most commonly observed in low lying areas. Typically, liquefaction is associated with shallow groundwater, which is less than 50 feet beneath the earth’s surface.

According to the General Plan Safety Element, portions of the town are susceptible to liquefaction, which is a potentially destructive secondary effect of strong seismic shaking. Liquefaction occurs primarily in saturated, loose, fine- to medium-grained soils in areas where the groundwater table is within approximately 50 feet of the surface. Shaking causes the soil to lose strength and behave as a liquid. Excess water pressure is vented upward through fissures and soil cracks and can result in a water-soil slurry flowing onto the ground surface. Liquefaction-related effects include loss of bearing strength, ground oscillations, lateral spreading, and flow failures or slumping. Site-specific geotechnical studies are the only practical and reliable way of determining the specific liquefaction potential of a site; however, a determination of general risk potential can be provided based on soil type and depth of groundwater. The Town has delineated areas of known and suspected liquefaction hazard. Liquefaction susceptibility in the town ranges from low to very low.

Map 3.6: Liquefaction Areas
(Source: General Plan Safety Element)



Q&A | ELEMENT B: RISK ASSESSMENT | B1-d.

Q: Does the plan include the history of **previous** hazard events for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Previous Earthquakes Impacting Yucca Valley, Previous Earthquakes Impacting San Bernardino County,** and **Table 3.7** below.

Previous Earthquakes Impacting Yucca Valley

According to the General Plan Safety Element, there have been several notable past earthquakes that were felt strongly in Yucca Valley, but the concentration of intense seismic activity in 1992 was the most destructive in recent history. The Joshua Tree Earthquake struck on April 22, 1992, most likely centered on the Eureka Peak fault, approximately 12 miles south of Highway 62. This magnitude 6.1 earthquake injured over 30 people. On June 28, 1992, the magnitude 7.3 Landers Earthquake rocked Southern California and was the largest quake to have occurred in the continental United States in 40 years. The epicenter was in Landers, approximately 10miles north of Yucca Valley. Several faults were involved, including Johnson Valley, which bisects the northern part of the Town. Several roads and buildings were damaged, over 400 people were injured in the region, and 3 people lost their lives, including one in Yucca Valley. The magnitude 6.4 Big Bear Earthquake struck approximately 3 hours after the Landers Earthquake. No additional damage in Yucca Valley was attributed to this quake.

Since the writing of the 2018 Mitigation Plan, there have been no significant earthquake events impacting the Town.

Previous Earthquakes Impacting San Bernardino County

According to the County of San Bernardino MJHMP, there have been 10 earthquakes greater than Magnitude 4.0 in the last five years. The table below lists these earthquakes.

Table 3.7: Previous Earthquakes Impacting San Bernardino County
(Source: County of San Bernardino MJHMP; FEMA Disaster Declaration, 2024)

Date	Name of Event
9/14/2011	Calimesa 4.1
1/15/2014	Fontana 4.4
7/5/2014	Running Springs 4.6
3/29/2014	Brea 5.1
7/25/2015	Fontana 4.2
9/16/2015	Big Bear Lake 4.0
12/30/2015	Muscoy 4.4
1/6/2016	Banning 4.4
7/3/2019	Ridgecrest 6.4
7/4/2019	Ridgecrest 7.1

Q&A | ELEMENT B: RISK ASSESSMENT | B1-e.

Q: Does the plan include the probability of future events for each identified hazard? Does the plan describe the effects of future conditions, including climate change (e.g., long-term weather patterns, average temperature and sea levels), on the type, location and range of anticipated intensities of identified hazards? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Probability of Future Earthquakes** below.

Probability of Future Earthquakes

Earthquakes occur every day throughout California. However, earthquakes that cause widespread catastrophic damage do not happen often. When conducting the risk assessment, the planning team determined that the probability of a catastrophic earthquake affecting Yucca Valley is rare with an annual probability of occurrence being between 1 in 10 and 1 in 100 years.

Q&A | ELEMENT B: RISK ASSESSMENT | B2-b.

Q: For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Climate Change Considerations** below.

Climate Change Considerations

According to an article published by PBS (See **Attachments**) "The connection between earthquakes and climate change is slightly less straightforward, and certainly less influential. Most earthquakes occur when tectonic plates within the Earth's crust change or move. Many things can lead to this, but where climate change comes into play is once again related to water. Earthquakes can be triggered or prevented by variability in stress on a fault between tectonic plates. Stress on these faults is impacted by surface water from rain or snow. When there is heavier rainfall, this precipitation and any subsequent flooding increases stress and decreases seismicity. When the season dries up and there's less water, the weight on the Earth's crust decreases and this can lead to micro-seismicity.

As of now, the majority of the connection between earthquakes and climate change is with micro-seismicity, or tiny earthquakes, which have magnitudes of less than zero and are so small that humans can't feel them. While additional connections can be made, such as impacts from pumping groundwater during droughts, connections between larger earthquakes and climate change have largely not been proven, though the rapid movement of glaciers has also been shown to cause glacial earthquakes."

Flood

Q&A | ELEMENT B: RISK ASSESSMENT | B1-a.

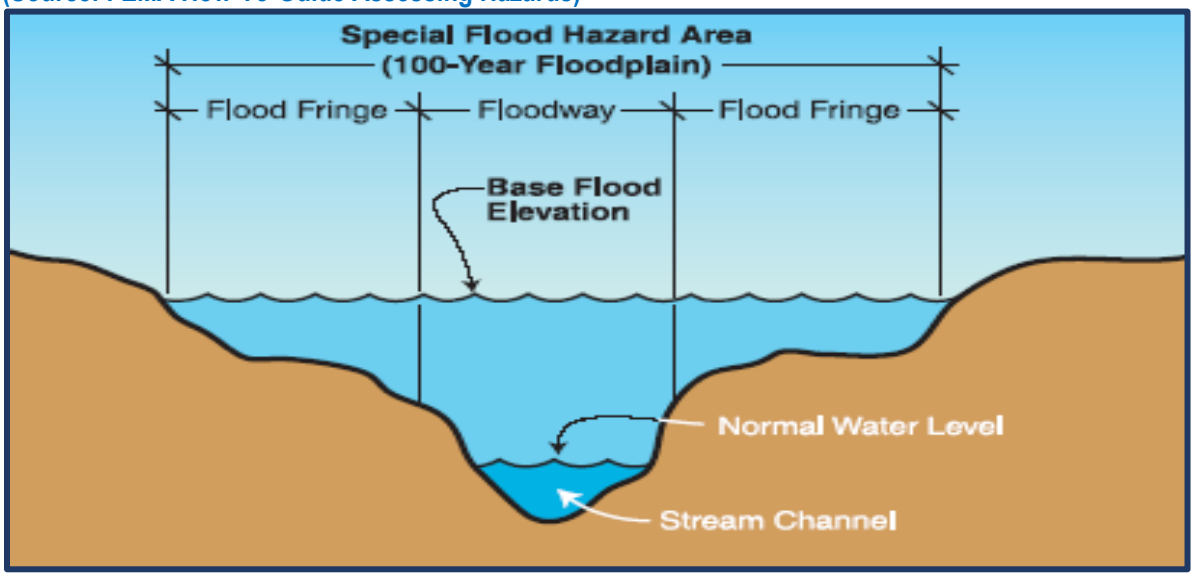
Q: Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Description** below.

Description

A floodplain is a land area adjacent to a river, stream, lake, estuary, or other water body that is subject to flooding. This area, if left undisturbed, acts to store excess flood water. The floodplain is made up of two sections: the floodway and the flood fringe. The 100-year flooding event is the flood having a one percent chance of being equaled or exceeded in magnitude in any given year. Contrary to popular belief, it is not a flood occurring once every 100 years. The 100-year floodplain is the area adjoining a river, stream, or watercourse covered by water in the event of a 100-year flood. Figure 3.1: Floodplain and Floodway shows the geographic relationship of the floodplain and the floodway.

Figure 3.1: Floodplain and Floodway
(Source: FEMA How-To-Guide Assessing Hazards)



Types of Flooding

Two types of flooding primarily affect the region: slow-rise or flash flooding. Slow-rise floods may be preceded by a warning period of hours or days. Evacuation and sandbagging for slow-rise floods have often effectively lessened flood related damage. Conversely, flash floods are most difficult to prepare for, due to extremely limited, if any, advance warning and preparation time.

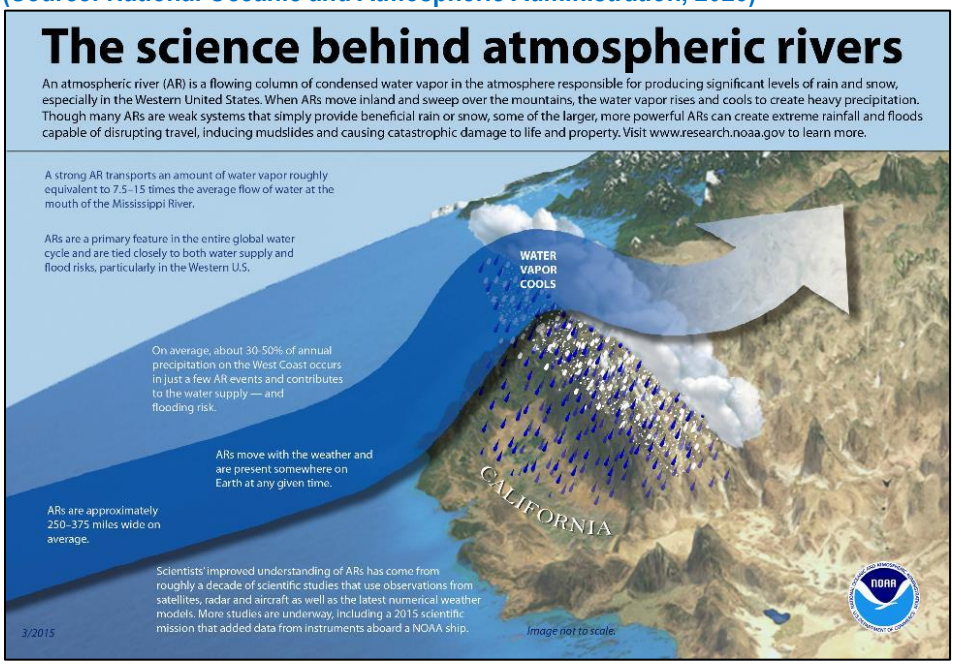
Atmospheric Rivers

According to the National Oceanic and Atmospheric Administration (NOAA), atmospheric rivers are relatively long, narrow regions in the atmosphere – like rivers in the sky – that transport most of the water vapor outside of the tropics. These columns of vapor move with the weather, carrying an amount of water vapor roughly equivalent to the average flow of water at the mouth of the

Mississippi River. When the atmospheric rivers make landfall, they often release this water vapor in the form of rain or snow.

Although atmospheric rivers come in many shapes and sizes, those that contain the largest amounts of water vapor and the strongest winds can create extreme rainfall and floods, often by stalling over watersheds vulnerable to flooding. These events can disrupt travel, induce mudslides, and cause catastrophic damage to life and property. A well-known example is the "Pineapple Express," a strong atmospheric river that can bring moisture from the tropics near Hawaii over to the US West Coast.

Figure 3.2: Atmospheric Rivers
(Source: National Oceanic and Atmospheric Administration, 2023)



While atmospheric rivers are responsible for great quantities of rain that can produce flooding, they also contribute to beneficial increases in snowpack. A series of atmospheric rivers fueled the strong winter storms that battered the U.S. West Coast from western Washington to southern California from December 10–22, 2010, producing 11 to 25 inches of rain in certain areas. These rivers also contributed to the snowpack in the Sierras, which received 75 percent of its annual snow by December 22, the first full day of winter.

Definitions of FEMA Flood Zone Designations

Flood zones are geographic areas that the FEMA has defined according to varying levels of flood risk. These zones are depicted on a community's Flood Insurance Rate Map (FIRM) or Flood Hazard Boundary Map. Each zone reflects the severity or type of flooding in the area.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-c.
Q: Does the plan describe the extent for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(ii)) **A:** See **Table 3.8** below.

Table 3.8: FEMA Flood Zones
(Source: FEMA)

Moderate to Low Risk Areas
In communities that participate in the NFIP, flood insurance is available to all property owners and renters in these zones:

ZONE	DESCRIPTION
B and X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. B Zones are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.
C and X (unshaded)	Area of minimal flood hazard usually depicted on FIRMs as above the 500-year flood level. Zone C may have ponding and local drainage problems that do not warrant a detailed study or designation as base floodplain. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100-year flood.

High Risk Areas

In communities that participate in the NFIP, mandatory flood insurance purchase requirements apply to all of these zones:

ZONE	DESCRIPTION
A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.
AE	The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones.
A1-30	These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a BFE (old format).
AH	Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
AO	River or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood control system (such as a levee or a dam). Mandatory flood insurance purchase requirements will apply, but rates will not exceed the rates for unnumbered A zones if the structure is built or restored in compliance with Zone AR floodplain management regulations.
A99	Areas with a 1% annual chance of flooding that will be protected by a Federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.

Undetermined Risk Areas

ZONE	DESCRIPTION
D	Areas with possible but undetermined flood hazards. No flood hazard analysis has been conducted. Flood insurance rates are commensurate with the uncertainty of the flood risk.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-b.

Q: Does the plan include information on the location of each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Local Conditions, Map 3.7** below.

Local Conditions

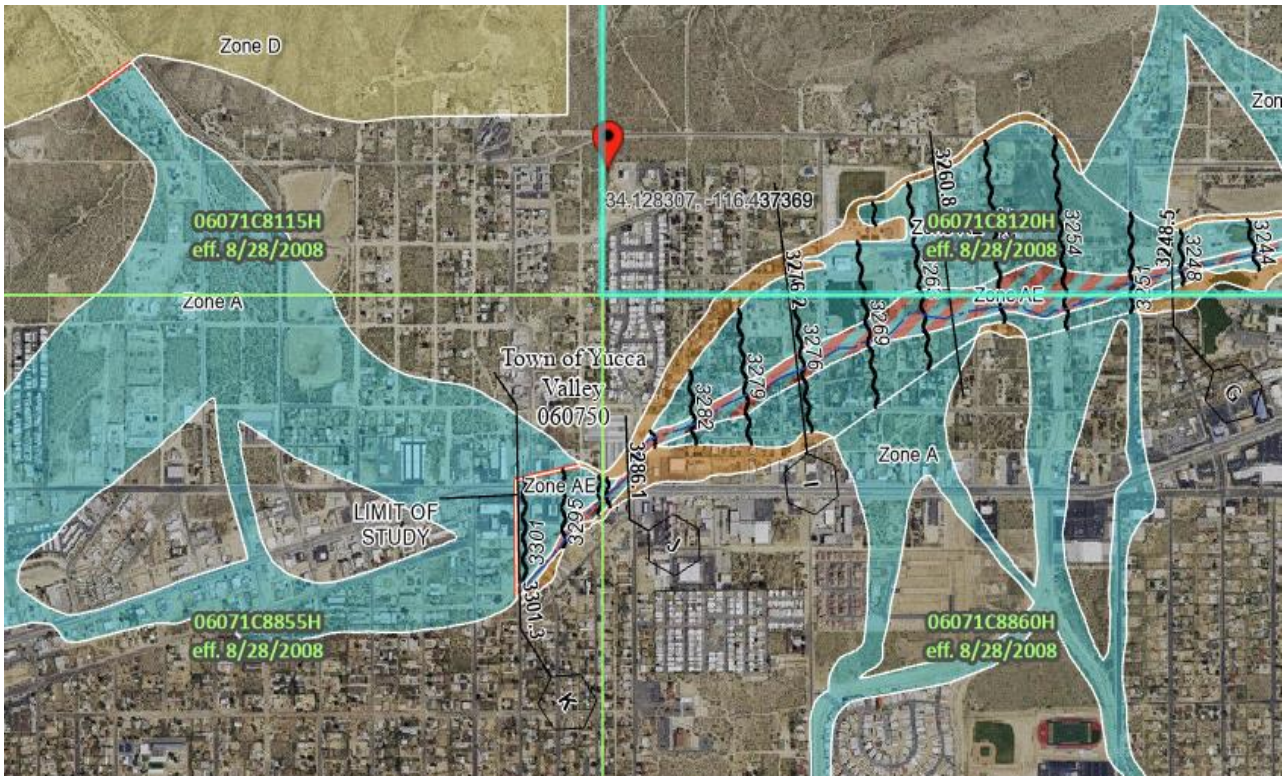
According to the General Plan Safety Element, FEMA identified the following areas in a 100-year flood zone: Yucca Wash, Water Canyon, Old Woman Springs Creek, Covington Wash, East and West Burnt Mountain Creeks, Long Canyon, Hospital Canyon, and Piñon Creek. These areas have little or no drainage infrastructure, undersized pipes where runoff exceeds pipe capacity

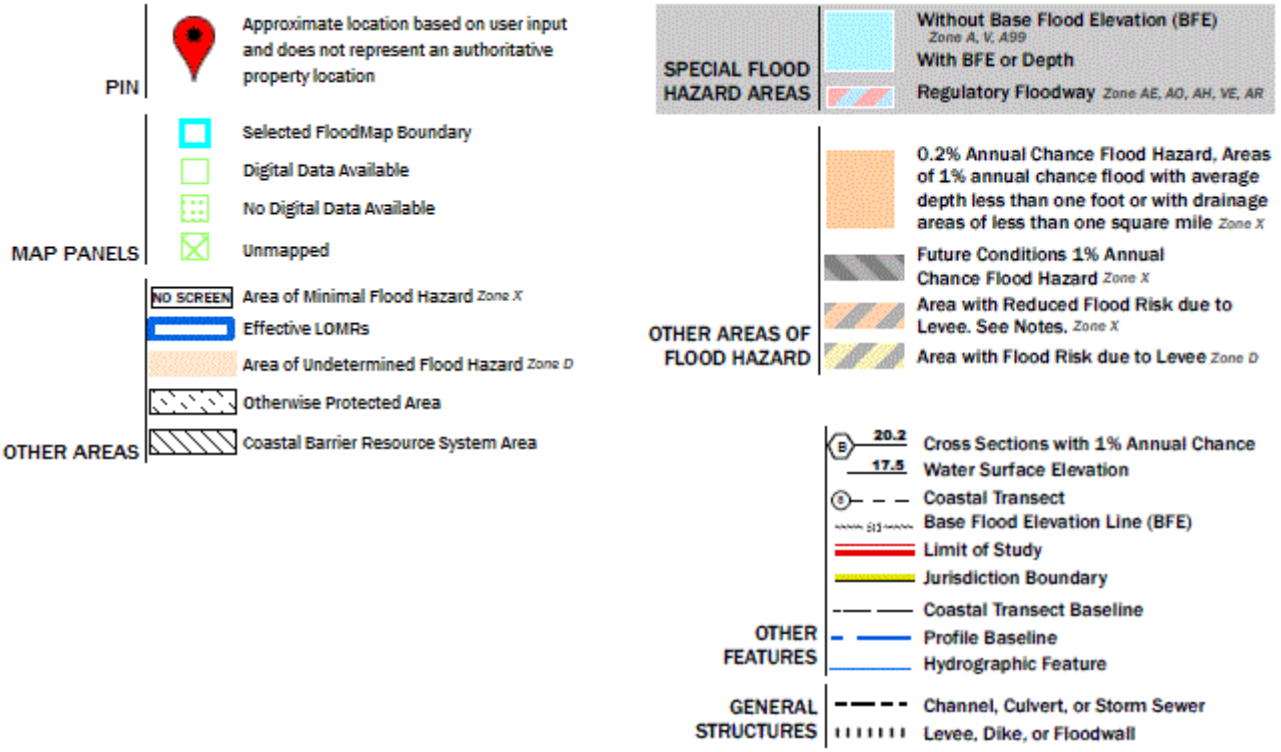
even for minor storms, obstructions, or damaged drainpipes. It is estimated that there are more areas affected by this flood zone that have yet to be identified by FEMA. Most of the100-year flood zones are concentrated around Yucca Wash, which crosses the center of community east to west, making flood control an important safety issue. This and other flood zones in Yucca Valley are shown in **Map 3.7**.

100-year events are not the only storms to cause flooding. Smaller storms can also result in property or infrastructure damage, especially when public and private floodways are not properly maintained. Floods are not only destructive to residential and commercial properties, but they can cause significant erosion to natural lands and ecosystems. Most of the existing development in Yucca Valley has been completed without significant alteration to the natural terrain. As a result, natural drainage courses pass through developed or semi-developed areas. Small channels pass through private yards, and some structures are built within the flow paths of shallow drainages. Most streets, many of which are unpaved, follow the natural contours of the land, crossing arroyos and gullies without the benefit of culverts or bridges. These crossings can quickly become filled with high-velocity floodwaters, trapping vehicles or washing them downstream.

Agencies responsible for flood control in Yucca Valley include FEMA, the Federal Insurance Administration (FIA), and the Department of Water Resources (DWR).

Map 3.7: Flood Zones - Town of Yucca Valley
(Source: FEMA Flood Map, 2024)





Q&A | ELEMENT B: RISK ASSESSMENT | B1-d.

Q: Does the plan include the history of **previous** hazard events for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Previous Flooding Impacting Yucca Valley, Previous Flooding Impacting San Bernardino County** and **Table 3.9** below.

Previous Flooding Impacting Yucca Valley

According to the General Plan – Safety Element, Yucca Valley is traversed by Yucca Wash, Water Canyon, Old Woman Springs Creek, Covington Wash, East and West Burnt Mountain Creeks, Long Canyon, Hospital Canyon, and Piñon Creek, and is at risk to both creek flooding and localized stormwater flooding. Historically, the desert region of San Bernardino County and the Town of Yucca Valley have been subject to flooding events primarily during the winter and spring months when river systems swell with heavy rainfall runoff. Typically, stormwater is kept within defined limits by a variety of storm drainage and flood-control measures. Occasionally, extended heavy rainfall results in floodwaters that exceed normal high-water boundaries and cause damage. Flooding has occurred both within the 100-and 500-year floodplains and in other localized areas. As land uses and climate conditions shift and as improvements are made to flood-control channels, the size of these flood zones is likely to change.

Most recent flood event was caused by Tropical Storm Hilary on August 19-20, 2023 when the community experienced 3 inches of rain. The Town distributed 25,000 sandbags to property owners. Also, the Town opened a shelter for the first time in nearly 2 decades.

Previous Flooding Impacting San Bernardino County

The desert areas of San Bernardino County contain many mountain ranges that are steep and experience summer thunderstorms causing flash floods in many dry washes on the desert floor. The water collects in dry lake beds throughout the desert area.

Flash flooding causes road and bridge wash outs and erosion of earthen channels and basins when they occur near these facilities. Cities and towns often experience street closures for several days due to sediment transport and road damage. Because of the sheet flow character of the desert, many private properties experience erosion and sediment deposits.

The urban valley also can experience flash flooding in its narrow canyons and within the many unimproved creeks and interim channels feeding the Santa Ana River. The valley floor in many areas is very flat so even minor rain events can produce flooding of roads and private property.

Table 3.9: Previous Flooding Impacting San Bernardino County (Source: FEMA Disaster Declaration, 2024)

Date	Location	Federal Declaration	State Executive Order/State of Emergency	Declaration Title
March 3, 2023	San Bernardino (County)	EM-3592-CA		Severe Winter Storms, Flooding, Landslides, and Mudslides
March 3, 2023	San Bernardino (County)	EM-3591-CA		Severe Winter Storms, Flooding, and Mudslides
January 26, 2011	San Bernardino (County)	DR-1952-CA		Severe Winter Storms, Flooding, and Debris And Mud Flows
February 2, 1993	San Bernardino (County)	DR-979-CA		Severe Winter Storm, Mud Slides, Land Slides, and Flooding
February 25, 1992	San Bernardino (County)	DR-935-CA		Rain/Snow/Windstorms, Flooding, Mudslides
September 19, 1983	San Bernardino (County)	DR-690-CA		Flash Flooding
July 1, 1983	San Bernardino (County)	DR-687-CA		Flooding
February 2, 1980	San Bernardino (County)	DR-615-CA		Severe Storms, Mudslides and Flooding
February 12, 1978	San Bernardino (County)	DR-547-CA		Coastal Storms, Mudslides and Flooding
September 21, 1976	San Bernardino (County)	DR-521-CA		Flooding, Tropical Storm Kathleen
January 1, 1969	San Bernardino (County)	DR-253-CA		Severe Storms and Flooding
January 1, 1967	San Bernardino (County)	DR-223-CA		Severe Storms and Flooding
December 5, 1965	San Bernardino (County)	DR-211-CA		Heavy Rains and Flooding

Q&A | ELEMENT B: RISK ASSESSMENT | B1-e.

Q: Does the plan include the probability of future events for each identified hazard? Does the plan describe the effects of future conditions, including climate change (e.g., long-term weather patterns, average temperature and sea levels), on the type, location and range of anticipated intensities of identified hazards? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Probability of Urban Future Events, Climate Change Considerations** below.

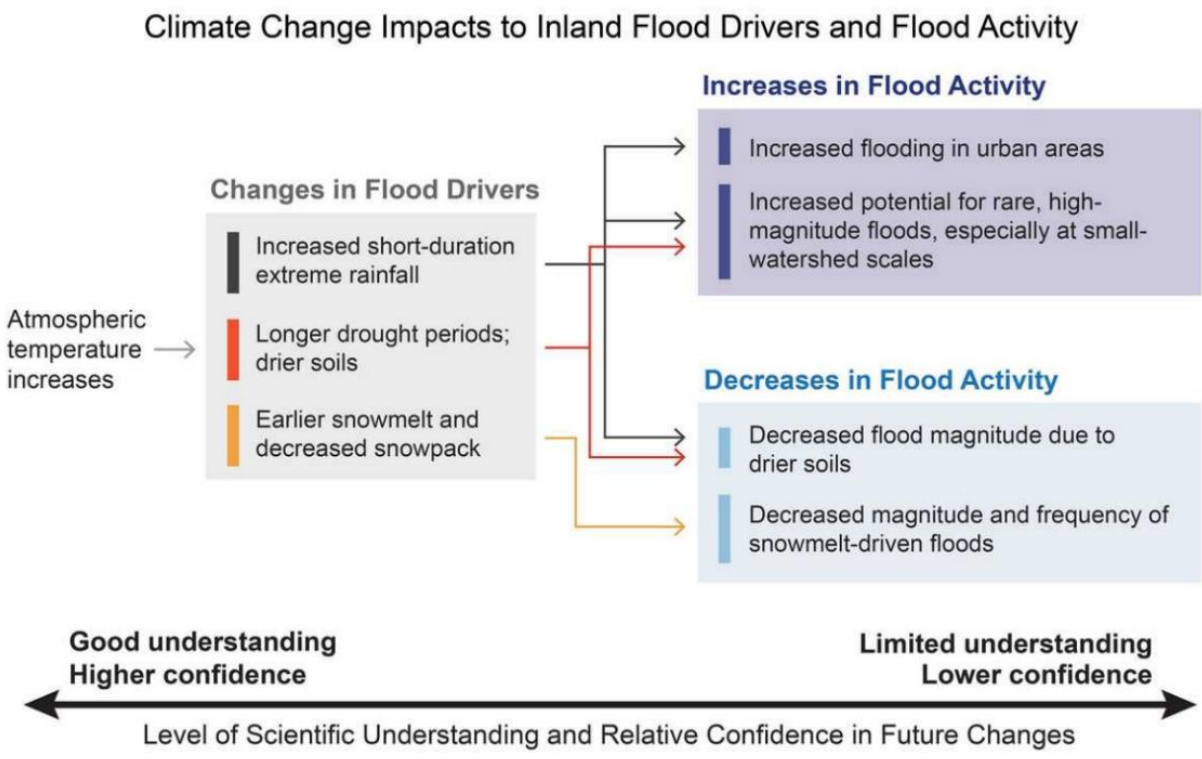
Probability of Future Flooding Events

When conducting the risk assessment, the planning team determined that the probability of a catastrophic urban flooding event affecting Yucca Valley is likely with an annual probability of occurrence being between 1 in 10 and 1 in 100 years.

Climate Change Considerations

According to the Fifth National Climate Assessment, extreme precipitation–producing weather systems ranging from tropical cyclones to atmospheric rivers are *very likely* to produce heavier precipitation at higher global warming levels. Recent increases in frequency, severity, and amount of extreme precipitation are expected to continue across the US even if global warming is limited to the Paris Agreement targets. Changes in extreme precipitation events differ seasonally—they are *very likely* to increase in spring and winter across the continental US and Alaska and in eastern and northwestern states in the fall, while projected changes in the summer season are more uncertain.

Figure 3.3: Climate Change Impacts to Inland Flood Drivers and Flood Activity
Source: Fifth National Climate Assessment (2023)

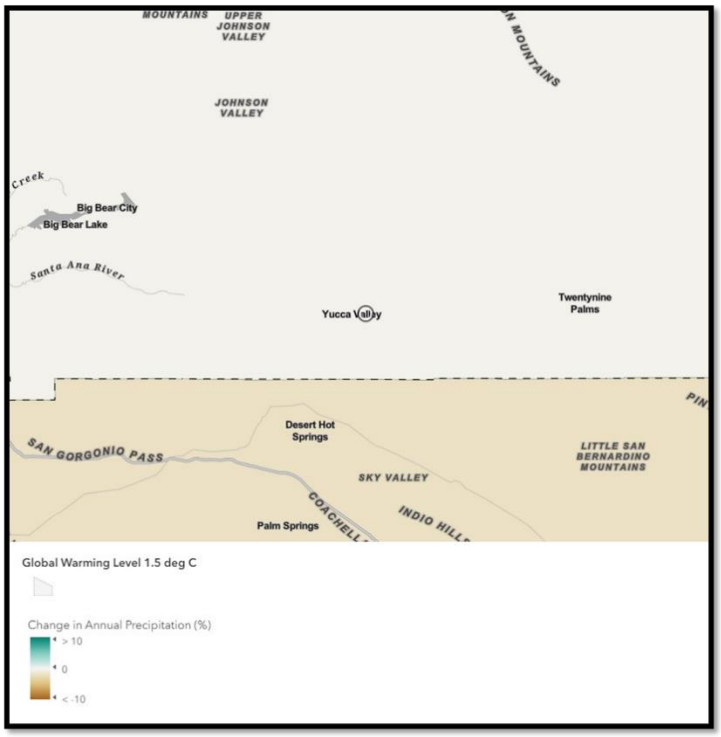


According to Cal-Adapt, Yucca Valley has a 30-year average baseline of 6.0 inches of precipitation. During the mid-century (2035-2064) this 30-year average is projected to drop slightly to 5.6 inches of precipitation under the high emissions scenario. During the end-century (2070-2099) it is projected that Yucca Valley's 30-year average precipitation will rise to 5.7 inches.

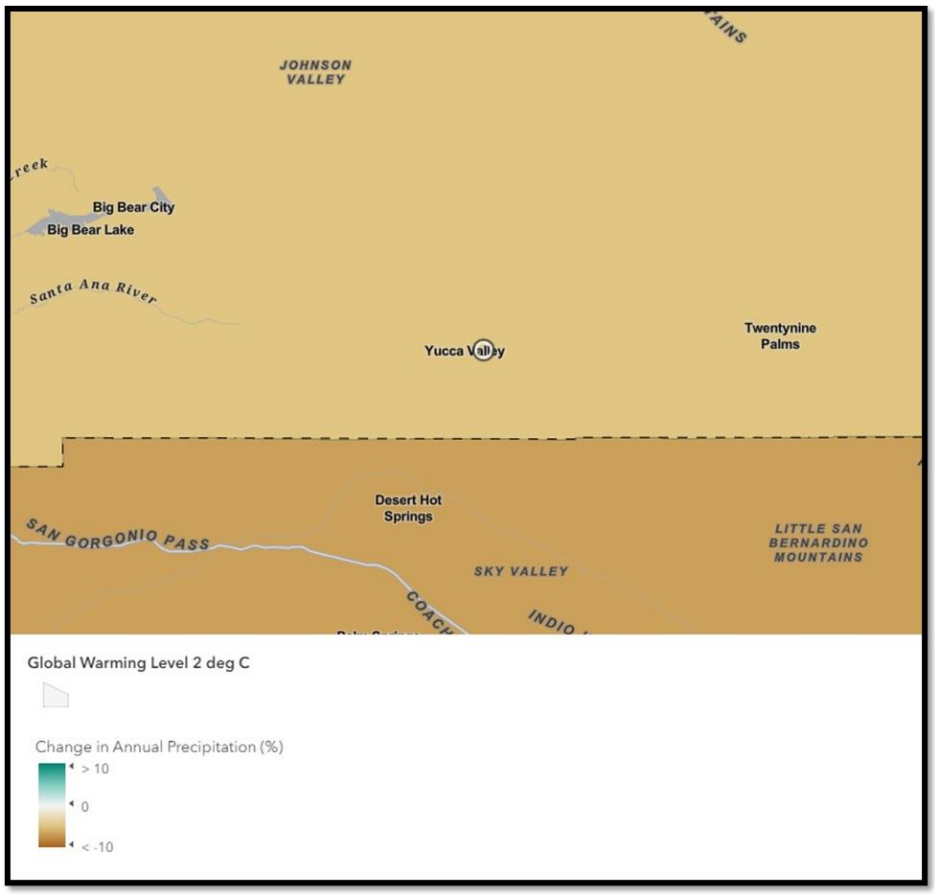
The maps are from the National Climate Assessment Interactive Atlas Explorer and depict the change in the number of days with extreme precipitation for 4 different global warming levels. The first level is if Earth's Temperature rises 2.7 degrees Fahrenheit (1.5 degrees Celsius) above the pre-industrial average. The effects of a 1.5 degree Celsius change in annual precipitation are depicted in **Map 3.8**. Under this scenario, the annual total precipitation in San Bernardino County is expected to remain unchanged compared to data from 1991 to 2020. The second level is if Earth's Temperature rises 3.6 degrees Fahrenheit (2 degrees Celsius) above the pre-industrial average and is depicted in **Map 3.9.** Under this scenario, the annual total precipitation for San Bernardino County is expected to decrease by 5% compared to 1991 to 2020. The third level is if Earth's Temperature rises 5.4 degrees Fahrenheit (3 degrees Celsius) above the pre-industrial average and is depicted in **Map 3.10**. Under this scenario, the annual total precipitation in San Bernardino County is projected to increase by 1% compared int 1991 to 2020. The fourth level is if Earth's Temperature rises 7.2 degrees Fahrenheit (4 degrees Celsius) above the pre-industrial average and is depicted in **Map 3.11**. Under this scenario, the annual total precipitation in San Bernardino County is projected to increase by 4% compared to 1991 to 2020.

The increase in the annual precipitation, especially in Global Warming Levels 3 or 4, will increase the probability Yucca Valley, and more broadly San Bernardino County, will experience flooding events. An increase in flood events will strain the town's capacity to respond to maintenance and repair activities due to flood events. Additional infrastructure modifications and retrofitting may be required for the town to better respond to and recover from flooding events.

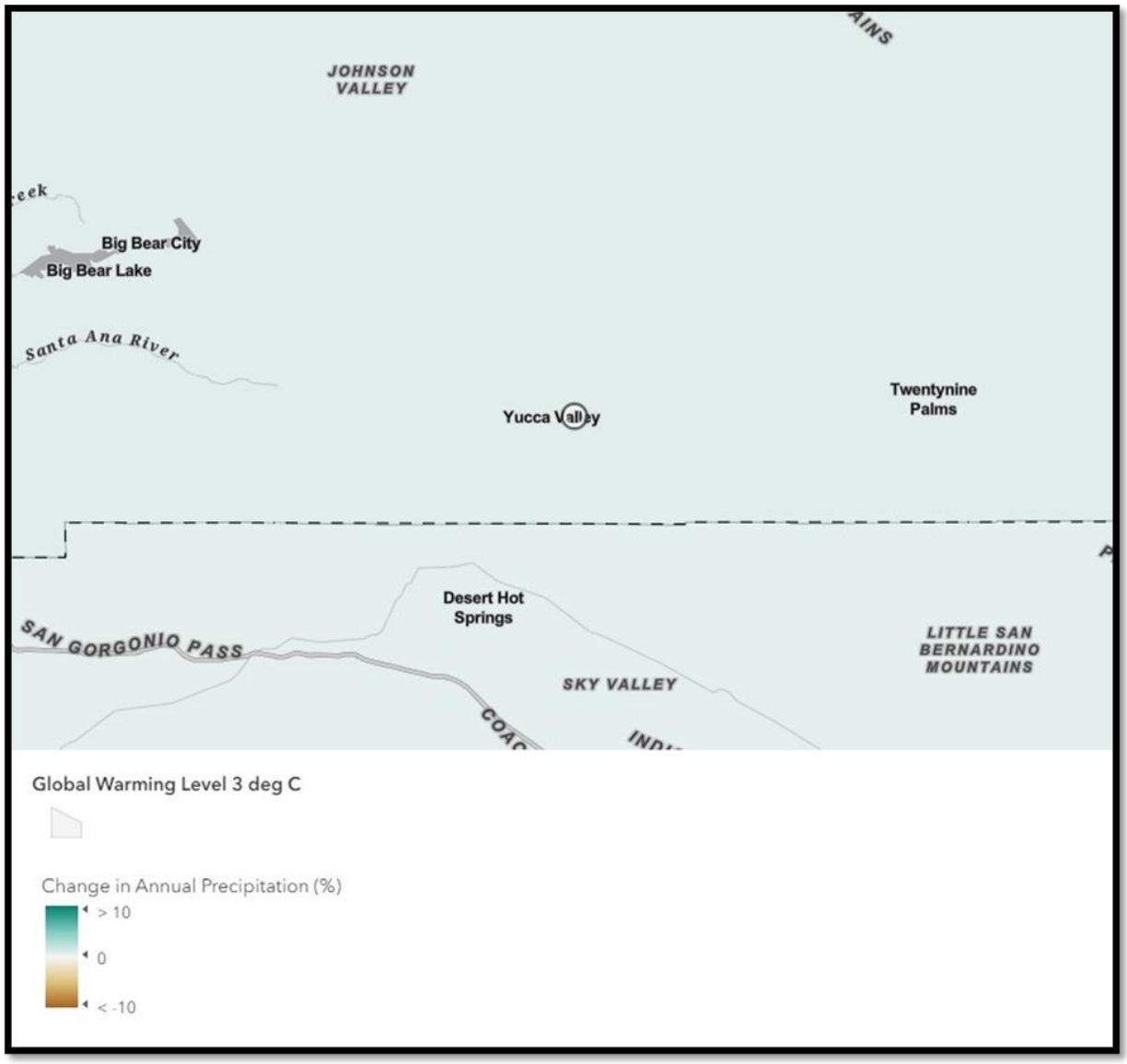
Map 3.8: Global Warming Level 1.5 deg C
Source: Fifth National Climate Assessment



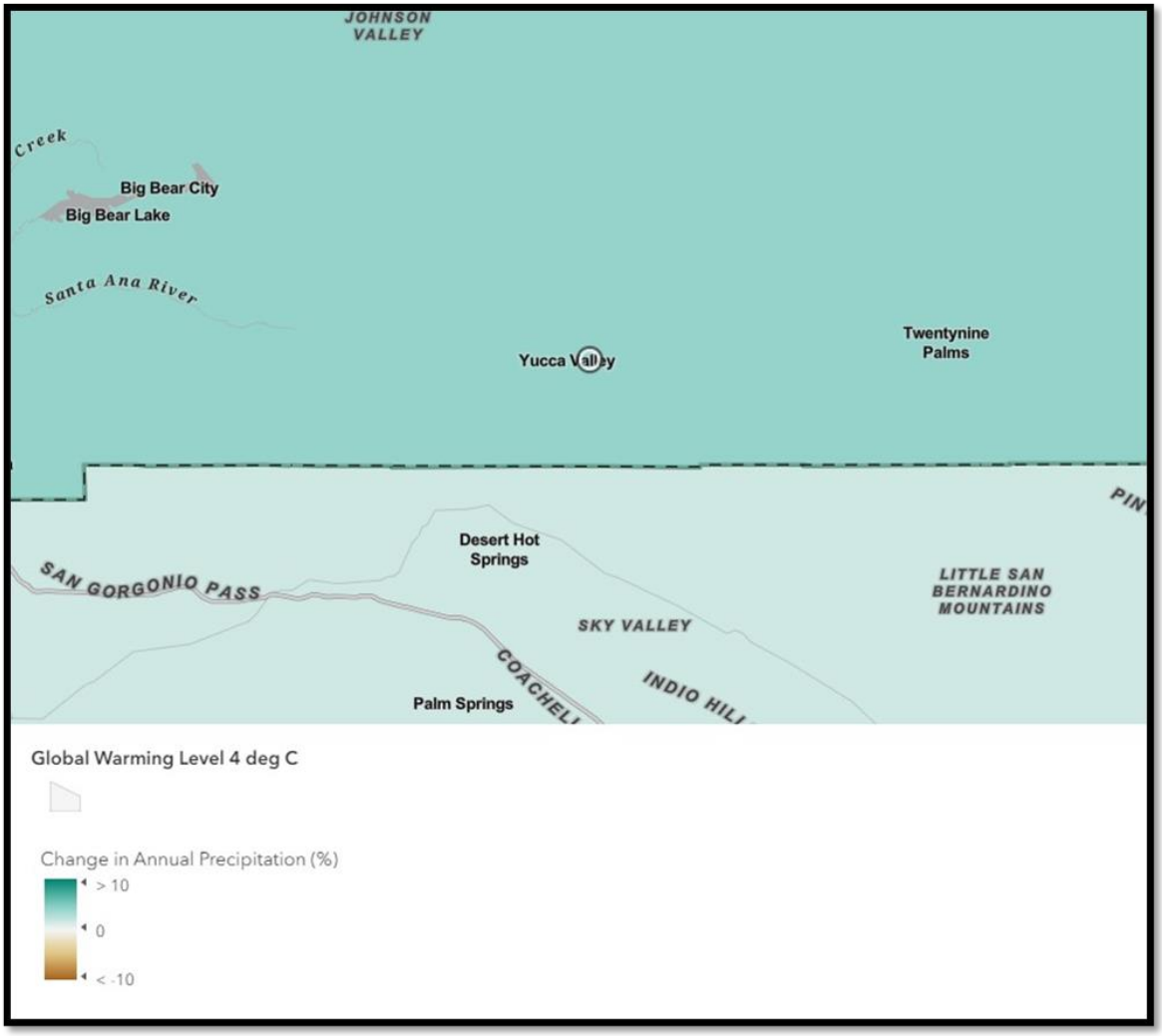
Map 3.9: Global Warming Level 2 deg C
Source: Fifth National Climate Assessment



Map 3.10: Global Warming Level 3 deg C
Source: Fifth National Climate Assessment



Map 3.11: Global Warming Level 4 deg C
Source: Fifth National Climate Assessment



According to the General Plan Safety Element, "Floods are among the most damaging natural hazards in Yucca Valley, and climate change is expected to make flood events worse. Although climate change may not change average precipitation levels significantly, scientists expect that it will cause more years with extreme precipitation events. This means that more years are likely to see particularly intense storm systems that drop enough precipitation over a short enough period to cause flooding. Although Southern California is likely to experience a decrease in overall precipitation levels from climate change, the region is also expected to see an increase in the number of extreme precipitation events. A meteorological phenomenon known as the "atmospheric river", a narrow stream of extremely moist air, is frequently responsible for the more intense storms that strike California. Atmospheric rivers generally deliver high levels of precipitation, up to 50 percent of the state's total precipitation in any given year. Floodwaters inundating a low-lying roadway."

"Because of this, floods are expected to occur more often in Yucca Valley and climate change may expand the parts of the town that are considered flood-prone. Although there are no specific flooding projections for the town, flood events are expected to become more frequent, and it is possible that the areas subject to flooding will expand."

Drought

Q&A | ELEMENT B: RISK ASSESSMENT | B1-a.
Q: Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area? (Requirement 44 CFR § 201.6(c)(2)(i)) **A:** See **Description** below.

Description

Drought is defined as a deficiency of precipitation over an extended period of time, usually a season or more. This deficiency results in a water shortage for some activity, group, or environmental sector. Drought should be considered relative to some long-term average balance between precipitation and evapotranspiration (i.e., evaporation + transpiration) in a particular area, a condition often perceived as "normal". It is also related to the timing (e.g., principal season of occurrence, delays in the start of the rainy season, occurrence of rains in relation to principal crop growth stages) and the effectiveness of the rains (e.g., rainfall intensity, number of rainfall events).

Other climatic factors such as high temperature, high wind, and low relative humidity are often associated with it in many regions of the world and can significantly aggravate its severity. Drought should not be viewed as merely a physical phenomenon or natural event. Its impacts on society result from the interplay between a natural event (less precipitation than expected resulting from natural climatic variability) and the demand people place on water supply. Human beings often exacerbate the impact of drought. Recent droughts in both developing and developed countries and the resulting economic and environmental impacts and personal hardships have underscored the vulnerability of all societies to this natural hazard.

One dry year does not normally constitute a drought in California but serves as a reminder of the need to plan for droughts. California's extensive system of water supply infrastructure — its reservoirs, groundwater basins, and inter-regional conveyance facilities — mitigates the effect of short-term dry periods for most water users. Defining when a drought begins is a function of drought impacts to water users. Hydrologic conditions constituting a drought for water users in one location may not constitute a drought for water users elsewhere, or for water users having a different water supply. Individual water suppliers may use criteria such as rainfall/runoff, amount of water in storage, or expected supply from a water wholesaler to define their water supply conditions.

Drought is a gradual phenomenon. Although droughts are sometimes characterized as emergencies, they differ from typical emergency events. Most natural disasters, such as floods or forest fires, occur relatively rapidly and afford little time for preparing for disaster response. Droughts occur slowly, over a multiyear period. There is no universal definition of when a drought begins or ends. Impacts of drought are typically felt first by those most reliant on annual rainfall -- ranchers engaged in dry land grazing, rural residents relying on wells in low-yield rock formations, or small water systems lacking a reliable source. Criteria used to identify statewide drought conditions do not address these localized impacts. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline.

There are four different ways that drought can be defined:

- **Meteorological** - a measure of departure of precipitation from normal. Due to climatic differences, what is considered a drought in one location may not be a drought in another location.
- **Agricultural** - refers to a situation when the amount of moisture in the soil no longer meets the needs of a particular crop.
- **Hydrological** - occurs when surface and subsurface water supplies are below normal.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-c.

Q: Does the plan describe the extent for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))
A: See **U.S. Drought Monitor, Figure 3.4** below.

US Drought Monitor

The US Drought Monitor (USDM) is a map that is updated weekly to show the location and intensity of drought across the country. The USDM uses a five-category system (USDM, 2021):

- D0—Abnormally Dry
  - Short-term dryness slowing planting, growth of crops
  - Some lingering water deficits
  - Pastures or crops not fully recovered
- D1—Moderate Drought
  - Some damage to crops, pastures
  - Some water shortages developing
  - Voluntary water-use restrictions requested
- D2—Severe Drought
  - Crop or pasture loss likely
  - Water shortages common
  - Water restrictions imposed
- D3—Extreme Drought
  - Major crop/pasture losses
  - Widespread water shortages or restrictions
- D4—Exceptional Drought
  - Exceptional and widespread crop/pasture losses
  - Shortages of water creating water emergencies

The USDM categories show experts' assessments of conditions related to drought. These experts check variables including temperature, soil moisture, stream flow, water levels in reservoirs and lakes, snow cover, and meltwater runoff. They also check whether areas are showing drought impacts such as water shortages and business interruptions. Associated statistics show what proportion of various geographic areas are in each category of dryness or drought, and how many people are affected. US Drought Monitor data go back to 2000.

Figure 3.4: US Drought Monitor – San Bernardino County, California
(Source: Website – U.S. Drought Monitor 6.4.2024)

Map released: Thurs. May 30, 2024

Data valid: May 28, 2024 at 8 a.m. EDT

Intensity

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
Current	2024-05-28	73.55	26.45	12.55	4.23	0.72	0.06	44
Last Week to Current	2024-05-21	72.62	27.38	12.55	4.18	0.75	0.06	45
3 Months Ago to Current	2024-02-27	53.16	46.84	21.59	7.79	1.49	0.14	78
Start of Calendar Year to Current	2023-12-26	45.71	54.29	32.35	16.74	6.44	1.16	111
Start of Water Year to Current	2023-09-26	43.65	56.35	38.23	22.46	10.15	2.82	130
One Year Ago to Current	2023-05-30	49.95	50.05	18.95	8.14	3.28	1.24	82

Q&A | ELEMENT B: RISK ASSESSMENT | B1-b.

Q: Does the plan include information on the location of each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Local Conditions** below.

Local Conditions

According to the San Bernardino County Vulnerability Assessment (CVA), San Bernardino County depends on both local and imported water sources to supply customers. Many commercial and residential customers rely on groundwater pumping and direct extraction from surface water bodies, including lakes and rivers. In addition, the State Water Project delivers water from the Sierra Nevada Mountains to San Bernardino County. Unfortunately, Southern California is highly prone to drought conditions that reduces these vital water sources. In addition to affecting human water supply, drought can have a significant impact on biological resources such as pinyon-juniper woodlands, conifer forests, grasslands, and marshes and seasonal wetlands.

All of Yucca Valley is vulnerable to drought.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-d.

Q: Does the plan include the history of **previous** hazard events for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Previous Drought Impacting Yucca Valley,** and **Previous Drought Impacting San Bernardino County,** and **Table 3.10** below.

Previous Drought Impacting Yucca Valley

Fortunately, there is no history of severe drought impacting Yucca Valley. Even so, the town has embraced state-level requirements to conserve water.

According to the Municipal Code "Landscaping and Water Conservation", the town promotes the value and benefits of landscapes while recognizing the need to use water and other resources as efficiently as possible. In compliance with applicable state standards and guidelines, this chapter establishes minimum landscape standards for all uses for the purpose of enhancing the appearance of developments, reducing heat and glare, controlling soil erosion, conserving water, establishing a buffer and/or screen between residential and nonresidential land uses, and ensuring the ongoing maintenance of landscape areas. Water conservation measures shall be addressed through landscape and irrigation design. (Ord. 254, 12-16-2014)

Previous Drought Impacting San Bernardino County

According to the San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan, the region has experienced droughts as recent as 2018.

- The 2018 California State MHMP states that from 1950 to 2018, there have been eight drought-related State Emergency Proclamations in California. for San Bernardino County, there have been six drought events since 1896. Previous occurrences of drought are described as follows:
- 1975 to 1977: California experienced the two driest years (1976 and 1977) in the State's history in 1976 and 1977. The drought was declared an Emergency (FEMA-EM-3023) on January 20, 1977. Total crop damage statewide totaled $2.67 billion dollars for both years ($888.5 million in 1976 and $1.8 billion in 1977).
- 2006 to 2009: California State declared a three-year drought of below-average rainfall, low snowmelt runoff, and the largest court-ordered water restricting in the state's history. The dry conditions damaged crops, deteriorated water quality, and caused extreme wildfire danger. Approximately $300 million in agricultural revenue loss, and a potential $3 billion in economic losses over time.
- 2012 to 2018: San Bernardino County first declared a local drought emergency in 2014. As of May 23rd, 2017, San Bernardino County and the City of Rancho Cucamonga had both submitted local Emergency Proclamations. This ongoing drought is the most severe drought in over 100 years. To abide by the State Water Resources Control Board's mandatory water reductions, the San Bernardino Municipal Water Department Board of Water Commissioners authorized implementation of Stage IIA of the department's Water Supply Contingency Plan on June 1, 2015. The State Water Board will adjust emergency water conservation regulations through the end of January 2017,

in recognition of the differing water supply conditions across the state and develop proposed emergency water restrictions for 2017 if the drought persists.

- 2020-2022: All of San Bernardino County is in a severe drought with water restrictions. Economic losses continue to increase from reduced tourism in the local mountains and fire risk continues to increase from drying vegetation.

Table 3.10 outlines the State of California drought related executive orders. There were no federal declarations related to droughts found for San Bernardino County.

Table 3.10: Drought Related Executive Orders in San Bernadino County (Source: Cal OES Open State of Emergency Proclamations, 2024)

Date	Location	State Executive Order	Cause
May 10, 2021	San Bernadino County	N-10-21 N-7-22 N-3-23 N-4-23 N-5-23 N-3-24	Drought Conditions

Q&A | ELEMENT B: RISK ASSESSMENT | B1-e.

Q: Does the plan include the probability of future events for each identified hazard? Does the plan describe the effects of future conditions, including climate change (e.g., long-term weather patterns, average temperature and sea levels), on the type, location and range of anticipated intensities of identified hazards? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Probability of Future Events, Climate Change Considerations** below.

Probability of Future Events

Droughts are not uncommon. However, droughts that cause widespread catastrophic impacts do not happen often. When conducting the risk assessment, the planning team determined that the probability of a catastrophic drought affecting Yucca Valley is probable with an annual probability of occurrence being between 1 in 100 and 1 in 1000 years.

Climate Change Considerations

According to the Fifth National Climate Assessment, drought is such a complex phenomenon that it is a challenge to even define what it is: more than 150 different definitions have appeared in scientific literature. Broadly, drought results when there is a mismatch between moisture supply and demand. Meteorological drought happens when there is a severe or ongoing lack of precipitation. Hydrological drought results from deficits in surface runoff and subsurface moisture supply. Drying soil moisture affects crop yields and can lead to agricultural droughts. The timing of droughts is also complex. Droughts can last for weeks or decades. They may develop slowly over months or come on rapidly. A drought may be immediately apparent or detectable only in retrospect.

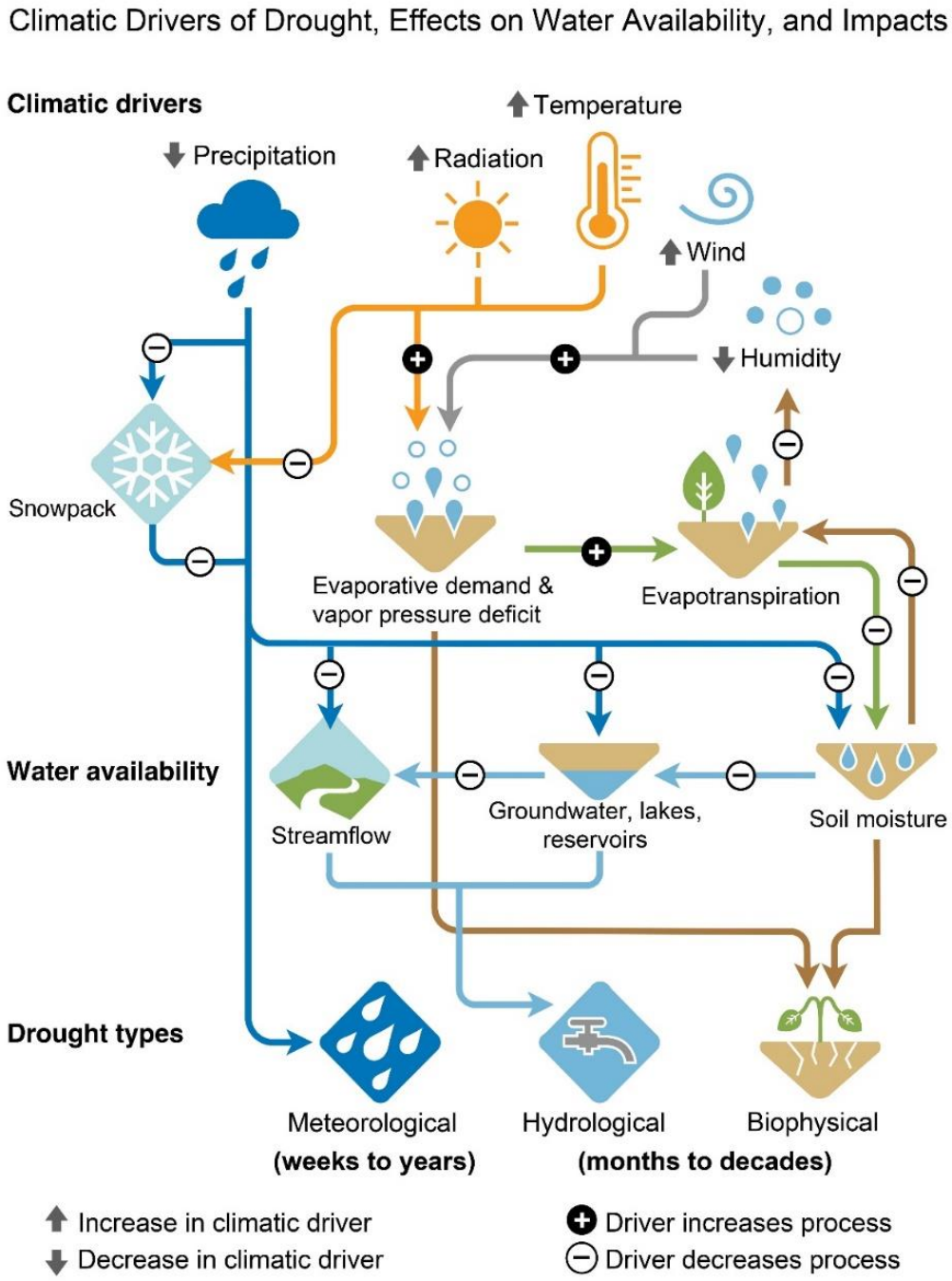
Despite this complexity, some robust regional trends are emerging. Colorado River streamflow over the period 2000–2014 was 19% lower than the 20th-century average, largely due to a reduction in snowfall, less reflected sunlight, and increased evaporation. The period 2000–2021

in the Southwest had the driest soil moisture of any period of the same length in at least the past 1,200 years. While this drought is partially linked to natural climate variability, there is evidence that climate change exacerbated it, because warmer temperatures increase atmospheric "thirst" and dry the soil. Droughts in the region are lasting longer and reflect not a temporary extreme event but a long-term aridification trend—a drier "new normal" occasionally punctuated by periods of extreme wetness consistent with expected increases in precipitation volatility in a warming world.

The Southwest is the only region in which the total area of unusually dry soil moisture is increasing. In the eastern regions of the country, hydrological droughts have become less frequent since the late 19th century due to increases in precipitation that compensate for warming-driven increases in evaporation. However, there is evidence that the likelihood of drought in the Northeast did not decrease as much as would be expected given these wetter conditions and that higher increases in evapotranspiration make the Southeast more drought-prone than the Northeast. Additionally, much of the US is vulnerable to rapid-onset flash droughts that can materialize in a matter of days, driven by extreme high temperatures or wind speeds and a lack of rainfall. These events are difficult to predict and prepare for and can have outsized impacts. There is evidence that these events are drying out soil more quickly as the world warms.

Climate change alters the hydrologic cycle and is expected to increase drought in some regions through various process pathways. The figure below shows how climate change alters the hydrologic cycle. According to the Fifth National Climate Assessment (2023), changes in climatic drivers (e.g., precipitation, temperature, wind, etc.) affect different aspects of the hydrologic cycle (e.g., evapotranspiration, snowpack, streamflow, soil moisture). In turn, these hydrologic shifts translate into changes in the severity, frequency, and risk of different drought types. Plus, and minus signs denote the direction of change in the driver that would cause increases in drought. For example, where precipitation declines (down arrow), all drought types will increase because this reduces snowpack, streamflow, groundwater and reservoir storage, and soil moisture. Similarly, increasing temperatures (up arrow) are also expected to increase hydrological and biophysical drought by reducing snowpack and increasing evaporative losses from streams, surface reservoirs, and soils.

Figure 3.5: Climate Drivers of Drought, Effects on Water Availability, and Impacts
Source: Fifth National Climate Assessment (2023)



According to the General Plan Safety Element Climate change is expected to increase the frequency and severity of droughts that cause soil to dry out and become compacted." This will require the Town to encourage water conservation measures and monitor fire weather closely to prevent wildfires.

Wildfire

Q&A | ELEMENT B: RISK ASSESSMENT | B1-a.

Q: Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area? (Requirement 44 CFR § 201.6(c)(2)(i))
A: See **Description** below.

Description

Wildfire is an uncontrolled fire spreading through vegetative fuels and exposing or possibly consuming structures. They often begin unnoticed and spread quickly. Naturally occurring and non-native species of grass, brush, and trees fuel wildfires. A wildland fire is a wildfire in an area in which development is essentially nonexistent, except for roads, railroads, power lines and similar facilities. A wildland/urban interface fire is a wildfire in a geographical area where structures and other human development meet or intermingle with wildland or vegetative fuels.

Wildfire Characteristics

There are three categories of wildland/urban interface fire: The classic wildland/urban interface exists where well-defined urban and suburban development presses up against open expanses of wildland areas; the mixed wildland/urban interface is characterized by isolated homes, subdivisions, and small communities situated predominantly in wildland settings.

The occluded wildland/urban interface exists where islands of wildland vegetation occur inside a largely urbanized area. Certain conditions must be present for significant interface fires to occur. The most common conditions include hot, dry and windy weather; the inability of fire protection forces to contain or suppress the fire; the occurrence of multiple fires that overwhelm committed resources; and a large fuel load (dense vegetation). Once a fire has started, several conditions influence its behavior, including fuel topography, weather, drought, and development.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-b.

Q: Does the plan include information on the location of each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))
A: See **Local Conditions, Map 3.11** below.

Local Conditions

Yucca Valley is in the lower Mojave section of the Southeastern Deserts Bioregion, an area characterized by isolated, steep-sided mountain ranges separated by broad alluvial basins. Lower elevation areas of the region feature desert scrub or are barren of vegetation. The limited amount of vegetation and low surface fuel loads typically hinder the spread of fire. Higher elevations both inside and outside the Town, including areas such as Joshua Tree National Park, feature a variety of vegetation types. Because of the increased diversity of surface fuel and relatively higher loads and continuity of vegetation, the spread of fire in these regions is higher than on the desert floor. This is reflected in the higher number of fires reported historically in Joshua Tree National Park and in the mountains to the northwest, compared with the Yucca Valley

area proper. In addition to vegetation, weather also impacts the risk of wildfires in Yucca Valley. Drought conditions that further reduce the low level of precipitation and summer thunderstorms

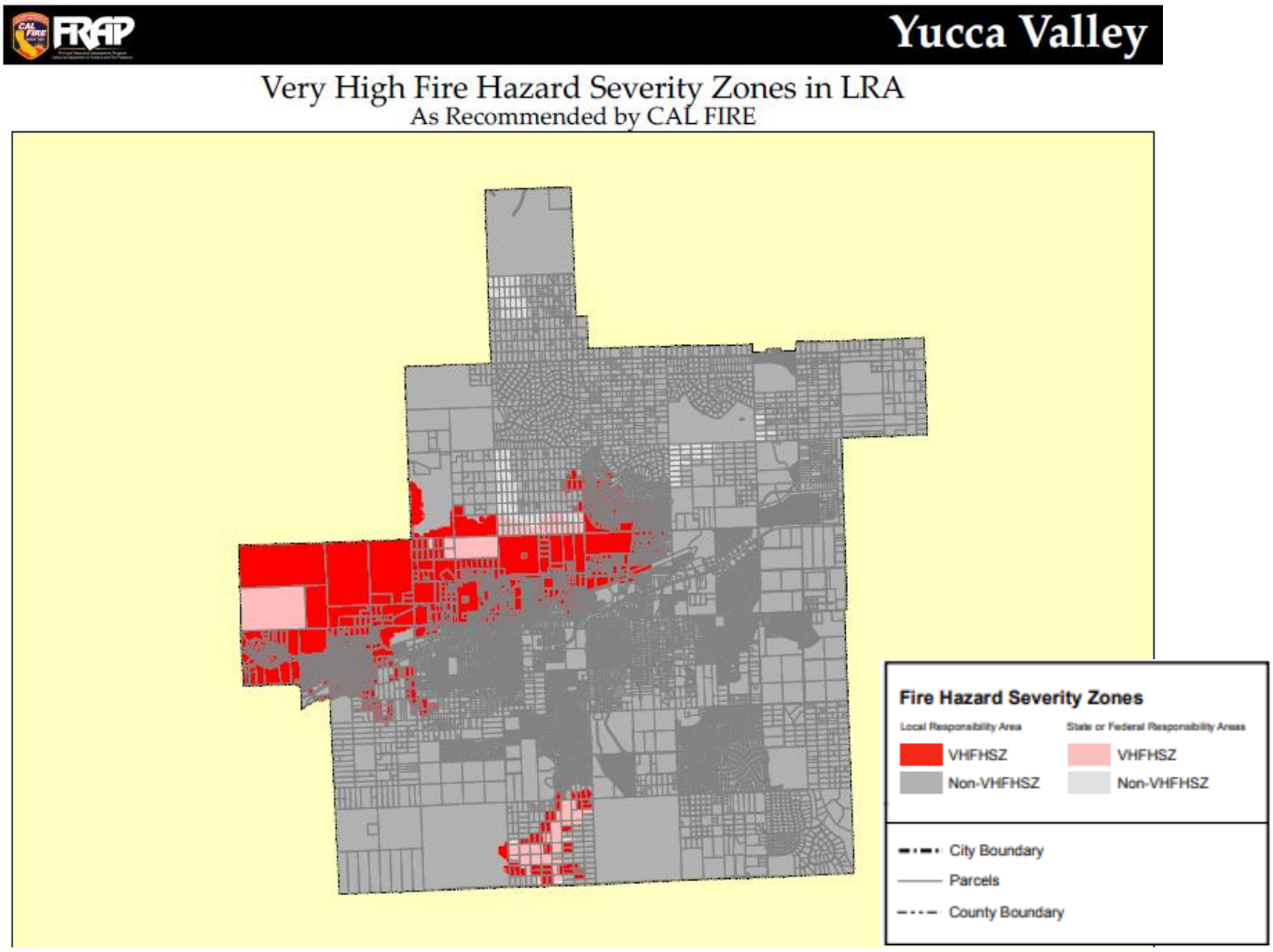
that produce lightning are both factors that increase the likelihood of wildland fires in the community.

Wildland fires pose a significant threat to large areas of Yucca Valley, mostly in the west-northwest and south parts of Town. The California Department of Forestry and Fire Protection identified the hillside areas of Yucca Valley as having a high to very high fire threat, as shown on **Map 3.11** below**.** In addition to providing fire safety standards in Yucca Valley, the San Bernardino County Fire Department also provides fire prevention and protection services.

The continued development of defensible spaces, free of combustible vegetation, will help reduce the potential for fire to harm lives and property.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-c.
Q: Does the plan describe the extent for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))
A: See **Map 3.11** below.

Map 3.11: Fire Hazard Severity Zones
(Source: Cal Fire, 2024)



Q&A | ELEMENT B: RISK ASSESSMENT | B1-d.
Q: Does the plan include the history of **previous** hazard events for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i)) **A:** See **Previous Wildfire Impacting Yucca Valley,** and **Previous Wildfire Impacting San Bernardino County,** and **Table 3.11** below.

Previous Wildfire Impacting Yucca Valley

According to the General Plan Safety Element, several historical wildland fires have impacted Yucca Valley, including the Acoma Fire of 2008, which burned 356 acres but only destroyed one outbuilding in Town. The largest wildland fire, the 2006 Sawtooth-Millard-Heart Complex fire, started by lightning and was the result of a merger of three separate wildland fires. It burned approximately 85,700 acres between Yucca Valley and San Gorgonio. In the Yucca Valley region, the fire destroyed 50 homes, 171 outbuildings, and 194 vehicles. It also caused a significant amount of damage to homes, businesses, and property. Seventeen individuals were injured and one civilian died.

In 2015, the Lake Fire impacted the Town of Yucca Valley with ash and serving as a host community for regionally displaced residents. The fire started on June 17, 2015, and burned over 31,359 acres before it was fully contained on July 21, 2015.

In 2022 the Elk Fire impacted the town which burned 431 acres. According to the Desert Sun Newspaper, the fire started on the southeast side of Yucca Valley and moved into a remote area before making its way into Joshua Tree National Park.

Previous Wildfire Impacting San Bernardino County

According to the County of San Bernardino Multi-Jurisdictional Hazard Mitigation Plan, there have been 10 significant wildland fires in the past 5 years. The table below lists these wildland fires.

Table 3.17: Previous Wildfire Impacting San Bernardino County 2018-2022
(Source: County of San Bernardino Multi-Jurisdiction Hazard Mitigation Plan, 2022)

Date	Name
8/16/2019	Blue Cut Fire
9/4/2019	Tenaja Fire
10/10/2019	Sandalwood Fire
10/10/2019	Rache Fire
10/30/2019	Water Fire
10/30/2019	Hill Fire
10/31/2019	Hillside Fire
7/31/2020	Apple Fire
7/31/2020	El Dorado Fire
8/25/2021	South Fire
9/5/2022	Radford Fire

Q&A | ELEMENT B: RISK ASSESSMENT | B1-e.

Q: Does the plan include the probability of future events for each identified hazard? Does the plan describe the effects of future conditions, including climate change (e.g., long-term weather patterns, average temperature and sea levels), on the type, location and range of anticipated intensities of identified hazards? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Probability of Future Events, Climate Change Considerations** below.

Probability of Future Events

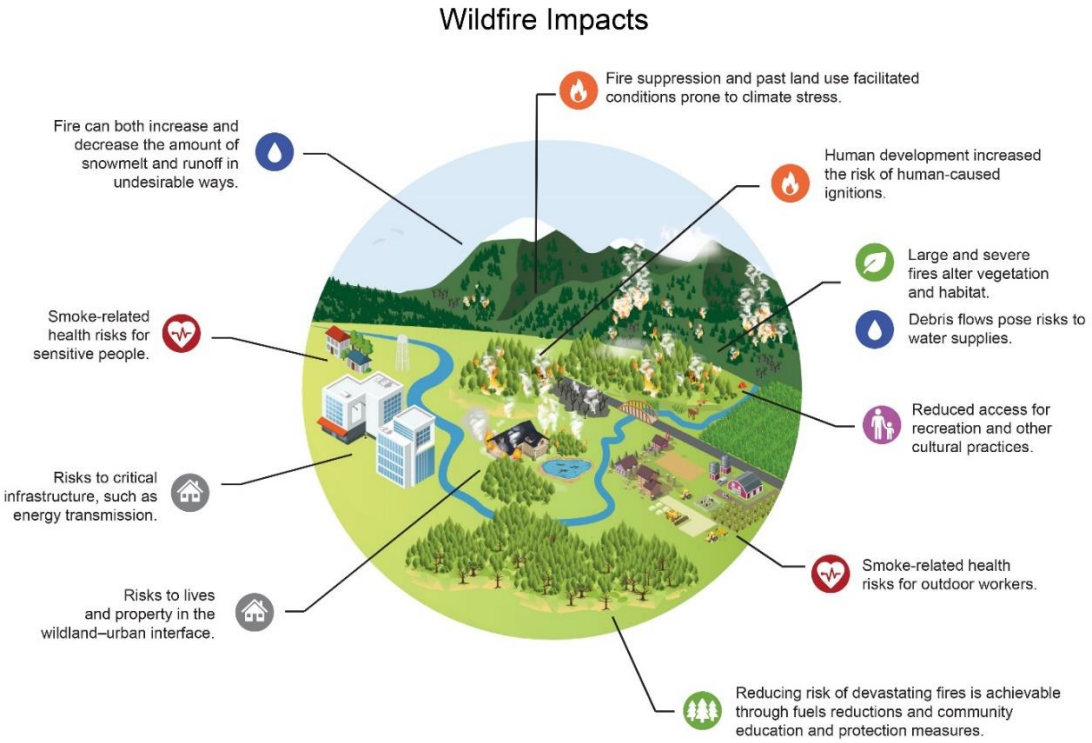
According to the General Plan Safety Element "Yucca Valley is at a high risk from wildfire, especially in the areas of chapparal, scrub, and grassland along hillsides. High fuel loads in the town, along with geographic and topographic features, create the potential for both natural and human-caused fires that can result in loss of life and property. These factors, combined with natural weather conditions common to the area, including periods of drought, high temperatures, low relative humidity, and periodic winds, can result in frequent and sometimes catastrophic fires. During the historic fire season, August to October, the dry vegetation combined with continued growth in the wildland urban interface areas, resulted in wildfire ignitions. Any fire, once ignited, has the potential to quickly become a large, out-of control fire. As development continues throughout the town, especially in these interface areas, the risk and vulnerability to wildfires will likely increase."

Climate Change Considerations

According to the Fifth National Climate Assessment, climate change has produced warmer and drier conditions with prolonged droughts that stress forest vegetation, facilitating pest outbreaks and tree death, leading to the accumulation of surface fuel. Wildfires are moving up in elevation, due to warming temperatures, reduced snowpacks and summer precipitation, and overall drier conditions. Climate change has also increased vapor pressure deficit that dries fuels, altering fire behavior that results in large, hotter, and more severe fires. Consequently, the annual area burned and area burned by high-severity wildfires have increased in the West about eightfold since 1985. And while the annual area burned is on par with pre-European settlement, the very large, high-severity, and deadly and destructive wildfires result in significant socioecological and economic impacts. These trends are expected to continue at least to midcentury, when fuel availability is expected to become more limited in some western forests.

Climate change is leading to larger and more severe wildfires in the western United States, bringing acute and chronic impacts both near and far from the flames. These wildfires have significant public health, socioeconomic, and ecological implications for the Nation. The figure below illustrates the drivers of, impacts from, and solutions to wildfire across a range of socioecological contexts within and beyond the western states. Considering these helps improve understanding of how impacts are experienced and how to adapt.

Figure 3.6: Wildfire Impacts
Source: Fifth National Climate Assessment (2023)



According to the General Plan Safety Element "changing climate conditions are expected to increase the wildfire risk in and around Yucca Valley. Warmer temperatures brought on by climate change can exacerbate drought conditions. Droughts can kill or dry out plants, creating more fuel for wildfires. Warmer temperatures are expected to increase the number of pest outbreaks, such as the shot hole borer, creating more dead trees and increasing the fuel load. Warmer temperatures are also expected to occur later in the year, extending the wildfire season, which is

likely to begin earlier in the year and extend later than it has historically. Wildfire occurring later or earlier in the year are more likely to occur during Santa Ana wind events, which can cause wildfires to move more quickly and increase the likelihood of wildfire moving into the wildland-urban interface areas. According to the California Fourth Climate Change Assessment, overall burned area may increase by as much as 60 percent during Santa Ana wind events (typically October to March), and 75 percent during periods without Santa Ana winds (typically April to September)."

Chapter 4: Vulnerability and Impacts

The vulnerability and impacts assessment process analyzes the potential harm of the prioritized hazard events discussed in Chapter 3: Risk Assessment.

Vulnerability and Impact Assessment Process

The vulnerability and impact assessment examines the potential harm that may result from a hazard event, without factoring in its likelihood. This means that equal attention is given to hazards regardless of their probability. The assessment evaluates three key aspects of each hazard on assets: the physical threat posed to facilities, the social threat to vulnerable populations, and the potential impact on other assets. The **FEMA Handbook** categorizes assets as follows:

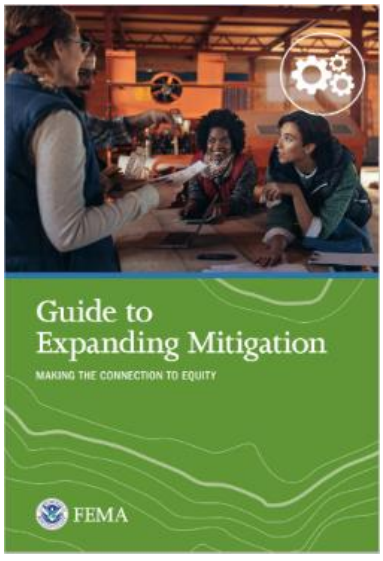
People
Structures
Economy
Natural, Historic, and Cultural Resources
Activities Bringing Value to the Community

People

Q&A | ELEMENT B: RISK ASSESSMENT | B2-a.
Q: Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards? (Requirement 44 CFR § 201.6(c)(2)(ii))
A: See **Vulnerability of People, Table 4.4** below.

People are the community's most important asset. People include individuals who live and/or work in Yucca Valley.

Vulnerability of People

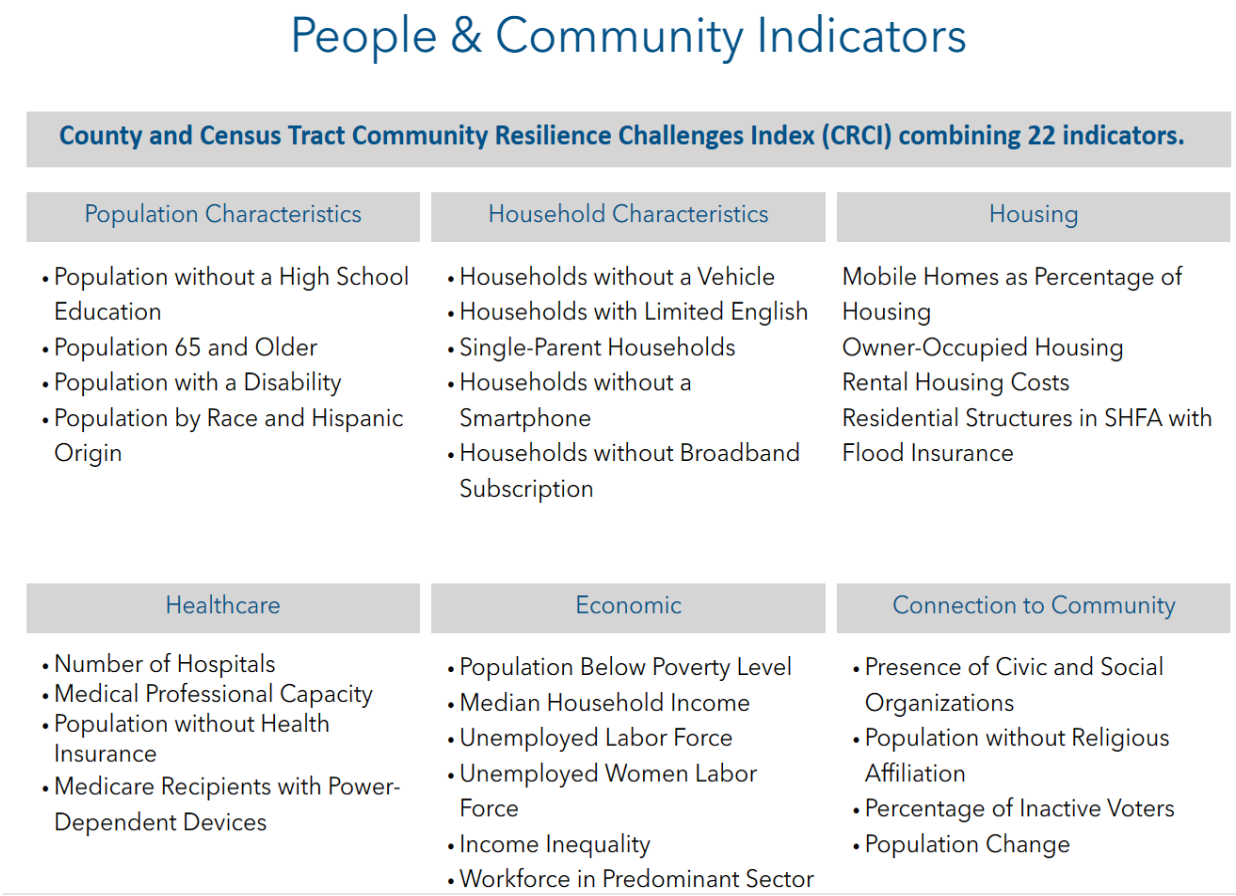


Disasters affect all populations; however, some populations are more adversely affected because of a higher level of social vulnerability. According to **The Guide to Expanding Mitigation – Making the Connection to Equity**, social vulnerability is defined in terms of the characteristics of a person or group that affect "their capacity to anticipate, cope with, resist, and recover from the impact" of a discrete and identifiable disaster in nature or society.

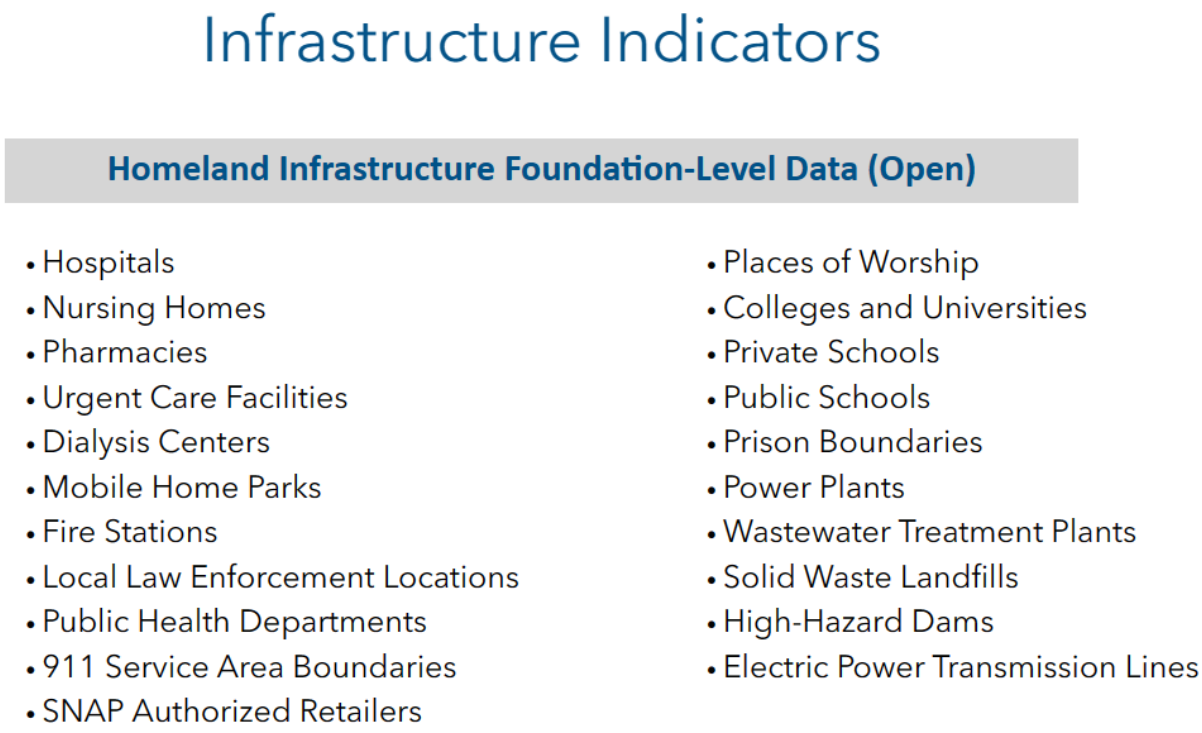
Using **FEMA's Resilience Analysis and Planning Tool** (RAPT), census tract data was used to understand what census tracts might be more vulnerable. Many of the maps in the People section were created using data provided by RAPT. RAPT is a free, publicly available geographic information systems (GIS) tool to help emergency managers and community partners of all GIS skill levels to visualize and assess potential challenges to community

resilience. RAPT includes over 100 pre-loaded data layers and the tool's functionality allows users to visualize combinations of these data layers for a specific location. One of the layers includes community demographics for counties, census tracts, and tribes drawn primarily from the U.S. Census Bureau. RAPT includes 27 demographic layers, including 22 community resilience challenges indicators identified from peer-reviewed research, and **FEMA's Community Resilience Challenges Index** (CRCI) for counties and census tracts, a composite value of all 22 community resilience challenges indicators. The graphics below outline the community resilience indicators.

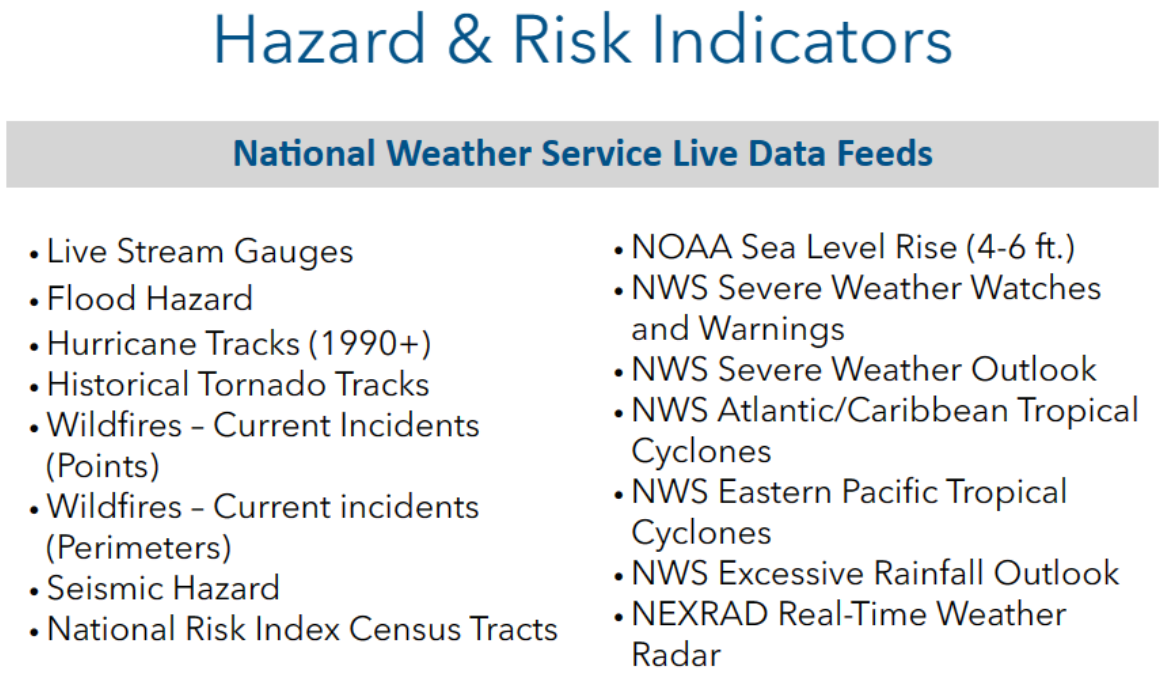
Graphic 4.1: RAPT People & Community Indicators
Source: FEMA Resilience Analysis and Planning Tool (RAPT)



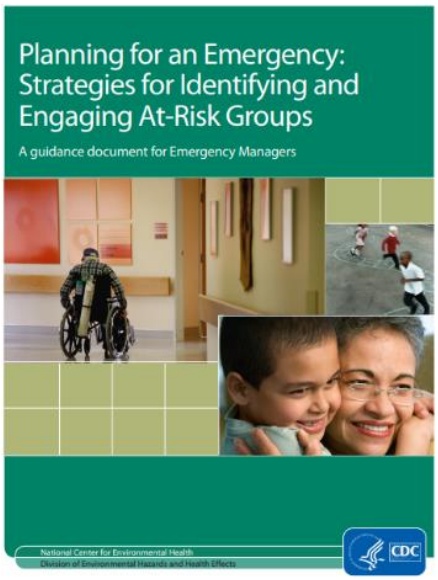
Graphic 4.2: RAPT Infrastructure Indicators
Source: FEMA Resilience Analysis and Planning Tool (RAPT)



Graphic 4.3: RAPT Hazard and Risk Indicators
Source: FEMA Resilience Analysis and Planning Tool (RAPT)



A person's vulnerability to disaster is influenced by many factors. According to **CDC's Planning for an Emergency: Strategies for Identifying and Engaging At-Risk Group**, the following six categories are among the most commonly accepted factors: socioeconomic status, age, gender, race and ethnicity, English language proficiency, and medical issues and disability. These categories were used to analyze the vulnerability of people in Yucca Valley. The compounding effects of these factors will further impact an individual's ability to withstand the effects of disasters and other hazards.



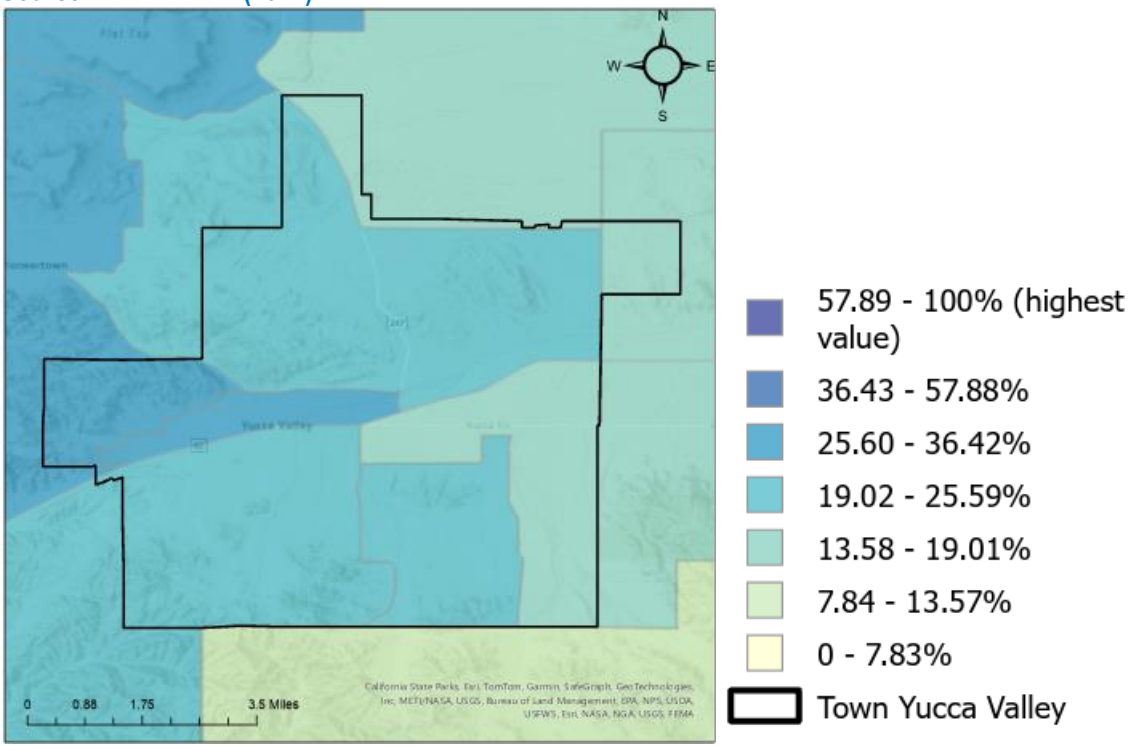
Below is an overview of the Town of Yucca Valley's population broken down by the six contributing factors of social vulnerability. Due to a limitation on data that is currently available it is not known exactly where in the town those who are more vulnerable may reside.

Age

The old and young are particularly vulnerable during disasters. Age can contribute to cognitive development, physical ability and mobility, socioeconomic stats, and access to resources that can help the individual prepare for, respond to and recover from disasters and other hazard events. For example, individuals 65 and older can have mobility challenges and other ailments that can prevent them from properly preparing for a disaster. At the same time, children are reliant on their parents or guardians to provide for them. Their ability to withstand a disaster is highly dependent on their parents or guardians. Children are more vulnerable to disasters when they are separated from their parents while at school or daycare.

According to the 2020 Census, there are 4,741 individuals over the age of 65 and 4,669individuals under the age of 18 living in Yucca Valley. **Map 4.1** depicts the population percentage of individuals over 65 in each census tract. The tracts with a darker blue represent a tract with a higher population of individuals over 65. The census tracts in the west boundaries of Yucca Valley have a higher percentage of their population older than 65. Due to a limitation on data that is currently available it is not known where certain aged populations live. Working with local organizations that serve these populations can provide better insight into the exact needs of the community.

Map 4.1: Percentage of the Population Over 65 by Census Tract
Source: FEMA RAPT (2024)



Race and Ethnicity

According to **Planning for an Emergency: Strategies for Identifying and Engaging At-Risk Group,** "Race and ethnicity contribute to social vulnerabilities. Race and ethnicity are tied to issues of socioeconomic status. Social and economic marginalization contributes to the vulnerability of these groups"

The majority of Yucca Valley identifies as white or of Hispanic Origin. A smaller percentage of the population in comprised of those with two or more races, Black, Asian, or American Indian/Alaska Native.

Table 4.1: Yucca Valley Population by Race/Ethnicity
Source: Esri Business Analyst

Race and Ethnicity	
2024 White Alone	68.8%
2024 Black Alone	3.8%
2024 American Indian/Alaska Native Alone	1.5%
2024 Asian Alone	3.0%
2024 Pacific Islander Alone	0.4%
2024 Other Race	9.0%
2024 Two or More Races	13.5%
2024 Hispanic Origin (Any Race)	25.8%

Gender

According to **Planning for an Emergency: Strategies for Identifying and Engaging At-Risk Group**, "gender does not necessarily indicate vulnerability or disadvantage. However, gender intersects with social patterns and inequalities can arise from gender differences. During a disaster, females might be more vulnerable because of differences in employment, lower income, and family responsibilities, as most single-parent households are single-mother families. However, females are a strong influence in mobilizing response to a warning. Females are also more likely to be effective risk communicators through being active participants in the community. They also might know more neighborhood information that can assist emergency managers. Although many families evacuate together, it is not uncommon for males to stay behind to guard the property or to continue working as the family provider. Males are also more likely to be risk takers and might not heed warnings."

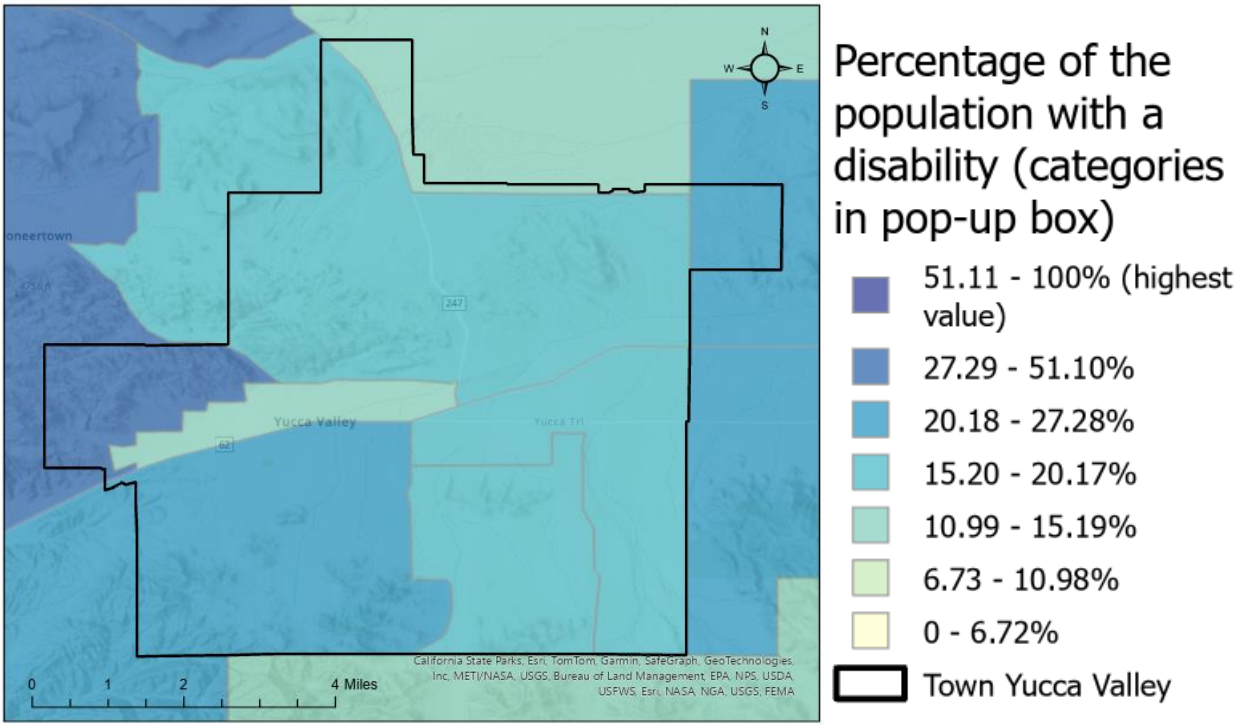
According to the 2020 Census, 51.3% of Yucca Valley's population is female and 48.7% are male. The majority of the population are living in a married couple household with 13.4% of those married having children under the age of 18. A smaller portion of the population lives in a single parent household with children under 18. There are approximately 157 single dad households and 422 single mom households in Yucca Valley.

Medical Issues and Disability

Individuals with disabilities are disproportionately affected by disasters. Individuals with disabilities have a higher rate of fatality, and exclusion during disasters. They also have greater challenges during recovery. Understanding the disability demographics of a community gives the community the opportunity to identify and plan for the access and functional needs their communities' members might need during a disaster.

With information provided by ESRI ArcGIS Business Analyst Tool, it was determined there are 2,863 households with at least 1 person with a disability. **Map 4.2** depicts the population percentage of individuals with at least one disability in each census tract. The tracts with a darker blue represent a tract with a higher population of individuals with a disability. The census tracts in the western region of Yucca Valley have a higher percentage of their population with a disability. Due to a limitation on data that is currently available it is not known the number of individuals in the community with a disability or what their limitation might be. Working with local organizations that serve these populations can provide better insight into the exact needs of the community.

Map 4.2: Percentage of the Population with a Disability
Source: FEMA RAPT (2024)



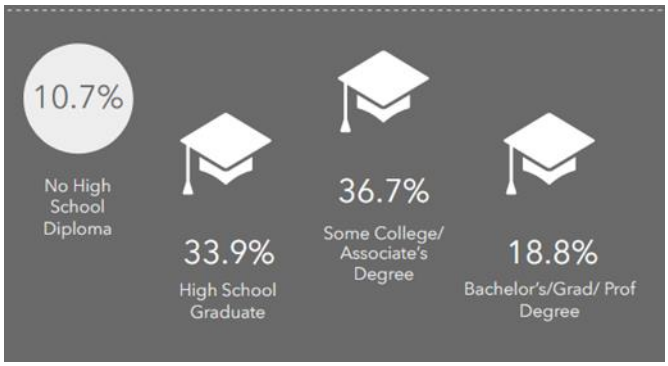
Socioeconomic Status

The ability for an individual to prepare for, mitigate against, respond to, and recover from disasters often depends on the availability of key resources. It is logical to assume that individuals with a higher socioeconomic status are in a better position to acquire key resources than individuals with a lower socioeconomic status. Factors that contribute to socioeconomic status include income, education, occupation, and housing. According to **Planning for an Emergency: Strategies for Identifying and Engaging At-Risk Group**, people with lower socioeconomic status more likely lack resources needed to follow emergency preparedness instructions. They might be unable to stockpile food, for example. They might be unwilling or unable to stay home from work and lose a day's pay or evacuate and leave their home during an emergency. By identifying at-risk groups ahead of time, you can plan more efficient evacuations and specifically target people who need transportation or special assistance (e.g., those without a vehicle).

The info graphics below show key indicators for socioeconomic status for the Town of Yucca Valley. The data in the sections below came from the ESRI ArcGIS Business Analyst Tool.

- Income: The average household income for the Town of Yucca Valley is $58,434. Roughly 16% of households in Yucca Valley are below poverty level.
- Education: Most of the residents of Yucca Valley have some college or an Associate Degree. **Figure 4.1** provides a visualization of the highest level of education completed by residents of Yucca Valley

Figure 4.1: Yucca Valley Residents' Highest Level of Education Completed
Source: ESRI Business Analyst



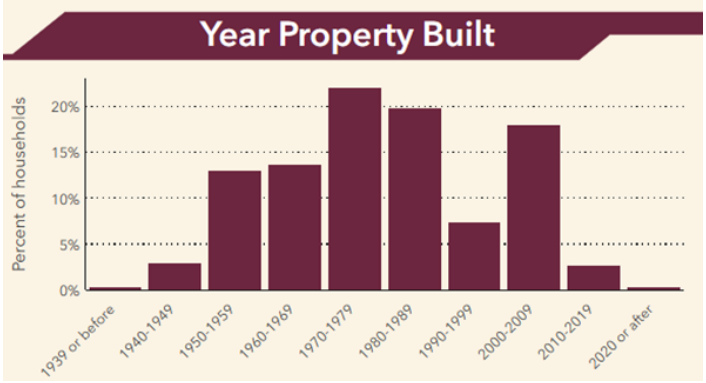
- Occupation: The majority of Yucca Valley's residents work white collar jobs. **Table 4.2** provides a percentage breakdown of Yucca Valley's Residents' employment by occupation.

Table 4.2: Yucca Valley Residents' Employment by Occupation
Source: ESRI Business Analyst

2023 Employed Population 16+ by Occupation	
Total	8,792
White Collar	52.7%
Management/Business/Financial	11.2%
Professional	20.8%
Sales	8.0%
Administrative Support	12.7%
Services	20.5%
Blue Collar	26.7%
Farming/Forestry/Fishing	0.0%
Construction/Extraction	4.9%
Installation/Maintenance/Repair	9.4%
Production	3.5%
Transportation/Material Moving	9.0%

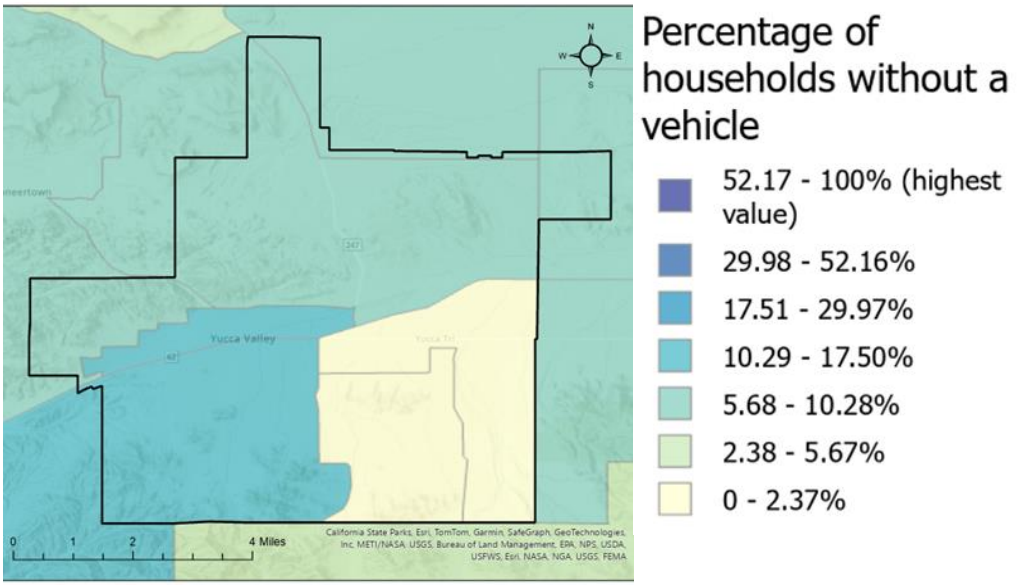
- Housing: The majority of the housing units are not rentals most are under mortgage/loan (44.4%). 33.6% of houses are rentals. The remainder are owned free and clear (21.9%). The majority of the houses in Yucca Valley were built between 1970 and 1979. **Graph 4.4** displays the percentage of households by decade of construction.

Graph 4.4: Houses Built in Yucca Valley by Decade
Source: ESRI Business Analyst

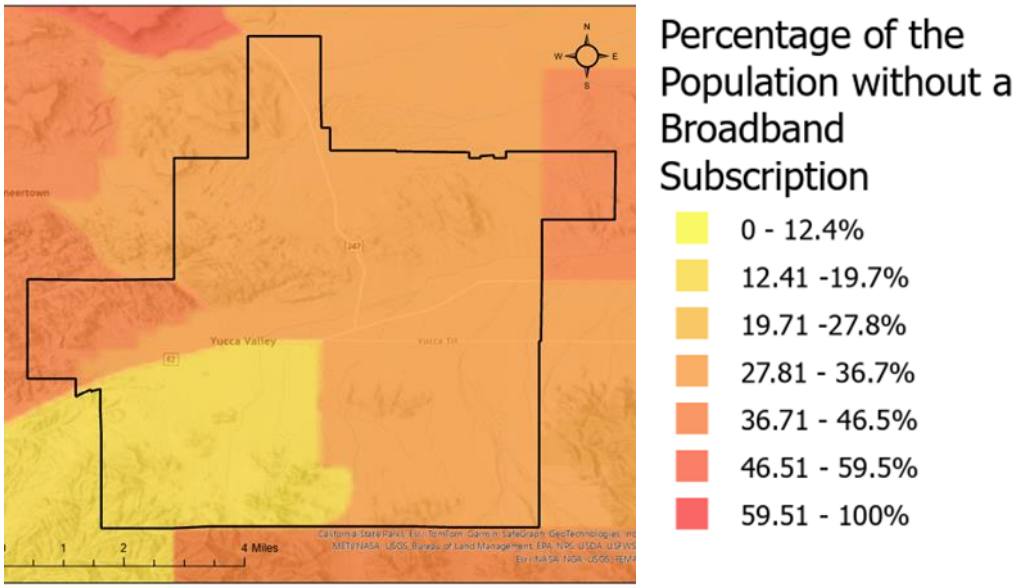


- **Other Factors:** There are other factors related to socioeconomic status that are important to take into account. **Map 4.3** breaks down the percent of households without a vehicle by census tract. Generalizing vehicle ownership to the entire Town of Yucca Valley, only 3% of households do not have a vehicle. **Map 4.4** breaks down the percent of households without a broadband subscription by census tract. 11% of households in Yucca Valley do not have access to internet. Access to internet and a vehicle will impact a person's ability to prepare for, respond to, and recover from disasters.

Map 4.3: Percent of Households without a Vehicle
Source: FEMA RAPT (2024)



Map 4.4: Percentages of Population without a Broadband Subscription
Source: FEMA RAPT (2024)



English Language Proficiency

The ability to communicate with others during a disaster is imperative for residents to be able to take the necessary precautions related to the disaster. When individuals do not speak the language in which emergency information is presented, it can negatively impact an individual's ability to comprehend the situation and take appropriate action. According to data provided by the **ESRI Business Analyst at Risk Population** infographic less than 1% of the population in Yucca Valley speak a language other than English and do not speak English. Furthermore, 2.6% of the population speak Spanish or an Indo-European language but English not well. Together, more than 3% of the population may have communication challenges during a hazard event. **Table 4.3** shows the breakdown of language spoken in Yucca Valley. Other than English, Spanish is the most common language spoken in Yucca Valley.

Table 4.3: Language Spoken in Yucca Valley
Source: ESRI Business Analyst/ American Community Survey (2023)

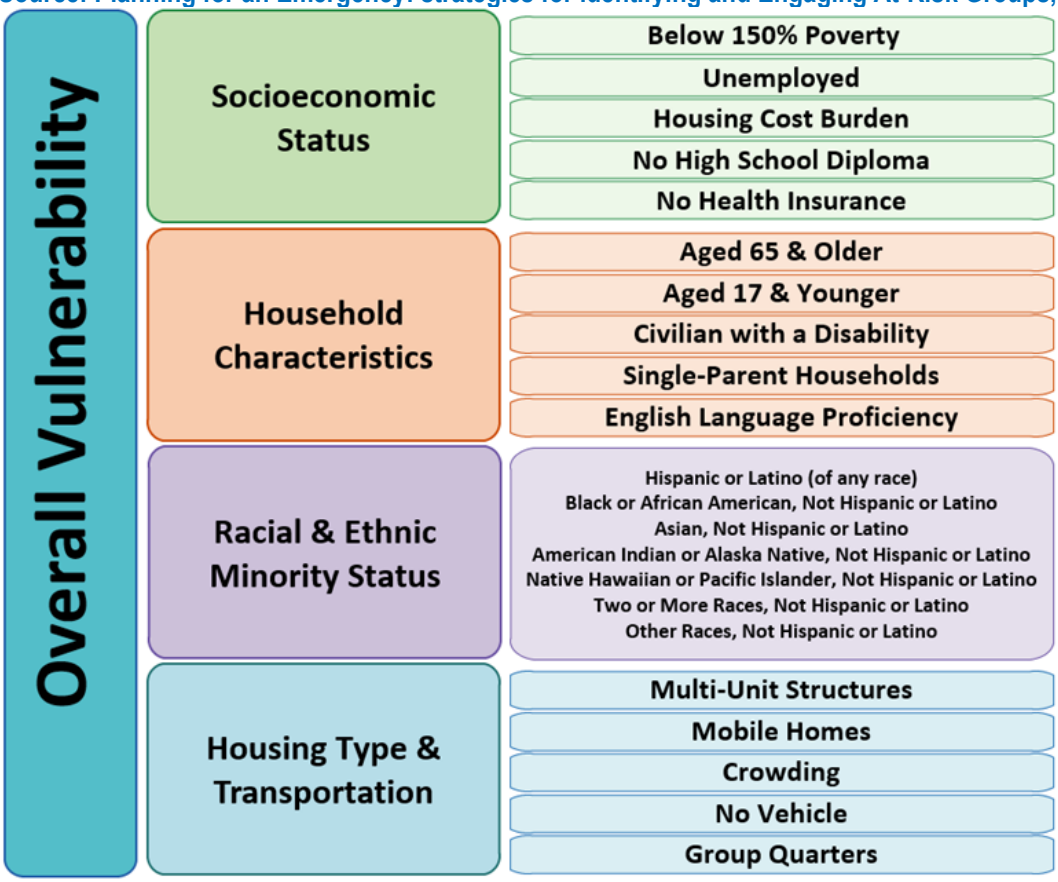
Language Spoken (ACS)	Age 5-17	18-64	Age 65+	Total
English Only	3,551	9,589	3,886	17,026
Spanish	402	1,904	622	2,928
Spanish & English Well	402	1,682	559	2,643
Spanish & English Not Well	0	222	46	268
Spanish & No English	0	0	17	17
Indo-European	66	259	98	423
Indo-European & English Well	66	84	97	247
Indo-European & English Not Well	0	175	0	175
Indo-European & No English	0	0	0	0
Asian-Pacific Island	0	19	0	19
Asian-Pacific Isl & English Well	0	18	0	18
Asian-Pacific Isl & English Not Well	0	0	0	0
Asian-Pacific Isl & No English	0	0	0	0
Other Language	14	46	4	64
Other Language & English Well	14	46	4	64
Other Language & English Not Well	0	0	0	0
Other Language & No English	0	0	0	0

Social Vulnerability Index

The Social Vulnerability Index (SVI) is a free, web-based tool developed at CDC by the Agency for Toxic Substance and Disease Registry's Geospatial Research, Analysis and Services Program (GRASP). The SVI was designed to help emergency managers identify and map communities that will most likely need support before, during, and after a disaster. This tool allows you to visualize population-level social vulnerabilities to help emergency planners and responders better prepare for and respond to disasters.

The SVI uses U.S. Census and American Community Survey data to identify at-risk groups by ranking all U.S. census tracts by level of social vulnerability. Census tracts are subdivisions of counties for which the Census collects statistical data. The SVI ranks, at national-level or state-level, each tract on 16 social factors. The 16 social factors are outlined in **Figure 4.2**.

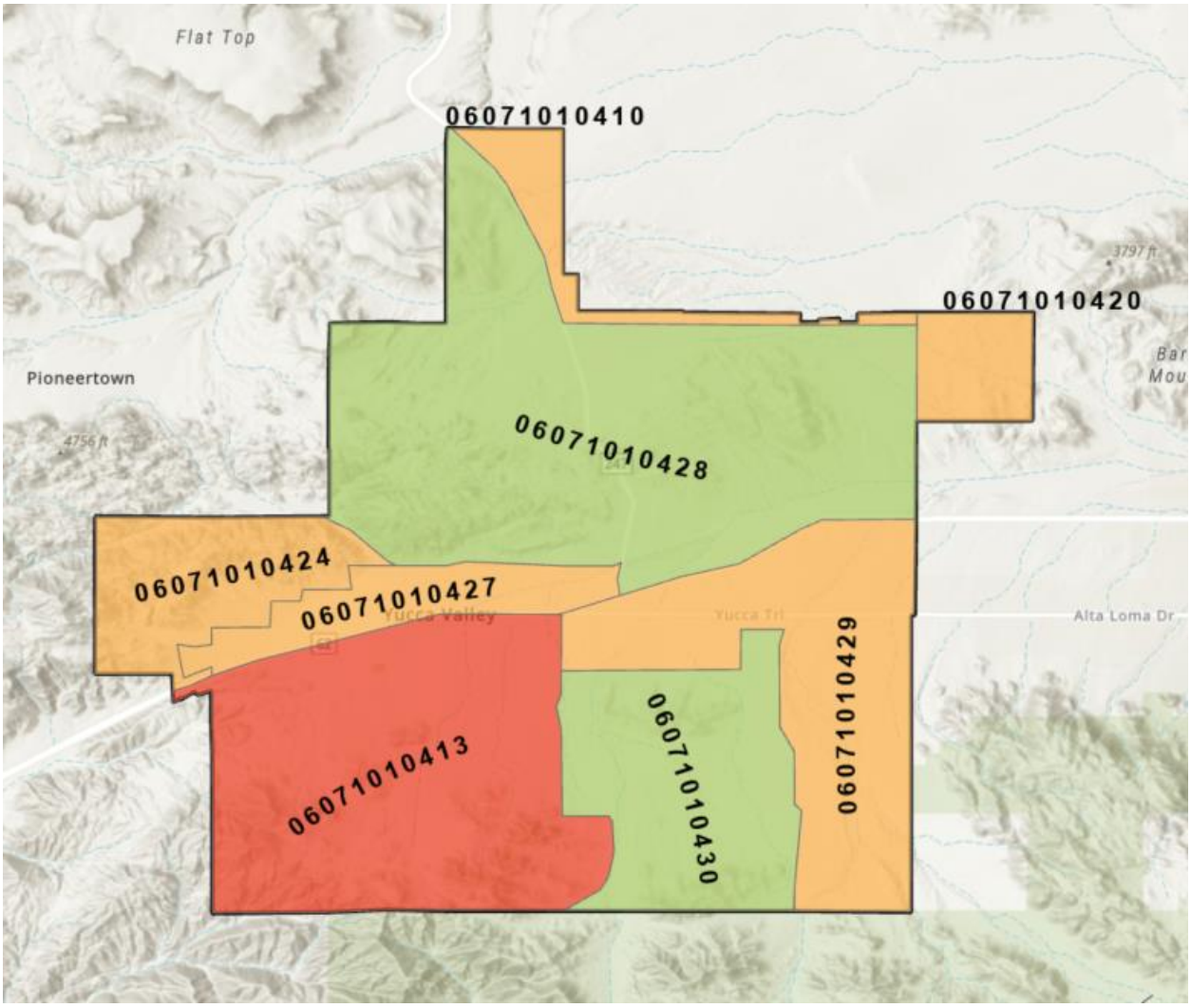
Figure 4.2: Social Vulnerability Index Themes and Social Factors
Source: Planning for an Emergency: strategies for identifying and Engaging At-Risk Groups, CDC



Map 4.5 below depicts the overall vulnerability for the Town of Yucca Valley. The areas in red represents the one census tract with an SVI equal to or greater than the 75th Percentile. This category is referred to as "high".

Table 4.4 assesses all eight of the census tracts in Yucca Valley by the hazard categories identified by the Planning Team.

Map 4.5: Yucca Valley Social Vulnerability Index
Source: CDC/ATSDR Social Vulnerability Index, 2024



Legend

Social Vulnerbility Index selection

- Low (Less than 50th Percentile)
- Medium (Greater than 50th Percentile)
- High (Greater than 75th Percentile)
- Town of Yucca Valley

Table 4.5: Hazard Vulnerability to People
(Source: Emergency Planning Consultants)
(Note: "X" indicates affirmative, Census Tract with an asterisk indicates a tract with high SVI)

Census Tract in Yucca Valley	Earthquake	Flooding	Drought	Wildfire
06071010410	X	X	X	
06071010420	X	X	X	
06071010428	X	X	X	X
06071010424	X	X	X	X
06071010427	X	X	X	X
06071010429	X	X	X	
06071010413*	X	X	X	X
06071010430	X	X	X	

Q&A | ELEMENT B: RISK ASSESSMENT | B2-b.

Q: For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction? (Requirement §201.6(c)(2)(ii))
A: See **Impact Profile of People** below.

Impact Profile of People

Earthquake

Yucca Vally has a diverse population that includes several vulnerable groups, such as elderly residents, low-income families, non-English speakers, and disabled individuals. The elderly population in Yucca Vally, many of whom live alone or in retirement communities, are particularly vulnerable during emergencies due to mobility issues and potential isolation. Low-income families in the town may lack the resources to adequately prepare for or recover from a disaster, such as securing emergency supplies or making necessary housing repairs. Non-English speakers, face language barriers that can impede their access to crucial information and services during an emergency. Additionally, individuals with physical, sensory, or cognitive disabilities face added challenges in evacuating and accessing emergency services.

In the event of an earthquake, these vulnerable populations in Yucca Valley would face significant risks and challenges. Elderly residents may have difficulty evacuating quickly and could be living in older, less earthquake-resistant buildings. The disruption of healthcare services could critically impact those with medical needs. Low-income families might struggle with the financial burden of property damage and loss of income if their workplaces are affected, with limited access to insurance and emergency funds exacerbating their vulnerability. Non-English speakers could be hindered by communication barriers that prevent them from receiving timely warnings and instructions, and they may also face difficulties in navigating relief services and understanding available resources. Disabled individuals may face increased risks due to mobility issues and the potential inaccessibility of emergency shelters and services.

Flood

Floods can have devastating impacts on Yucca Vally's vulnerable populations, including the elderly, low-income families, non-English speakers, and individuals with disabilities. The elderly, many of whom live alone or in care facilities, may struggle to evacuate or access emergency services during floods, leading to heightened health risks. Low-income families, already facing financial constraints, may suffer property damage and loss of belongings, further destabilizing their situation. Non-English speakers may encounter difficulties understanding evacuation orders or accessing relief services due to language barriers. Individuals with disabilities may face challenges evacuating safely or finding accessible shelter, putting them at greater risk. The disruption of critical services, such as healthcare and transportation, can exacerbate these vulnerabilities, highlighting the need for targeted preparedness and response strategies to protect Yucca Valley's vulnerable populations during urban floods.

Drought

Drought significantly impacts Yucca Valley's vulnerable populations, including the elderly, low-income families, non-English speakers, and individuals with disabilities. Elderly individuals are particularly susceptible to the effects of drought. Limited mobility and health issues make them more vulnerable to heat-related illnesses, which can be exacerbated by water shortages and reduced availability of cooling options. Additionally, the elderly may have fixed incomes, making it difficult to cope with increased utility bills and the cost of purchasing bottled water. Low-income families are disproportionately affected by drought due to their limited financial resources. These families may struggle to afford higher water bills, and the cost of purchasing additional water or implementing water-saving measures can be prohibitive. Drought can also lead to increased food prices, as agricultural production declines, further straining household budgets. Reduced availability of water for hygiene and sanitation can lead to health issues, compounding the challenges faced by these families. Non-English speakers may face difficulties accessing information and resources related to drought.

Language barriers can impede their understanding of water conservation measures, drought warnings, and available assistance programs. This population might also have limited access to services that provide drought relief, such as financial assistance for increased utility costs or resources for securing alternative water supplies. People with disabilities often require additional water for medical and personal care needs. Drought conditions can make it more difficult for them to access sufficient water, affecting their health and well-being. Mobility issues can also hinder their ability to access relief services and emergency supplies. Drought can lead to increased utility costs and maintenance expenses for households. Vulnerable populations may face difficult choices between paying for water and other essential expenses, potentially leading to housing instability or displacement if they are unable to keep up with costs. Furthermore, those with cognitive disabilities may find it challenging to understand and implement necessary water conservation practices. Drought can lead to poor water quality, as reduced water levels can concentrate contaminants. Vulnerable populations are at higher risk of waterborne illnesses due to weakened immune systems and limited access to healthcare. Heatwaves associated with drought can exacerbate chronic health conditions and increase the incidence of heatstroke and dehydration.

Wildfire

Wildfire in Yucca Valley can significantly impact vulnerable populations, including the elderly, low-income families, and individuals with health issues. Health risks from smoke inhalation can

worsen existing conditions, while evacuation challenges disproportionately affect those without transportation or resources. Economic hardships arise from property loss and job disruption, complicating recovery efforts for low-income families. Additionally, limited access to timely information can hinder effective responses, and environmental hazards can threaten water supplies, impacting health further.

Structures

Q&A | ELEMENT B: RISK ASSESSMENT | B2-a.
Q: Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards? (Requirement 44 CFR § 201.6(c)(2)(ii))
A: See **Vulnerability of Structures, Table 4.6** below.

Vulnerability of Structures

Structures include critical facilities, properties and structures that serve vital functions in government operations and the services offered to the community. These may include local government offices and yards, community centers, public safety buildings such as police and fire stations, schools, and other properties deemed essential for town operations. Additionally, some critical facilities may serve dual roles if designated as public assembly points during emergencies. While many critical facilities are owned by the town, certain ones, such as utilities and telecommunication infrastructure, may be privately owned and operated.

FEMA separates critical buildings and facilities into the five categories shown below based on their loss potential. All of the following elements are considered critical facilities:

> **Essential Facilities** are essential to the health and welfare of the whole population and are especially important following hazard events. Essential facilities include hospitals and other medical facilities, police and fire stations, emergency operations centers and evacuation shelters, and schools.
>
> **Transportation Systems** include airways – airports, heliports; highways – bridges, tunnels, roadbeds, overpasses, transfer centers; railways – trackage, tunnels, bridges, rail yards, depots; and waterways – canals, locks, seaports, ferries, harbors, drydocks, piers.
>
> **Lifeline Utility Systems** such as potable water, wastewater, oil, natural gas, electric power and communication systems.
>
> **High Potential Loss Facilities** are facilities that would have a high loss associated with them, such as nuclear power plants, dams, and military installations.
>
> **Hazardous Materials Facilities** include facilities housing industrial/hazardous materials, such as corrosives, explosives, flammable materials, radioactive materials, and toxins.

The Planning Team identified six town-owned facilities as "critical". The Team also identified nine other facilities that are not owned by the town but are deemed critical. **Table 4.6** below illustrates the hazards with potential to impact critical facilities owned by or providing critical services to the Town of Yucca Valley.

Table 4.6: Hazard Vulnerability to Structures
(Source: Town of Yucca Valley Planning Team, Emergency Planning Consultants)
(Note: "X" indicates affirmative)

Name of Facility	Earthquake	Flooding	Drought	Wildfire
Town-Owned Facilities				
Town Hall Complex Address: 57090 Twentynine Palms Highway, Yucca Valley # of Buildings: 3 # Staff: 21 Structure + Content Value: $6,478,710	X		X	
Library Address: 57098 Twentynine Palms Highway, Yucca Valley # of Buildings: 1 # Staff: 0 Structure + Content Value: $143,840	X		X	
Community Development / Public Works Address: 58928 Business Center Drive, Yucca Valley # of Buildings: 3 # Staff: 17 Structure + Content Value: $393,869	X		X	
Yucca Valley Animal Shelter Address: 4755 Malin Way, Yucca Valley # of Buildings: 3 # Staff: 8 Structure + Content Value: $5,362,918	X		X	X
California Welcome Center – Yucca Valley/Chamber of Commerce Address: 56711 Twentynine Palms Highway, Yucca Valley # of Buildings: 1 # Staff: 0 Structure + Content Value: $1,005,894	X	X	X	

Name of Facility	Earthquake	Flooding	Drought	Wildfire
Facilities Not Owned by Town				
San Bernardino County Fire Department Station: Address: #41 - 57201 Twentynine Palms Highway, Yucca Valley	X		X	
San Bernardino County Fire Department Stations: Address: #42 – 58612 Aberdeen Drive, Yucca Valley	X		X	
Amerigas Propane 55596 Yucca Trail, Yucca Valley	X	X	X	
Ferrell Gas (Propane) 55888 Yucca Trail #B, Yucca Valley	X	X	X	
Hi Desert Propane 7281 Dumosa Ave #5, Yucca Valley	X		X	
Southern California Edison (SCE) 6999 Old Woman Springs Road, Yucca Valley	X		X	
Hi Desert Water District 55439 Twentynine Palms Highway, Yucca Valley	X		X	
Yucca Valley Airport 6804 Warren Vista Ave, Yucca Valley	X	X	X	X

Based on available data provided by the town, there is a minimum of $13,385,231 worth of town owned property and town owned contents that were analyzed. The total potential loss value of all town-owned and non-town-owned assets is much higher but is unknown due to data limitations.

The possibility that all facilities will be completely damaged simultaneously is extremely rare. Most of the impacts of the hazards that were analyzed are anticipated to be isolated to certain locations. To better understand the magnitude of impacts, this plan identifies representative percentages of potential impact based on the total valuation of town assets. For planning purposes, we identified different tiers of impact that could occur. It is reasonable to assume that impacts would not exceed 50% of the total asset value town-wide during a single event. The following are parameters to help understand how much a proposed investment/improvement compares to the existing assets within the town:

- 1% Impact – $133,852.31
- 5% Impact – $669,261.55
- 10% Impact – $1,338,523.10
- 20% Impact – $2,677,046.20
- 50% Impact – $6,692,615.50

Q&A | ELEMENT B: RISK ASSESSMENT | B2-b.

Q: For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Impact Profile of Structures** below.

Impact Profile of Structures

Earthquake

Structures include physical buildings, lifelines, and critical infrastructure in a community. All properties and occupants in Yucca Valley can be either directly impacted or affected by earthquakes. It is estimated more than a third of the planning area's building stock was built prior to 1975, when seismic provisions became uniformly applied through building code applications. These buildings are at a higher risk of damage from earthquakes. Due to limitations in current modeling abilities, the risk to critical facilities in the planning area from the earthquake hazard is likely understated. A more thorough review of the age of critical facilities, codes they were built to, and location on liquefiable soils should be conducted. Damage to transportation systems in the planning area after an earthquake has the potential to significantly disrupt response and recovery efforts and lead to isolation of populations. Additionally, seismic events can damage communication systems, complicating efforts to coordinate response to the event. Many structures may need seismic retrofits in order to withstand a moderate earthquake. Residential retrofit programs, such as Earthquake Brace+Bolt, may be able to assist in the costs of these efforts.

The town-owned critical facilities include 11 buildings with property and contents valued at $13,385,231 based on estimates in 2023. Additionally, contracted San Bernardino County-owned Fire Stations #41 and 42 could be impacted by an earthquake. The severe ground shaking and soil liquefaction will result in significant damage or total destruction of these facilities and can be catastrophic for the Town of Yucca Valley.

Flood

All properties and occupants in Yucca Valley can be directly impacted or affected by flooding. Structures in the planning area built before any regulations existed on floodplain development may be particularly vulnerable to some level of flood hazard. The risk associated with the flood hazard overlaps the risk associated with other hazards such as earthquakes, landslide, and severe weather. One of the town-owned facilities is vulnerable to flooding. There are also 3 community lifelines that are vulnerable to some level of flood hazard. Additionally, several main and secondary roads in the town are vulnerable to flooding. Clearly, this type of flooding has its greatest impact on transportation.

Existing channels and curbs help to protect Yucca Valley from floodplain flooding, however excessive rain and blocked or insufficient storm drains can result in increasing the extent of urban flooding while resulting in damage to buildings and infrastructure. Structures can also be damaged from trees falling as a result of water-saturated soil. In the event of electrical power outages, related interruptions can cause major problems throughout the community. Also, loss of power is a common precursor to closure of schools. The town may need to activate crews to reroute traffic or even close access to impacted properties.

Drought

The most immediate impact of a drought is on the water supply. Yucca Valley relies on both surface and groundwater sources, which can become depleted during prolonged droughts. This could lead to water rationing, affecting residential, institutional, commercial, and industrial users. Reduced water availability could strain the town's ability to provide adequate water for drinking, sanitation, and fire suppression, compromising public health and safety. All properties in Yucca Valley could be directly impacted or affected by drought. Most of the impact will be from the

related hazards such as competition for water supply and disruption of public infrastructure. Reduced water supply could leave property vulnerable to fires. Dried vegetation around properties could also increase the vulnerability to fires.

Prolonged drought conditions could weaken soil stability, leading to ground subsidence. This can cause damage to roads, bridges, and pipelines, increasing maintenance costs and potentially leading to hazardous conditions. Water mains and sewage systems could be impacted by a loss of water or pressure. Also, those systems could be affected by soil movement, leading to leaks and breaks that further strain the town's water resources. Public parks and recreational areas may face restrictions on water use for irrigation, leading to degraded landscapes and reduced green spaces. This can affect the quality of life for residents and reduce the city's attractiveness for tourism and community events.

All of the critical facilities in Yucca Valley could be affected by drought. town-owned critical facilities include 11 buildings with property and contents valued at $13,385,231 based on estimates in 2023. Additionally, contracted San Bernardino County-owned Fire Stations #41 and 42 could be impacted directly impacted or affected by drought.

Wildfire

Yucca Valley, located in California's Mojave Desert, is particularly vulnerable to wildfire due to several factors. The area's dry climate, combined with high temperatures and seasonal winds, creates ideal conditions for fire spread. The abundant vegetation, including shrubs and grass, serves as fuel, especially during drought periods. The community's proximity to wildland areas increases the risk of ignitions from natural causes or human activity. Firefighting resources can be stretched thin, especially during peak wildfire seasons. Efforts to manage vegetation, create defensible space around homes, and promote community awareness are essential to mitigate these risks.

All of the critical facilities in Yucca Valley could be affected by drought. town-owned critical facilities include 11 buildings with property and contents valued at $13,385,231 based on estimates in 2023. Additionally, contracted San Bernardino County-owned Fire Stations #41 and 42 could be impacted directly impacted or affected by wildfire.

Economy

Q&A | ELEMENT B: RISK ASSESSMENT | B2-a.
Q: Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards? (Requirement 44 CFR § 201.6(c)(2)(ii))
A: See **Vulnerability to Economy** and **Table 4.7** below.

Vulnerability to Economy

Yucca Valley has several assets that have an important impact on the town's economy. Several of these economic assets overlap with the assets outlined earlier in **Structures** as they are community lifelines. These assets are also key employers and any impact from natural hazards has the potential of causing debilitating consequences to the local economy. These assets include Morongo Unified School District, Walmart, Home Depot, Stater Brothers, Applebee's, Vons, and San Bernardino County.

Table 4.7: Hazard Vulnerability to Economic Assets
(Source: Town of Yucca Valley Planning Team, Emergency Planning Consultants)

Economic Assets	Earthquake	Flooding	Wildfire	Drought
Morongo Unified School District Yucca Valley High School – 7600 Sage Avenue	X	X		X
Morongo Unified School District Yucca Valley Elementary School – 7601 Hopi Trail	X			X
Morongo Unified School District Academy of College & Excellence – 5926 Sunnyslope Drive	X			X
Morongo Unified School District Black Rock High School – 5927 Sunnyslope Drive	X			X
Morongo Unified School District Onaga Elementary School – 58001 Onaga Trail	X			X
Morongo Unified School District La Contenta Middle School – 7050 La Contenta Road	X			X
Walmart 58501 29 Palms Hwy	X			X
Home Depot 58705 29 Palms Hwy	X			X
Stater Brothers 57075 29 Palms Hwy	X			X
Stater Brothers 58060 29 Palms Hwy	X			X
Applebee's 57796 29 Palms Hwy	X	X		X
Vons 57590 29 Palms Hwy	X			X

Q&A | ELEMENT B: RISK ASSESSMENT | B2-b.

Q: For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Impact Profile of Economy** below.

Impact Profile of Economy

An earthquake, flood, wildfire, and drought in Yucca Valley would significantly impact its principal employers including Morongo Unified School District, Walmart, Home Depot, Stater Brothers, Applebee's, and Vons.

Morongo Unified School District

- Earthquake: The school district will likely experience damage to buildings and facilities, disrupting the education of thousands of students. Schools might need to close temporarily for inspections and repairs, affecting students, staff, and families. Closure of schools could lead to reduced or no pay for faculty and staff which will cause financial hardship. This financial hardship is not limited to the employees but will also spread to Yucca Valley as these employees may need to move out of the town for employment.

- Flood: Certain locations could experience water damage to buildings, equipment, and learning materials. Flooding might necessitate temporary closures, disrupting education and displacing students and staff. Closure of schools could lead to reduced or no pay for faculty and staff which will cause financial hardship. This financial hardship is not limited to the employees but will also spread to Yucca Valley as these employees may need to move out of the town for employment.
- Wildfire: Although the Morongo Unified School District schools in Yucca Valley are not situated in a designated fire hazard area, they remain vulnerable to poor air quality from nearby wildfires. This can pose health risks to students and staff, potentially leading to the cancellation of outdoor activities. In more severe cases, schools may be closed or shift to remote learning to minimize outdoor exposure to hazardous air conditions.
- Drought: District Headquarters and schools would need to implement water conservation measures, potentially affecting landscaping, maintenance, and sanitation practices. Water shortages could impact school operations, including the availability of drinking water and functioning of restrooms. Educational programs might need to be adjusted to include information on water conservation and the effects of drought. Job loss from a drought is not likely, however changes in educational structure could lead to increased costs or reduced pay for faculty and staff.

Walmart

- Earthquake: The Walmart store plays a crucial role in providing essential goods to the community. Earthquake damage could result in the loss of inventory, structural damage to buildings, and potential safety hazards for both employees and customers. The stores might also face supply chain disruptions, affecting their ability to restock essential items quickly. Even if the stores remained operational, the economic impacts of the earthquake could lead to a decrease in consumer spending, impacting the revenue of these stores.
- Flood: The Walmart store is critical for providing essential goods to the community. Although not directly impacted by floodplain flooding, indirect impacts could include damage to inventory, infrastructure, and equipment, leading to temporary store closures. Access to stores might be hindered by flooded roads, affecting both customers and supply chains. Even if the stores remained operational, the economic impacts of related flooding could lead to a decrease in consumer spending, impacting the revenue of these stores.
- Wildfire: Although the Walmart is not situated in a designated fire hazard area, they remain vulnerable to poor air quality from nearby wildfires. This can pose health risks to employees and customers leading to staff calling out of work or shopper limiting their shopping activities.
- Drought: Retailers like Walmart may experience disruptions in the supply chain, particularly for products reliant on water-intensive manufacturing processes or agriculture. Increased costs for water and utilities could affect store operations. By changing their store operations, prices for goods might increase. At the same time if work hours are reduced, staff will have a reduction in pay.

Home Depot

- Earthquake: The Home Depot plays a crucial role in providing tools, appliances, and other home building materials to the community. Earthquake damage could result in the loss of inventory, structural damage to buildings, and potential safety hazards for both employees and customers. The stores might also face supply chain disruptions, affecting their ability to restock essential items quickly. Even if the stores remained operational, the economic impacts of the earthquake could lead to a decrease in consumer spending, impacting the

revenue of these stores. Damage to the store and inventory might also delay recovery efforts as home repair items will not be readily available after an earthquake.

- Flood: Although not directly impacted by floodplain flooding, urban flooding could damage inventory, infrastructure, and equipment, leading to temporary store closures. Damage to the store and inventory might also delay recovery efforts as home repair items will not be readily available after a flood. Access to the store might be hindered by flooded roads, affecting both customers and supply chains. Even if the store remained operational, the economic impacts of urban flooding could lead to a decrease in consumer spending, impacting the revenue of the store.
- Wildfire: Although the Home Depot is not situated in a designated fire hazard area, they remain vulnerable to poor air quality from nearby wildfires. This can pose health risks to employees and customers leading to staff calling out of work or shopper limiting their shopping activities.
- Drought: Retailers like the Home Depot may experience disruptions in the supply chain, particularly for products reliant on water-intensive manufacturing processes or agriculture. Increased costs for water and utilities could affect store operations. By changing their store operations, prices for goods might increase. At the same time if work hours are reduced, staff will have a reduction in pay.

Stater Brothers

- Earthquake: Stater Brothers is a major grocery store Chain with two locations in Yucca Valley. Catastrophic damage from an earthquake would not only cause job related economic impacts, but it will also have a negative impact on the food supply chain in the area
- Flood: Neither of the Stater Brothers is located in a flood zone; however, urban flooding can cause indirect impacts on the business. As roads are temporarily closed due to urban flooding, employees, customers, and delivery trucks will need to be rerouted causing delays and inconveniences that could drive customers to other stores. While temporary, this can cause a negative impact on Stater Brothers' revenues.
- Wildfire: Although neither of the Stater Brothers is situated in a designated fire hazard area, they remain vulnerable to poor air quality from nearby wildfires. This can pose health risks to employees and customers leading to staff calling out of work or shopper limiting their shopping activities.
- Drought: Retailers like Stater Brothers may experience disruptions in the supply chain, particularly for products reliant on water-intensive manufacturing processes or agriculture. Increased costs for water and utilities could affect store operations. By changing their store operations, prices for goods might increase. At the same time if work hours are reduced, staff will have a reduction in pay.

A**pplebee's**

- Earthquake: Applebee's could face significant operational challenges following an earthquake. Earthquake damage to the restaurant could lead to temporary closures, supply chain disruptions, and financial losses. Even if the restaurant remained operational, the economic impact of the earthquake could lead to a decrease in consumer spending, impacting the revenue of these restaurants
- Flood: Flooding can damage facilities, equipment, and food supplies, leading to temporary closures and financial losses. Even if the restaurants remained operational, economic impacts of urban flooding could lead to a decrease in consumer spending, impacting the revenue of these restaurants.

- Wildfire: Although Applebee's is not situated in a designated fire hazard area, they remain vulnerable to poor air quality from nearby wildfires. This can pose health risks to employees and customers leading to staff calling out of work or dinners limiting their dinning activities.
- Drought: Restaurants like Applebee's may experience disruptions in the supply chain, particularly for products reliant on water-intensive manufacturing processes or agriculture. Increased costs for water and utilities could affect store operations. By changing their store operations, prices for goods might increase. At the same time if work hours are reduced, staff will have a reduction in pay.

Vons

- Earthquake: Vons is a major grocery store in Yucca Valley. They are also a major employer for the Town. Catastrophic damage to Vons from an earthquake would not only cause job related economic impacts, but it will also have a negative impact on the food supply chain in the area
- Flood: Vons is not located in a flood zone; however, urban flooding can cause indirect impacts on the business. As roads are temporarily closed due to urban flooding, employees, customers, and delivery trucks could be in need of rerouting which could cause delays and inconveniences that could drive customers to other stores. While temporary, this could have a negative impact on the store's revenues.
- Wildfire: Although the Vons is not situated in a designated fire hazard area, they remain vulnerable to poor air quality from nearby wildfires. This can pose health risks to employees and customers leading to staff calling out of work or shopper limiting their shopping activities.
- Drought: Retailers like Vons may experience disruptions in the supply chain, particularly for products reliant on water-intensive manufacturing processes or agriculture. Increased costs for water and utilities could affect store operations. By changing their store operations, prices for goods might increase. At the same time if work hours are reduced, staff will have a reduction in pay.

Overall, an earthquake, flood, wildfire, and drought would disrupt operations, cause financial losses, and pose significant safety challenges for these major employers in Yucca Valley. Recovery efforts would require coordinated responses to ensure employee safety, restore services, and support the community's needs during the crisis.

Natural, Historic, and Cultural Resources

Natural, historic, and cultural resources are essential elements that define the identity and heritage of a community. Natural resources include native flora and fauna, water bodies, landscapes, and climate, providing ecological and recreational benefits. Historic resources consist of buildings, archaeological sites, monuments, and historic districts that hold historical significance. Cultural resources encompass museums, traditional practices, languages, literature, festivals, and public art, reflecting the community's cultural heritage and values. Together, these resources contribute to preserving the community's history, environment, and cultural identity, enriching the quality of life for its residents.

Q&A | ELEMENT B: RISK ASSESSMENT | B2-a.

Q: Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards? (Requirement 44 CFR § 201.6(c)(2)(ii))

A: See **Vulnerability of Natural, Historic, and Cultural Resources** below.

Vulnerability of Natural, Historic, and Cultural Resources

Yucca Valley, located in the Mojave Desert region of Southern California, is rich in natural, historic, and cultural resources. These resources are significant for both their environmental value and their importance to local history and indigenous culture.

- **Hi-Desert Nature Museum**: This museum, located in Yucca Valley, showcases the natural and cultural history of the region. Exhibits focus on the ecology of the Mojave Desert and the history of human settlement, including indigenous cultures and the later pioneers.
- **Desert Christ Park**: This unique park features over 40 statues of biblical figures and scenes, created by artist Antone Martin in the mid-20th century. It is a historic religious and artistic site in Yucca Valley, drawing visitors interested in its spiritual and cultural significance.

Table 4.8: Hazard Proximity to Natural, Historic, and Cultural Resources
(Source: Town of Yucca Valley Planning Team, Emergency Planning Consultants)
(Note: "X" indicates affirmative)

Natural, Historic, and Cultural Resources	Earthquake	Flooding	Wildfire	Drought
Hi-Desert Natural Museum 57098 29 Palms Hwy	X			X
Desert Christ Park 56200 Sunnyslope Dr	X		X	X

Q&A | ELEMENT B: RISK ASSESSMENT | B2-b.

Q: For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Impact Profile of Natural, Historic, and Cultural Resources** below.

Impact Profile of Natural, Historic, and Cultural Resources

Earthquake

Earthquakes could significantly impact both the Hi-Desert Nature Museum and Desert Christ Park in Yucca Valley. The museum may suffer structural damage, endangering fragile exhibits and leading to temporary closures. Fragile artifacts could be damaged or destroyed if not properly secured, disrupting operations and posing safety risks to staff and visitors. Desert Christ Park's large concrete statues are particularly vulnerable to cracking or toppling, especially in areas with ground instability. Both sites could face cultural losses, costly repairs, and reduced tourism.

Mitigation measures like seismic retrofitting and preparedness planning would be essential to reduce these risks.

Flooding

Although the Hi-Desert Nature Museum and Desert Christ Park are not in designated flood zones, they could still experience significant impacts from urban flooding, flash floods, or heavy rains. The museum might face water damage to its structure and exhibits, mold growth, and operational disruptions. At Desert Christ Park, flooding could cause soil erosion, potentially destabilizing the concrete statues, while waterlogged pathways could pose safety hazards for visitors. Both sites could experience closures for repairs and restoration, emphasizing the need for preparedness measures like drainage improvements and emergency response plans to mitigate flood risks.

Wildfire

Although the Hi-Desert Nature Museum is not located in a designated fire zone, nearby wildfires can still have indirect impacts. Smoke and ash from wildfire could infiltrate the museum, potentially damaging sensitive exhibits and collections, particularly if they are exposed to particulates or if ventilation systems are affected. Poor air quality from nearby fires could also pose health risks for staff and visitors, potentially leading to temporary closures. Additionally, evacuations or transportation disruptions caused by the fire might limit access to the museum, affecting its operations and visitor traffic.

At Desert Christ Park, the threat from wildfires is more direct since it is an outdoor location. The park's vegetation could serve as fuel for a spreading fire, and smoke, ash, or even flames could cause damage to the large concrete statues, either through heat exposure or surface damage. The park's infrastructure, including pathways and visitor areas, could be affected by debris or fire damage. Evacuations and temporary closures might be necessary to ensure visitor safety during nearby wildfires, and damage to the statues could require restoration efforts. The site is vulnerable to wildfire-related air quality issues and operational disruptions, despite the museum being outside a fire zone.

Drought

Drought can significantly affect the Hi-Desert Nature Museum and Desert Christ Park by stressing local ecosystems and impacting visitor experiences. At the museum, prolonged drought may necessitate updates to exhibits related to local ecology, while outdoor water features and landscaping could suffer, diminishing aesthetic appeal. This could also lead to changes in educational programs focused on drought effects. In Desert Christ Park, vegetation may decline due to water scarcity, affecting the park's beauty and wildlife habitat. Additionally, drought increases soil erosion around the large concrete statues, potentially compromising their stability. Reduced visitor engagement due to extreme heat or diminished natural beauty, along with an elevated wildfire risk, poses further challenges for both sites, emphasizing the need for effective management strategies to mitigate these impacts.

Activities Bringing Value to the Community

Activities bringing value to the community are those that contribute positively to the well-being, cohesion, and development of the community as a whole. These activities can take various forms and serve different purposes, but they generally aim to enhance the quality of life for community members and promote a sense of belonging and connectedness.

Q&A | ELEMENT B: RISK ASSESSMENT | B2-a.

Q: Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards? (Requirement 44 CFR § 201.6(c)(2)(ii))

A: See **Vulnerability of Activities Bringing Value to the Community** below.

Vulnerability Of Activities Bringing Value to the Community

The Yucca Valley Film Festival is an annual event that celebrates independent filmmaking by showcasing a diverse selection of films, including short films, feature-length works, and documentaries from emerging filmmakers . Held in Yucca Valley, the festival features screenings, competitions for various awards, and workshops or panels with industry professionals, providing valuable insights into the filmmaking process. It aims to engage the local community in the arts and foster cultural involvement, all set against the scenic backdrop of the High Desert. Overall, the festival offers filmmakers a platform to gain exposure and audiences a chance to experience unique cinematic works.

Table 4.9: Hazard Proximity to Activities Bringing Value to the Community
(Source: Town of Yucca Valley Planning Team, Emergency Planning Consultants)
(Note: "X" indicates affirmative)

Activities Bringing Value to the Community	Earthquake	Flooding	Wildfire	Drought
Yucca Valley Film Festival 57090 29 Palms Hwy	X			X

Q&A | ELEMENT B: RISK ASSESSMENT | B2-b.

Q: For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Impact Profile of Activities Bringing Value to the Community** below.

Impact Profile of Activities Bringing Value to the Community

Earthquake

An earthquake could significantly impact the Yucca Valley Film Festival by causing venue damage, operational disruptions, and safety concerns. Structural damage to the festival's location could necessitate a change of venue or even cancellation, while damaged equipment might hinder the ability to showcase films. Logistical challenges related to transportation and scheduling could arise, particularly if the earthquake occurs close to the event dates, potentially leading to lower

attendance as the community prioritizes recovery efforts. Additionally, safety protocols may need to be heightened to ensure participant well-being during emergencies. Overall, the earthquake could disrupt the festival's execution and diminish its cultural and economic contributions to the local community, highlighting the need for preparedness and resilience planning for future events.

Flooding

Although the location of the Yucca Valley Film Festival is not typically subject to flooding, a downpour or blocked storm drains could create a situation similar to urban flooding. Such circumstances could have significant impacts, including safety concerns for attendees due to risks like being temporarily stranded and water contamination. Flooding could also damage festival infrastructure, disrupt activities, and create logistical challenges for organizers. The flood could lead to a decrease in attendance, affecting vendors and organizers financially. However, it could also prompt a community-wide response, with residents coming together to support each other and assist with recovery efforts. Quick and effective response measures would be crucial to ensuring the safety of attendees and minimizing the impact on the festival in future years.

Wildfire

Although the Yucca Valley Film Festival is not located in a fire-prone area, nearby wildfires can still significantly impact the event. Smoke and ash from wildfires could deteriorate air quality, posing health risks and potentially deterring attendees. Logistical challenges, such as road closures, could hinder access for participants and resources, while safety concerns might necessitate emergency evacuation protocols. These factors could lead to decreased attendance, affecting the festival's atmosphere and economic benefits for local businesses. Consequently, festival organizers may need to develop contingency plans to address the impacts of wildfires, ensuring preparedness for future events.

Drought

A drought could directly impact or affect the Yucca Valley Film Festival. Depending on the level of drought, water restrictions could impact the maintenance of green spaces and decorative features, reducing the festival's aesthetic appeal. The drought could also result in reduced vegetation and plant health, affecting the ambiance and natural beauty of the event. Increased fire risk due to dry vegetation could impact safety and accessibility, requiring additional precautions. High temperatures and dry conditions could make attending the festival less comfortable for visitors, necessitating additional measures such as shade and cooling stations. Additionally, the availability and cost of food and drink vendors could be affected, potentially limiting options for attendees. Overall, organizers would need to adapt to mitigate these impacts and ensure a successful festival.

Chapter 5: Mitigation Strategies

Overview of Mitigation Strategy

As the cost of damage from disasters continues to increase nationwide, the Town of Yucca Valley recognizes the importance of identifying effective ways to reduce vulnerability to disasters. Mitigation Plans assist communities in reducing risk from natural hazards by identifying resources, information and strategies for risk reduction, while helping to guide and coordinate mitigation activities at the Town's facilities.

The plan provides a set of action items to reduce risk from hazards through education and outreach programs, and to foster the development of partnerships. Further, the plan provides for the implementation of preventative activities.

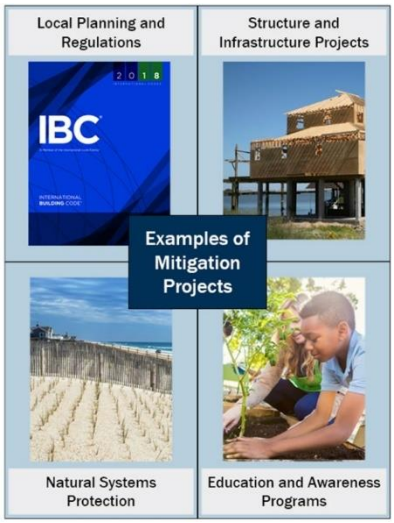
The resources and information within the Mitigation Plan:

1. Establish a basis for coordination and collaboration among agencies and the public in the Town of Yucca Valley.
2. Identify and prioritize future mitigation projects.
3. Assist in meeting the requirements of federal assistance programs.

The Mitigation Strategy incorporates two of the Town's strategic documents: General Plan and the Capital Improvement Program.

Mitigation Measure Categories

Following is FEMA's list of mitigation categories. The activities identified by the Planning Team are consistent with the four mitigation categories outlined in FEMA's **Local Mitigation Planning Handbook**.



Local Planning and Regulations: Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning and zoning, building codes, capital improvement projects, open space preservation, and storm water management regulations.

Education and Awareness Programs: Actions to inform and educate citizens, property owners, and elected officials about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.

Natural Systems Protection: Actions that, in addition to minimizing hazard losses, preserve or restore the functions of natural systems. Examples include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.

Structure and Infrastructure Projects: Actions that involve modification of existing buildings or structures to protect them from hazards, or removal from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass. Also, actions that involve the construction of structures to reduce the impact of a hazard include structures like dams, levees, floodwalls, retaining walls, and safe rooms.

Q&A | ELEMENT C. MITIGATION STRATEGY | C3-a.
Q: Does the plan include goals to reduce the risk from the hazards identified in the plan? (Requirement 44 CFR § 201.6(c)(3)(i)) **A:** See **Goals** below.
Q&A | ELEMENT C. MITIGATION STRATEGY | C5-a.
Q: Does the plan describe the criteria used for prioritizing actions? (Requirement 44 CFR § 201.6(c)(3)(iv)) **A:** See **Priorities** below.
Q&A | ELEMENT E. PLAN UPDATE | E2-a.
Q: Does the plan describe how it was revised due to changes in community priorities? (Requirement 44 CFR § 201.6(d)(3)) **A:** See **Community Priorities** below.

Goals

It's important to note that, as identified in Chapter 3: Risk Assessment – Hazard Profiles – Land Use Development Considerations (for each hazard), that the changes in development that occurred in the hazard-prone areas has not changed the overall vulnerability of Yucca Valley since the writing of the 2018 HMP.

Overall goals guide the direction of future activities aimed at reducing risk and preventing loss from natural hazards. During the first meeting of the Planning Team, the 2018 HMP goals were reviewed and a determination made that the goals were consistent with the 2024 risk assessment and that the goals continue to represent a long-term vision for hazard reduction and enhanced mitigation capabilities.

Community Priorities

Equally important are the changes in priorities to the plan update itself since the writing of the 2018 HMP. Most of the changes in priorities are tied directly to the 2023 FEMA **Local Mitigation Planning Policy Guide**:

- Executive Summary: new section summarizes the plan, and
- Chapter 1: Planning Process - several stakeholder categories were added along with design and execution of a more robust community outreach strategy, and
- Chapter 2: Community Profile – new attention given to the location and levels of the underserved communities and socially vulnerable populations, and
- Chapter 3: Risk Assessment – consideration given to the state and federal recommended hazards yielded different hazards for inclusion in the 2024 HMP; inclusion of the Town's Floodplain Ordinance, and
- Chapter 4: Vulnerability and Impacts - new research and content for the vulnerabilities and impacts discussion, much more comprehensive list and analysis of vulnerability of assets including people, structures, systems, economy, community resources, and activities, and

- Chapter 5: Mitigation Strategies – added appropriate General Plan Safety Element projects/actions; updated status on 2018 action items including deleting some lacking political or budgetary support; adding action items to protect critical facilities and socially vulnerable populations, and
- Chapter 7: Plan Review, Adoption, and Approval - a new section summarizing the progression of the Draft Plan to Final Plan.

The Planning Team identified the overall goals to guide the direction of future activities aimed at reducing risk and preventing loss from natural hazards.

The Planning Team established goals based on the risk assessment that represent a long-term vision for hazard reduction and enhanced mitigation capabilities.

Each goal is supported by mitigation action items. The Planning Team developed these action items through its knowledge of the local area, risk assessment, review of past efforts, identification of mitigation activities, and qualitative analysis.

Protect Life and Property

Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to losses from natural, human-caused, and technological hazards.

Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards.

Improve hazard assessment information to make recommendations for avoiding new development in high hazard areas and encouraging preventative measures for existing development in areas vulnerable to natural, human-caused, and technological hazards.

Public Awareness

Develop and implement education and outreach programs to increase public awareness of the risks associated with natural hazards.

Provide information on tools, partnership opportunities, and funding resources to assist in implementing mitigation activities.

Natural Systems

Balance watershed planning, natural resource management, and land use planning with natural hazard mitigation to protect life, property, and the environment.

Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions.

Partnerships and Implementation

Strengthen communication and coordinate participation among and within public agencies, citizens, non-profit organizations, business, and industry to gain a vested interest in implementation.

Encourage leadership within public and private sector organizations to prioritize and implement local, county, and regional hazard mitigation activities.

Emergency Services

Establish policy to ensure mitigation projects for critical facilities, services, and infrastructure.

Strengthen emergency operations by increasing collaboration and coordination among public agencies, non-profit organizations, business, and industry.

Coordinate and integrate natural hazard mitigation activities, where appropriate, with emergency operations plans and procedures.

How are the Mitigation Action Items Organized?

The action items are a listing of activities in which Town agencies and citizens can be engaged to reduce risk.

The action items are organized within the following Mitigation Actions Matrix, categorized by hazard. Data collection and research and the public participation process resulted in the development of these action items. The Matrix includes the following information for each action item:

Q&A | ELEMENT C: MITIGATION STRATEGY | C5-b.
Q: Does the plan identify the position, office, department, or agency responsible for implementing/administering the identified mitigation actions, as well as potential funding sources and expected time frame? (Requirement 44 CFR § 201.6(c)(3)(iii)) **A:** See **Lead Department/Position** below.

Lead Department/Position

The Mitigation Actions Matrix assigns primary responsibility for each of the action items to either a department or specific position within the Town. The primary responsibility for implementing the action items falls to the entity shown as the “Lead Department”. The lead department has the regulatory responsibility to address hazards, or is willing and able to organize resources, find appropriate funding, or oversee activity implementation, monitor, and evaluate. The lead department is within the Town staff or contracted while supporting agencies may include local governments, County, or regional agencies

Timeline

The mitigation plan will be updated every 5 years according to FEMA regulations. However, there are projects and programs in the Mitigation Actions Matrix that will require more than 5 years to complete. Some of the actions in the 2018 HMP indicated “ongoing”. Now, such items are indicated with a more specific indicator of frequency (e.g., Annual, Quarterly, Monthly, Weekly, Daily) or “As Needed” with an explanation of what triggers the action (e.g., amending the General Plan, a public agency meeting, etc.).

Funding Source

External Resources could include a range of FEMA mitigation grants perhaps including HMGP, FMA, and BRIC.

Internal Resources could include general fund, capital improvement budgets, impact fees, human capital, in-kind resources, etc.

Plan Goals Addressed

The plan goals addressed by each action item are included as a way to monitor and evaluate how well the mitigation plan is achieving its goals once implementation begins.

The plan goals are organized into the following five areas:

- ✓ Protect Life and Property
- ✓ Enhance Public Awareness
- ✓ Preserve Natural Systems
- ✓ Encourage Partnerships and Implementation
- ✓ Strengthen Emergency Services

Q&A | ELEMENT D: PLAN MAINTENANCE | D3-b.
Q: Does the plan identify the planning mechanisms for each plan participant into which the ideas, information and strategy from the mitigation plan may be integrated? (Requirement 44 CFR § 201.6(c)(4)(ii))
A: See **Planning Mechanisms** below.

Planning Mechanisms

It's important that each action item be implemented. Perhaps the best way to ensure implementation is through integration with one or many of the Town's existing "planning mechanisms" including the "internal resources" including the General Plan, Capital Improvement Projects, General Fund, and "external resources" including Grants. Opportunities for integration will be simple and easy in cases where the action item is already compatible with the content of the planning mechanism. As an example, if the action item calls for the creation of a floodplain ordinance and the same action is already identified in the General Plan's policies, then the General Plan will assist in implementation. On the contrary, if preparation of a floodplain ordinance is not already included in the General Plan policies, then the item will need to be added during the next update to the General Plan.

The Capital Improvement Program, depending on the budgetary environment, is updated every 5 years. The CIP includes infrastructure projects built and owned by the Town. As such, the CIP is an excellent medium for funding and implementing action items from the Mitigation Plan. The Mitigation Actions Matrix includes several items from the existing CIP. The authors of the CIP served on the Planning Team and are already looking to funding addition Mitigation Plan action items in future CIPs. The General Fund is the budget document that guides all of the Town's expenditures and is updated on an annual basis. Although primarily a funding mechanism, it also includes descriptions and details associated with tasks and projects.

Grants come from a wide variety of sources – some annually and others triggered by events like disasters. Whatever the source, the Town uses the General Fund to identify successful grants as funding sources.

Building and Infrastructure

This addresses the issue of whether or not a particular action item results in the reduction of the effects of hazards on new and existing buildings and infrastructure.

Expanding and Improving Capabilities

This identifies the capability categories and applicability to individual mitigation action items. Sub-category indicators are P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach.

Q&A | ELEMENT E: PLAN UPDATE | E2-b.

Q: Does the plan include a status update for all mitigation actions identified in the previous mitigation plan? (Requirement 44 CFR § 201.6(d)(3))

A: See **Comments** below.

Comments

The purpose of the "Comments" is to capture the notes and status of the various action items. Notations include:

"Completed" - action item from the 2018 HMP is now completed and will be removed following FEMA approval of the 2024 Plan.

"Revised" – action item from the 2018 HMP has been edited.

"Deleted" – action item from the 2018 HMP has been deleted. This happens for a variety of reasons but most often it's because of a lack of staff/funding.

"Deferred" – action item from the 2018 HMP was not yet completed but will remain in the 2014 HMP.

"New" – action item did not exist in the 2018 HMP.

"Notes" – often include details or justifications for a particular action item intended to assist with implementation.

It's also important to note that some of the action items are shown in strike-out. This is because FEMA requires explanation of all action items in the previous plan (2018). When an item is now complete, the "Comments" column will indicate "completed" while the action item itself will be shown in strike-out.

Q&A | ELEMENT C. MITIGATION STRATEGY | C5-a.

Q: Does the plan describe the criteria used for prioritizing actions? (Requirement 44 CFR § 201.6(c)(3)(iv))

A: See **Benefit/Cost Ratings, Priority Rating** below.

Benefit/Cost Ratings

The benefits of proposed projects were weighed against estimated costs as part of the project prioritization process. The benefit/cost analysis was not of the detailed variety required by FEMA for project grant eligibility under the Hazard Mitigation Grant Program (HMGP) and Building Resilient Infrastructure and Communities (BRIC) grant program. A less formal approach was used because some projects may not be implemented for up to 10 years, and associated costs and benefits could change dramatically in that time. Therefore, a review of the apparent benefits

versus the apparent cost of each project will be performed in the future as needed. Parameters were established for assigning subjective ratings (high, medium, and low) to the costs and benefits of these projects.

Cost ratings were defined as follows:

High: Existing funding within the jurisdiction will not cover the cost of the action item so outside sources of revenue would be required.

Medium: The action item could be funded through existing jurisdictional funding but would require budget modifications.

Low: The action item could be funded under existing jurisdictional funding within the assigned lead department.

Benefit ratings were defined as follows:

High: The action item will provide short-term and long-term impacts on the reduction of risk exposure to life and property.

Medium: The action item will have long-term impacts on the reduction of risk exposure to life and property.

Low: The action item will have only short-term impacts on the reduction of risk exposure to life and property.

Priority Rating

It's important to note that since the 2018 HMP was approved by FEMA, several mitigation actions have been completed (as indicated in the Comments column on the Mitigation Actions Matrix). Even though those projects are now complete, the Planning Team did not make any revisions to "priority" of the remaining items. For new action items (written during the 2024 planning process), the Planning Team utilized the same Priority Rating system as the one used during the 2018 planning process. Designations of "High", "Medium", and "Low" priority have been assigned to all of the action item using the following criteria:

Does the Action:

- ☐ solve the problem?
- ☐ address Vulnerability Assessment?
- ☐ reduce the exposure or vulnerability to the highest priority hazard?
- ☐ address multiple hazards?
- ☐ benefits equal or exceed costs?
- ☐ implement a goal, policy, or project identified in the General Plan or Capital Improvement Project?

Can the Action:

- ☐ be implemented with existing funds?
- ☐ be implemented by existing state or federal grant programs?
- ☐ be completed within the 5-year life cycle of the LHMP?
- ☐ be implemented with currently available technologies?

Will the Action:

- ☐ be accepted by the community?
- ☐ be supported by community leaders?
- ☐ adversely impact segments of the population or neighborhoods?
- ☐ require a change in local ordinances or zoning laws?
- ☐ positive or neutral impact on the environment?
- ☐ comply with all local, state and federal environmental laws and regulations?

Is there:

- ☐ sufficient staffing to undertake the project?
- ☐ existing authority to undertake the project?

As mitigation action items were updated or written the Planning Team, representatives were provided worksheets for each of their assigned action items. Answers to the criteria above determined the priority according to the following scale.

- 1-6 = Low priority
- 7-12 = Medium priority
- 13-18 = High priority

Q&A | ELEMENT C: MITIGATION STRATEGY | C4-a.
Q: Does the plan include an analysis of a comprehensive range of actions/projects that each jurisdiction considered to reduce the impacts of hazards identified in the risk assessment? (Requirement 44 CFR § 201.6(c)(3)(ii)) **A:** See **Mitigation Actions Matrix (Action Items)** below.
Q&A | ELEMENT C: MITIGATION STRATEGY | C4-b.
Q: Does the plan include one or more action(s) per jurisdiction for each of the hazards as identified within the plan's risk assessment? (Requirement 44 CFR § 201.6(c)(3)(ii)) **A:** See **Mitigation Actions Matrix (Action Items)** below.
Q&A | ELEMENT C: MITIGATION STRATEGY | C5-a.
Q: Does the plan describe the criteria used for prioritizing actions? (Requirement 44 CFR § 201.6(c)(3)(ii)) **A:** See **Mitigation Actions Matrix (Priority, Goals)** below.
Q&A | ELEMENT C: MITIGATION STRATEGY | C5-b.
Q: Does the plan identify the position, office, department, or agency responsible for implementing/administering the identified mitigation actions, as well as potential funding sources and expected time frame? (Requirement 44 CFR § 201.6(c)(3)(iii))) **A:** See **Mitigation Actions Matrix (Lead Department, Timeline, Funding Source)** below.
Q&A | ELEMENT D: PLAN MAINTENANCE | D3-a.
Q: Does the plan describe the process the community will follow to integrate the ideas, information and strategy of the mitigation plan into other planning mechanisms? (Requirement 44 CFR § 201.6(c)(4)(ii)) **A:** See **Mitigation Actions Matrix (Planning Mechanism)** below.
Q&A | ELEMENT E: PLAN UPDATE | E2-b.
Q: Does the plan include a status update for all mitigation actions identified in the previous mitigation plan? (Requirement 44 CFR § 201.6(d)(3)) **A:** See **Mitigation Actions Matrix (Comments)** below.

Mitigation Actions Matrix

Table 5.1: Mitigation Actions Matrix identifies the existing and future mitigation activities developed by the Planning Team.

Table 5.1: Mitigation Actions Matrix
Source: Yucca Valley Planning Team

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
MULTI-HAZARD ACTION ITEMS														
MH-1 Acquire and install emergency generator for the Town Hall Complex including Community Services and Animal Shelter.	Disaster Preparedness	Completed	X			X	X	Y	HMGP, BRIC	HMGP, BRIC	H	M	H	Completed in 2019
MH-2 Maintain and utilize County's TENS service for emergency notifications.	SBC Sheriff	Annual	X	X	X	X	X	Y	GF	GF	H	L	H	
~~MH-6 Prepare Evacuation Plans~~	~~SBC Fire, SBC Sheriff~~	~~Ongoing~~	~~X~~	~~X~~		~~X~~	~~X~~	~~N~~	~~*~~		~~H~~	~~L~~	~~H~~	Deleted – Accomplished through

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
														General Plan Safety Element
MH-3 Update to State Building Code every 3 years.	Community Development	3 years	X	X	X	X		Y	GF	GF	H	L	M	
MH-4 Establish Memorandums of Understanding (MOU) for sharing of resources with City of 29 Palms, Copper Mountain College, and National Park Police.	Town Manager's Office	1-2 years	X	X		X	X		GF	GF	H	L	H	Revised – action item
MH-5 Continue to support CERT program and Morongo Basin COAD program. (Source: added Morongo Basin COAD based on input during Community Outreach)	Disaster Preparedness	Monthly	X	X		X	X		GF	GF	H	L	M	Revised – action item

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
MH-6 Continue to add emergency preparedness information to Town's website.	Disaster Preparedness	Annual	X	X		X	X		GF	GF	H	L	M	
~~MH-7 Review all industrial development proposals with a focus on public health and safety issues to ensure that the type and intensity of the use is appropriate for the proposed location and compatible with surrounding land uses. (Source: GP Safety Element)~~	~~Community Development~~	~~Ongoing~~	~~X~~					~~Y~~	~~GF~~	~~GF~~	~~H~~	~~L~~	~~M~~	Deleted – removed during update to Safety Element
~~MH-8 Restrict higher intensity uses from areas subject to flooding, seismic hazards, airport safety hazards and wildland fires. (Source: GP Safety Element)~~	~~Community Development, Planning~~	~~Ongoing~~	~~X~~					~~Y~~	~~GF~~	~~GF~~	~~H~~	~~L~~	~~H~~	Deleted – removed during update to Safety Element

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
~~MH-9 Foster and maintain relationships with Caltrans to facilitate the establishment of emergency evacuation routes, and to provide for the development of an emergency response plan that assures the timely repair of state highways damaged by earthquakes, flooding or other disasters. Consult with Caltrans, the Federal Highway Administration, FEMA and the US Department of Defense regarding funding assistance for the construction, repair and/or upgrading of bridges, floodway crossings, cut slopes and other structures to minimize the~~	~~Town Manager, Community Development~~	~~Ongoing~~	~~X~~			~~X~~			~~GF~~	~~GP~~	~~H~~	~~L~~	~~H~~	Deleted – removed during update to Safety Element

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
~~potential isolation of the community and surrounding facilities from ground-based assistance. (Source: GP Safety Element)~~														
~~MH-10 The Town shall periodically review and update the Safety Element of the General Plan with the latest information and data available on the various seismic and flooding threats. This process shall ensure that additional or refined measures are systematically incorporated into these elements to protect lives and property. Also, the next update should ensure~~	~~Planning~~	~~Ongoing~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~Y~~	~~GF~~	~~GP~~	~~H~~	~~M~~	~~H~~	Deleted – removed during update to Safety Element

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
~~compliance with AB 2140. (Source: GP Safety Element)~~														
MH-7 Cooperate and coordinate with San Bernardino County, the Hi-Desert Water District and other agencies and utilities in the preparation of public information materials to assist residents and business owners in responding to local disasters.	Disaster Preparedness	Annual	X	X		X	X		GF	GF	M	L	M	
MH-8 Update and maintain the Town's ham radio equipment located in Community Development.	Disaster Preparedness	1-2 years	X	X		X	X		GF, HMGP, BRIC	GF, HMGP, BRIC	M	L	M	New
MH-9 Coordinate and integrate both commercial and private radio operators, including ham radio operators, to establish a	San Bernardino County OES,	1-2 years		X			X		GF	GP	M	L	M	

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
Radio Amateur Civil Emergency Service.	Disaster Preparedness													
MH-10 Continue to examine vulnerability to natural and man-made disasters when reviewing proposals for the siting and development of critical and essential public/quasi-public facilities.	Community Development	As needed	X	X			X	Y	GF	GP	H	L	H	
MH-11 Develop and maintain a Memorandum of Understanding with Morongo Unified School District requiring that the fuel storage tanks be equipped with an emergency generator.	Community Development, Disaster Preparedness	1 year	X	X		X	X	Y	GF	GF	H	L	H	New
MH-12 Purchase, install, and maintain emergency generators for the Town's Aquatics Center	Community Development, Disaster Preparedness	1-2 years	X	X		X	X	Y	HMGP, BRIC	HMGP, BRIC	H	L	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
and Senior Center. Both are designated as shelters.														
MH-13 Encourage the purchase and maintenance of emergency power generators at other important public and private facilities.	Disaster Preparedness	1 year	X	X		X	X	Y	GF	GF	H	L	H	Revised – action item
MH-14 Promote hazard mitigation as a public value in recognition of its importance to the health, safety, and welfare of the population.	Disaster Preparedness	As needed		X		X		Y	GF	GF	M	L	M	
MH-15 Compile a directory of out-of-area contractors to help with repairs/reconstruction so that restoration occurs in a timely manner.	Public Works	1-2 years	X			X	X	N	GF/GR	GF	M	L	M	

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
MH-16 Review and update the Emergency Operations Plan with local key staff members, including medical, fire, police, etc., to ensure that the Town is adequately prepared for most likely and demanding emergency disasters. (Source: GP Safety Element – Implementation Actions)	Disaster Preparedness	Every 3 years	X	X	X		X	Y	GF, HMGP, BRIC	GF, HMGP, BRIC	H	H	H	Revised – action item, timeline
MH-17 Continue to enforce hazard-resistant building construction.	Community Development	As needed	X	X			X	Y	GF	GF	H	L	H	
MH-18 Require that new structures or structures undergoing significant renovation meet code requirements in accordance with the State Building Code.	Building & Safety	As needed	X	X				Y	GF	GF	H	L	H	

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
MH-19 Identify and inspect critical infrastructure for needs associated with ensuring reserve water supply for drinking and firefighting.	Disaster Preparedness	1-5 years	X	X	X	X	X	Y	GF, HMGP, BRIC, CIP	GF, HMGP, BRIC, CIP	M	M	M	
MH-20 Identify and inspect critical infrastructure for needs associated with reinforcing or retrofitting to mitigate against weaknesses.	Disaster Preparedness	1-5 years	X	X	X	X	X	Y	GF, HMGP, BRIC, CIP	GF, HMGP, BRIC, CIP	M	M	M	
MH-21 Identify and inspect critical infrastructure for needs associated with risks to transportation corridors.	Disaster Preparedness	1-5 years	X	X	X	X	X	Y	GF, HMGP, BRIC	GF/CIP	M	M	M	
MH-22 Incorporate updated building code standards into renovation and expansion of Town Hall into former Library for all non-field Town staff. Also	Community Development	1-3 years	X	X	X		X	X	Bond	Bond	M	H	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal**: Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
incorporate "safety measures" (e.g., earthquake safety glass, etc.) to support emergency protocols including duck/cover/hold, shelter-in-place, lockdown, and evacuation.														
MH-23 Utilize local radio, print media, and social media to spread hazard awareness.	Disaster Preparedness	As needed	X	X		X			GF	GF	H	L	H	
MH-24 Conduct a vulnerability assessment of all Town-owned facilities to determine if the facilities should be redesigned or relocated to avoid future service disruptions.	Community Development, PW/ENG, Disaster Preparedness	5 years	X				X	Y	HMGP, BRIC, CIP	GF	H	M	M	Revised – action item
MH-25 Investigate, apply, and implement the National Weather Service designation of	Disaster Preparedness	2 years	X	X	X	X	X	Y	GF	GF	H	L	H	

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
StormReady or Weather Ready Nation programs.														
MH-26 Monitor trees and branches in public areas at risk of breaking or falling in wind and sandstorms. Prune or thin trees or branches when they would pose an immediate threat to property, utility lines or other significant structures or critical facilities in the community.	PW/ENG	Annual	X	X	X		X	Y	GF, HMGP, BRIC, CIP	GF, HMGP, BRIC, CIP	H	M	H	
MH-27 Integrate the Mitigation Plan into future Capital Improvement Plans and General Plan updates to ensure that development does not encroach on known hazard areas.	Community Development, Disaster Preparedness, PW/ENG	Annual	X	X	X		X	Y	GF	GF	M	M	H	

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
MH-28 Seek funding to prepare a Pre-Disaster Recovery Plan including priorities for changes in land use and restoration of the community's infrastructure and vital public facilities following a disaster.	Disaster Preparedness, PW/ENG, Community Development	1-5 years	X	X			X	Y	HMGP, BRIC	HMGP, BRIC	M	M	M	
MH-29 Complete the Continuity of Operations Plan (COOP).	Disaster Preparedness	1-2 years	X	X	X	X	X	Y	GF	GF	H	L	H	Revised – action item and timeline
MH-30 Explore alternatives for storing emergency water at Town Hall Complex.	Disaster Preparedness, Public Works	1-5 years	X				X	Y	GF, HMGP, BRIC	GF, HMGP, BRIC	H	M	H	New
MH-31 Seek grant funding for the next update to Hazard Mitigation Plan.	Disaster Preparedness	5 years	X	X	X	X	X		HMGP	HMGP	M	L	M	Completed in 2023 and applying again in 2028
MH-32 Seek grant funding for establishing and maintaining	Disaster Preparedness	1 year	X	X	X	X	X		GR	GF	H	H	H	Revised – action item

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
GIS capabilities (e.g., software, equipment, etc.)														
MH-33 Identify and pursue funding opportunities to develop and implement local mitigation activities.	All Lead Departments	Annual	X	X	X	X	X		GF, HMGP, BRIC, CIP	GF, HMGP, BRIC, CIP	H	M	H	
MH-34 Seek funding for development of a Personal Mitigation Outreach Program. Possible components could include home risk/mitigation assessments and broker available free/subsidized resources to participating residents. Initial Program should be delivered at the Senior Center.	Disaster Preparedness, Community Services	1-2 years	X	X	X	X	X	Y	GF, HMGP, BRIC, CIP	GF, HMGP, BRIC, CIP	H	M	H	
MH-35 Seek funding for upgrades to the existing EOC	Public Works, Facilities,	1-5 years	X			X	X	Y	GF, GR, CIP	GF, CIP	H	H	H	

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
locations (Town Hall Complex, Community Development)	Disaster Preparedness													
MH-36 Seek funding to update 2013 Emergency Operations Plan.	Disaster Preparedness	1 year	X	X	X	X	X	Y	HMGP, BRIC	GF, HMGP, BRIC, CIP	H	H	H	New
MH-37 Work with MUSD to establish an MOU for developing a ham radio program for youth. (Source: Community Outreach suggestion)	Public Works, Disaster Preparedness	1-5 years	X	X	X	X	X	Y	GF	GF	M	L	H	New
MH-38 Examine and correct any deficiencies in emergency ingress/egress for mobile home parks. (Source: Community Outreach suggestion)	Public Works, Disaster Preparedness	1-5 years	X	X	X	X	X	Y	GF	GF	M	L	H	New
EARTHQUAKE ACTION ITEMS														

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
EQ-1 Continuous evaluation of seismic building codes and updates to ensure that new buildings conform to latest standards.	Community Development	As needed	X	X		X	X	Y	GF	GF	H	L	H	
EQ-2 Maintain lines of communication between the Town and the US Geological Survey to assure the provision of earthquake predictions which may impact the Town and surrounding area.	San Bernardino County OES, Disaster Preparedness	Annual	X	X		X	X	Y	GF	GF	H	L	H	
EQ-3 Periodically contact the California Division of Mines and Geology to develop and maintain updated Alquist-Priolo Earthquake Fault Zoning maps and other information on seismic and other geological	Community Development Department and State and Federal Agencies	Annual	X	X		X		Y	GF	GP	H	L	H	Revised – funding. New – planning mechanism, benefit, cost, priority.

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
hazards affecting the community. Consult and cooperate with San Bernardino County, surrounding unincorporated communities and applicable State and Federal agencies, in an on-going program to improve and update the database and other information on regional geologic/seismic conditions.														
EQ-4 Continue to monitor suitability of future development in areas subject to a rock fall or landslide hazards.	Community Development, Engineering	As needed	X				X	Y	GF	GF	H	L	H	
EQ-5 Continue to install non-structural mitigation (e.g., strap or secure) all Town facilities.	Disaster Preparedness, Facilities	1-2 years	X	X			X	Y	GF	GF	H	L	H	Revised – action item

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
EQ-6 Maintain Emergency Kits and Grab-N-Go bags at all Town office locations.	Disaster Preparedness	1 year	X					N	GF	GF, GR	M	M	M	Completed and now ongoing
EQ-7 Disseminate information on areas of landslide susceptibility at Town Hall and on the Town's website by making available/posting a link to the Slope Distribution Map. (Source: GP Safety Element – Implementation Actions)	Community Development	1 year	X	X	X	X	X	X	GF	GF	H	L	H	New
EQ-8 Contract with a state-certified geologist and/or geological engineer to review and determine the adequacy of geotechnical studies for proposed projects. (Source: GP Safety Element – Implementation Actions)	Community Development, Building & Safety	1-2 years	X	X	X	X	X	X	GF	GF	H	L	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
EQ-9 Maintain a reference collection of maps and other materials illustrating the location of seismic hazards occurring within the Town boundaries. (Source: GP Safety Element - Implementation Actions)	Community Development	1-3 years	X	X	X	X	X	X	GF	GF	H	L	H	New
EQ-10 Disseminate information on fault locations at Town Hall and on the Town website by making available/ posting a link to the Seismic Hazards Map. (Source: GP Safety Element - Implementation Actions)	Community Development	1-2 years	X	X	X	X	X	X	GF	GF	H	L	H	New
EQ-11 Update building, zoning, and grading codes as needed to ensure adopted standards mitigate potential seismic hazards and comply with the	Community Development, Building & Safety	As needed	X	X	X	X	X	X	GF	GF	H	L	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
Alquist-Priolo Act and Unreinforced Masonry Law. (Source: GP Safety Element - Implementation Actions)														
EQ-12 Communicate with the Hi-Desert Water District to ensure the seismic safety of all existing and proposed water storage tanks and pipe connections. (Source: GP Safety Element -Implementation Actions)	Community Development	1 year	X	X	X	X	X	X	GF	GF	H	L	H	New
EQ-13 Collect and distribute earthquake preparedness information and materials to Town residents and local businesses (Source: GP Safety Element -Implementation Actions)	Community Development	As needed	X	X	X	X	X	X	GF	GF	H	L	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
EQ-14 Review and provide feedback of geotechnical studies submitted by developers or applicants working in areas of the Town prone to earthquake and seismic hazards. (Source: GP Safety Element -Implementation Actions)	Community Development	As needed	X	X	X	X	X	X	GF	GF	H	L	H	New
EQ-15 Develop presentation materials for mobile home park managers to share with occupants. Focus on unique earthquake-related hazards and recommendations regarding retrofitting. (Source: adapted from Community Outreach suggestion)	Disaster Preparedness	1-5 years	X	X	X	X	X	X	GF	GF	H	L	H	New
WILDFIRE ACTION ITEMS														

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
WF-1 Educate the public regarding defensible space for wildfire safety.	SB County FD, Disaster Preparedness	Annual	X	X		X	X	Y	GF	GF	H	L	H	Revised – action item, coordinating agency, funding. New – planning mechanism, benefit, cost, priority.
WF-2 Continue with code compliance for weed, fire/fuel module abatement proactive outreach.	Code Enforcement	Annual	X	X		X		Y	GF	GF	H	L	H	Revised – action item, coordinating agency, funding. New – planning mechanism, benefit, cost, priority.

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
WF-3 Coordinate with the appropriate agencies and service providers to assure that emergency preparedness plans include contingencies for large-scale urban and wildland fires.	SB County Fire, Disaster Preparedness	Annual	X			X	X		GF	GF	H	L	H	Revised – coordinating agency, funding. New – planning mechanism, benefit, cost, priority.
WF-4 Continue to implement San Bernardino County Fire Protection District standards that include wildfire safety planning measures, including buffer space and defensible space requirements (100 ft. around structures adjacent to wildland areas). (Source: GP Safety Element – Implementation Actions)	Community Development	As needed	X	X	X	X	X	Y	GF	GF	H	L	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
WF-5 Disseminate information on wildfire hazard zones at Town Hall and on the Town's website by making available/ posting a link to the Wildfire Hazards Map (Source: GP Safety Element – Implementation Actions)	Community Development	1-2 years	X	X	X	X	X	Y	GF	GF	H	L	H	New
WF-6 Coordinate with the Hi-Desert Water District to monitor peak water supply to ensure adequate capacity in the event of an urban fire, wildfire, or other emergency (Source: GP Safety Element – Implementation Actions)	Community Development, Disaster Preparedness	1 year	X	X	X	X	X	Y	GF	GF	H	L	H	New
WF-7 Update the Wildfire Hazards Map as needed and include the location of critical	Community Development	1 year	X	X	X	X	X	Y	GF	GF	H	L	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal**: Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
facilities and resilience hubs relative to their location within or adjacent to Very High Fire Hazard Severity Zones or Wildland-Urban Interface areas. (Source: GP Safety Element – Implementation Actions)														
WF-8 Review all applicant submittals to ensure that wildfire risk has been mitigated to the lowest extent for development proposals located in fire-prone areas by ensuring the proximity of fire crews and firefighting facilities, Town approval of any required landscaping plans, appropriate and minimum evacuation capacity and planning for fuel	Community Development	As needed	X	X	X	X	X	Y	GF	GF	H	L	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal**: Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
reduction. Recommend either alternative siting if development proposal is located in a fire hazard severity zone or appropriate design features to reduce fire risks. (Source: GP Safety Element – Implementation Actions)														
WF-9 Develop a fire risk reduction assessment to use for new development in Very High Fire Hazard Severity Zones or wildland-urban interface areas. The assessment should include identifying existing fire hazards on properties, describing the proposed projects, developing thresholds, and establishing guidance (e.g., fuel	Community Development	1 year	X	X	X	X	X	Y	GF	GF	H	L	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal**: Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
modification, fire breaks, etc.) to mitigate wildfire risks to these new developments. (Source: GP Safety Element – Implementation Actions)														
WF-10 When reviewing long-term comprehensive fuel reduction and management programs for discretionary projects, the Town shall require these plans to include a risk analysis; fire response capabilities discussion; fire safety requirements, including defensible space, infrastructure, and building ignition resistance; mitigation measures and design considerations for non-conforming fuel modification;	Community Development	As needed	X	X	X	X	X	Y	GF	GF	H	L	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
wildfire education; and maintenance and limitations. Fire hazard reduction measures shall be incorporated into the design of development projects in fire hazard areas and incorporated into the covenants, conditions, and restrictions (CC&Rs), as appropriate. (Source: GP Safety Element – Implementation Actions)														
WF-11 When reviewing long-term comprehensive fuel reduction and management programs for discretionary projects, the Town shall require these plans to include a risk analysis; fire	Community Development	1-3 years	X	X	X	X	X	Y	GF	GF	H	L	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
response capabilities discussion; fire safety requirements, including defensible space, infrastructure, and building ignition resistance; mitigation measures and design considerations for non-conforming fuel modification; wildfire education; and maintenance and limitations. Fire hazard reduction measures shall be incorporated into the design of development projects in fire hazard areas and incorporated into the covenants, conditions, and restrictions (CC&Rs), as appropriate. (Source: GP Safety Element – Implementation Actions)														

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
WF-12 The Town shall amend or create development standards for wildfire protection and streamlining opportunities for high-density residential and affordable developments for infill locations within the WUI, SRA, or VHFHSZs with adequate access/evacuation routes and water supply infrastructure (Source: GP Safety Element – Implementation Actions)	Community Development	1 year	X	X	X	X	X	Y	GF	GF	H	L	H	New
FLOODING ACTION ITEMS														
~~FLD-1 Code Compliance – Proactive clearing of wash debris to allow free flow of runoff in contained channels.~~	~~Code Enforcement~~	~~Ongoing~~	~~X~~					~~Y~~	~~GF~~	~~GF~~	~~H~~	~~L~~	~~M~~	Deleted – deemed impractical due to the fact clearing

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
														would be responsibility of the public.
FLD-1 Drainage Improvement Projects in Long Canyon Channel. As identified in the FY 23-24 – 28-29 Unfunded CIP, following is a description of the desired improvements: It is recommended the existing Long Canyon Detention Basin be enlarged to control the runoff from all of the upper Long Canyon area. Runoff from the portion of the tributary drainage area currently bypasses the basin to the west will be routed through the basin substantially reducing the flood peak	Community Development	1-2 years	X		X		X	Y	HMGP, BRIC, CIP	HMGP, BRIC, CIP	H	M	H	Still seeking funding. Challenges with satisfying BCA thresholds in federal grants.

Mitigation Action Item	Lead Department	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Partnerships and Implementation	Goal: Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	Planning Mechanism: GP-General Plan, GF, CIP, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
downstream. All of the basin outflow will discharge into the Long Canyon Channel. From the existing basin upstream to Golden Bee, it is recommended Long Canyon be a rock lined channel. From this point upstream, it is recommended the drainage course be managed floodplain. A rock lined channel is also recommended for Long Canyon Channel between the basin and its confluence with High School Channel. Long Canyon Channel from its confluence with High School Channel to Yucca Wash is currently a concrete lined channel.														

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal**: Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
FLD-2 Drainage Improvement Projects in Long Canyon Basin. As identified in the FY 23-24 – 28-29 Unfunded CIP, following is a description of the desired improvements: The intent is to expand the existing Long Canyon Basin easterly, westerly and southerly to achieve the required capacity. The purpose of these basins is to reduce peak 100-year peak inflows and manage sediment. The basins allow the use of smaller drainage facilities downstream because of reduced flow rates and the elimination of the need to apply debris bulking factors. Physical and hydrologic	Community Development, SB County, Army Corps of Engineers	1-5 years	X		X		X	Y	HMGP, BRIC, CIP	HMGP, BRIC, CIP	H	M	H	Still seeking funding. Challenges with satisfying BCA thresholds in federal grants.

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
characteristics of the expansion are: Tributary area-3.4 miles; storage capacity-130 acre-feet; debris capacity-108,000 cubic yards; peak inflow-4846 cfs; peak outflow-1462 cfs; percent peak reduction-70; basin footprint-15 acres; embankment height-26 feet.														
FLD-3 Construct Brehm Park as a component of the Town's Flood Control Master Plan to prevent downstream and upstream flood potential. As identified in the FY 23-24 – 28-29 Unfunded CIP, following is a description of the desired improvements: Replace the existing Boys & Girls Club with	Public Works	3-5 years	X			X		Y	HMGP, BRIC, CIP	HMGP, BRIC, CIP	H	H	H	Still seeking funding. Challenges with satisfying BCA thresholds in federal grants.

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
a new facility containing a gym, computer room, game room, meeting rooms, reading room/study area and administrative offices including the expansion of Brehm Park with turf areas to accommodate multi-use fields for practice and play. In the area of the existing Boys & Girls Club the development of a neighborhood park incorporating the existing Little League baseball fields and soccer field and adding picnic facilities, tot lot, commercial batting cage and food concession.														

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal**: Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
FLD-4 Construct Kickapoo Drain and Basin in coordination with flood planning at Blue Skies area. As identified in the FY 23-24 – 28-29 Unfunded CIP, following is a description of the desired improvements: + The Kickapoo Drain will carry the runoff that currently flows in and adjacent to Kickapoo Trail. A detention/debris basin is recommended at the inlet to the drain to reduce the peak flow rate and remove the debris. The Kickapoo Storm Drain will confluence with the La Honda Drain and carry the flow under SR62 and discharge near the Hawks Landing Golf Course.	Town of Yucca Valley	5 years	X				X	Y	HMGP, BRIC, CIP	HMGP, BRIC, CIP	H	H	H	Still seeking funding. Challenges with satisfying BCA thresholds in federal grants.

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal**: Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
These facilities along with the La Honda Drain will reduce the flooding of SR62 and protect the development near the Hawks Landing Golf Course. + Kickapoo Basin is in need of five new detention and/or debris basins are included in the recommended Master Plan of Drainage. The purpose of these basins is to reduce peak 100-year peak inflows and manage sediment. The basins allow the use of smaller drainage facilities downstream because of reduced flow rates and the elimination of the need to apply debris bulking factors. Physical and hydrologic														

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
characteristics are: Tributary area-0.8 miles; storage capacity-32 acre-feet; debris capacity-26,500 cubic yards; peak inflow-1178 cfs; peak outflow-290 cfs; percent peak reduction-75; basin footprint-8 acres; embankment height-22 feet.														
FLD-5 As identified in the FY 23-24 – 28-29 Unfunded CIP, La Honda Drain: (K01-01): The La Honda Drain is one of few underground storm drains recommended in the Master Plan. This drain will have a debris control inlet to prevent it from becoming obstructed with debris. The La	Town of Yucca Valley	5 years	X	X	X	X	X	Y	HMGP, BRIC, CIP	HMGP, BRIC, CIP	H	H	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
Honda Drain will reduce flooding of SR62 on the west end of the Town and provide flood protection for development near the Hawks Landing Golf Course. This drain will confluence with the Kickapoo Drain and discharge near the Hawks Landing Golf Course.														
FLD-6 Continue to implement National Flood Insurance Program (NFIP) requirements for new construction and substantially improved buildings.	Community Development	As needed	X				X	Y	HMGP, BRIC, CIP	HMGP, BRIC, CIP	H	M	H	Still seeking funding. Challenges with satisfying BCA thresholds in federal grants.

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
FLD-7 Following a disaster, revise codes to help ensure mitigating against future disasters.	Community Development, Public Works	As needed	X	X	X	X	X	Y	GF	GF	H	L	H	
~~FLD-7 Revise the Zoning and Subdivision Ordinance to require the utilization of various pervious surfaces within the floodplain in order to reduce storm water runoff. This should include encouragement to developers to utilize the use of various pervious surfaces in parking lots in recreational areas near the floodplain. (Source: GP Safety Element)~~	~~Community Development~~	~~Ongoing~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~Y~~	~~GF~~	~~GF~~	~~M~~	~~L~~	~~M~~	Deleted – removed during update to Safety Element
FLD-8 Continue to implement and update the Master Drainage Plan and associated	Community Development, SBC	Annual	X	X	X	X	X	Y	GF	GP	H	M	H	Revised – action item

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
maps in coordination with the County of San Bernardino.	Transportation/ Flood Control													
FLD-9 Ongoing effort to secure a Conditional Letter of Map Amendment (CLOMA) and final map amendment recognizing the re-designation of the 100-year floodplain within the Town boundaries.	Community Development Department, FEMA, and County Flood Control	1-5 years			X	X	X	Y	GF	GP	H	L	H	Notes – cost of updating FIRM maps. New – goals, funding, benefit, cost.
~~FLD-10 As appropriate, the mandates set forth in the General Plan Safety Element shall be implemented through the Master Drainage Plan.~~	~~Community Development Department, County Flood Control, and Caltrans~~	~~Ongoing~~	~~X~~		~~X~~		~~X~~	~~Y~~	~~GF~~	~~GP~~	~~H~~	~~L~~	~~H~~	Deleted – not mitigation
~~FLD-10 All major drainage facilities, including debris basins and flood control washes and channels, shall be designed to~~	~~Community Development, Community Services, SBC~~	~~Ongoing~~	~~X~~		~~X~~		~~X~~	~~Y~~	~~GF, HMGP, BRIC, CIP~~	~~GF, HMGP, BRIC, CIP~~	~~H~~	~~L~~	~~H~~	Deleted – removed during update

Mitigation Action Item	Lead Department	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Partnerships and Implementation	Goal: Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	Planning Mechanism: GP-General Plan, GF, CIP, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
~~maximize their enhancement as wildlife habitat, consistent with the functional requirements of these facilities. (Source: GP Safety Element)~~	~~Flood Control District~~													to Safety Element
~~FLD-11 Pursue all sources of funding for local and area-wide drainage improvements needed to provide flood control protection, and to achieve related General Plan goals and policies. (Source: GP Safety Element)~~	~~Community Development, SBC Flood Control District~~	~~Ongoing~~	~~X~~		~~X~~		~~X~~	~~Y~~	~~GF, HMGP, BRIC, CIP~~	~~GF, HMGP, BRIC, CIP~~	~~H~~	~~L~~	~~H~~	Deleted – removed during update to Safety Element
~~FLD-12 Promote the sensitive use of floodplains to reduce flood losses and protect the natural and cultural resources and functions of floodplains. (Source: GP Safety Element)~~	~~Community Development~~	~~Ongoing~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		~~GF, HMGP, BRIC, CIP~~	~~GF, HMGP, BRIC, CIP~~	~~H~~	~~L~~	~~M~~	Deleted – removed during update to Safety Element

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
FLD-10 Monitor flood warning and notification systems.	Public Works, SBC Fire, SBC Sheriff	As needed	X	X			X	Y	GF, HMGP, BRIC, CIP	GF, HMGP, BRIC, CIP	H	M	H	Revised – action item. Notes – signage was completed as of 2023.
FLD-11 Maintain Floodplain Ordinance.	Community Development	As needed	X	X	X	X	X	Y	GF	GF	H	L	H	Revised – action item
FLD-12 As identified in FY 23-24 – 28-29 Unfunded CIP, fund and construct improvements to Yucca Wash. This is an existing graded earth flood control channel for the majority of its length. Significant changes are not proposed for the wash except for the most westerly reach, the wash would remain a soft bottom trapezoidal channel	Public Works	1-5 years	X	X	X	X	X	Y	HMGP, BRIC	HMGP, BRIC	H	H	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
with grade stabilizers and side slope revetment. The most westerly reach between Deer Trail and Apache Trail will be a concrete lined channel with improved culverts at street crossings. Some of the soft bottom reaches would be enlarged to convey the 100-year peak flows with freeboard. All weather street crossings are proposed for SR62, Sage Ave and SR247. The proposed detention basins will reduce the peak flow rate and debris in the wash and the need for grade stabilizers will be required. Stabilization will be provided in several locations by existing														

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
street crossings of the wash flow line and through improved at-grade culver crossings.														
FLD-13 As identified in FY 23-24 – 28-29 Unfunded CIP, fund and construct improvement to Hanford Avenue Drain. Soft bottom and rock lined channel with reinforced concrete box, fence and gates, street pavement and right-of way. Construct channel from Yucca Wash confluence U/S to Sunnyslope Drive and construct Hanford Avenue, and Balsa Avenue street improvements as needed.	Public Works	1-5 years	X	X	X	X	X	Y	HMGP, BRIC	HMGP, BRIC	H	H	H	New
FLD-14 As identified in the FY 23-24 – 28-29 Unfunded CIP,	Public Works	1-5 years	X	X	X	X	X	Y	HMGP, BRIC	HMGP, BRIC	H	H	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal**: Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
fund and construct improvements to West Burnt Mountain Wash. The wash will consist of soft bottom and rock lined conveyances from its confluence with Yucca Wash to the detention basins. From the Yucca Wash confluence upstream to Sunnyslope Drive, a revetted soft bottom channel is recommended. From Sunnyslope Dr. to the West Burnt Mountain Detention Basin, a rock lined channel is recommended. Culvert crossings at SR62, Yucca Trail and Joshua Lane. From the basin upstream to just downstream of Warren Vista														

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
Avenue, the drainage course will be floodplain managed. For the reach from Warren Vista Avenue upstream to San Andreas Road, a rock revetted soft bottom channel and floodplain management of the local drainage course upstream of San Andreas Road.														
FLD-15 As identified in the FY 23-24 – 28-29 Unfunded CIP, fund and construct improvements to East Burnt Mountain Wash. The wash will consist of concrete box and rock lined channel facilities from its confluence with West Burnt Mountain Wash to the detention basin. An underground concrete	Public Works	1-5 years	X	X	X	X	X	Y	HMGP, BRIC	HMGP, BRIC	H	H	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
box is recommended in Lucerne Vista from the confluence to Onaga Trail to convey the 100-year desilted detention basin outflow. From Onaga Trail upstream to the detention basin, and from the detention basin upstream to Joshua Drive, a rock lined channel is recommended. From Joshua Drive upstream to San Andreas Road a rock revetted soft bottom channel is recommended. Upstream of San Andreas Road, floodplain management of the drainage course is recommended.														
FLD-16 As identified in the FY 23-24 – 28-29 Unfunded CIP,	Public Works	1-5 years	X	X	X	X	X	Y	HMGP, BRIC	HMGP, BRIC	H	H	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
fund and construct improvements to Hospital Channel. The Hospital Channel upstream of Onaga Trail is currently a soft bottom channel. Due to high velocity flows, it is recommended this channel be rock lined from its confluence with Long Canyon Channel upstream to Golden Bee Drive. From this point upstream it is recommended that the drainage course be a managed floodplain.														
FLD-17 As identified in the FY 23-24 – 28-29 Unfunded CIP, fund and construct improvements to Acoma Channel: Acoma, Deer and a	Public Works	1-5 years	X	X	X	X	X	Y	HMGP, BRIC	HMGP, BRIC	H	H	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
local tributary to Deer are channels tributary to the proposed Acoma Basin. They run adjacent to Elk Trail, Deer Trail and Acoma Trail. These channels have been excavated and are currently unlined. It is recommended these channels be rock revetted from Golden Bee northerly to Desert Gold Drive. Upstream of Golden Bee it is recommended these drainage courses be managed floodplains.														
FLD-18 As identified in FY 23-24 – 28-29 Unfunded CIP, fund and construct improvements to Water Canyon Channel: The Water Canyon Channel will	Public Works	1-5 years	X	X	X	X	X	Y	HMGP, BRIC	HMGP, BRIC	H	H	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal**: Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
carry flows from Water Canyon to Yucca Wash. Water Canyon is one of the largest tributaries to Yucca Wash. A detention/debris basin at the mouth of Water Canyon just outside of the Town limits is recommended. This basin will substantially reduce the peak flows from Water Canyon. The channel will be a revetted soft bottom from a distance of approximately 3,000 feet downstream of the basin. From this point downstream, the channel will be rock lined.														
FLD-19 As identified in FY 23-24 – 28-29, fund and construct improvements to Pinon Creek.	Public Works	1-5 years	X	X	X	X	X	Y	HMGP, BRIC	HMGP, BRIC	H	H	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal**: Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
Pinon Creek is an existing graded earth flood control channel. The channel is very steep and debris is effectively transported to an area adjacent to the Hawks Landing Golf Course. Debris movement in Pinon Creek has minimized streambed scour and the at-grade street crossings appear to be helping to control headcut. There is, however, evidence of lateral erosion along the banks of Pinon Creek in a few locations. The channel banks will be repaired where they have eroded and they will be revetted to prevent future erosion. Grade stabilization will														

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
be provided through improved culvert crossings and an additional intermediate stabilizer structure.														
FLD-20 As identified in the FY 23-24 – 28-29 Unfunded CIP, fund and construct improvements to Covington Wash. Covington Wash and its tributaries, Black Rock Wash and Carmelita Wash are proposed to be maintained as managed floodplains with the exception of the reach from SR62 to La Contenta Road. Within this reach a rock revetted soft bottom channel is recommended. A rock lined levee inlet structure is	Public Works	1-5 years	X	X	X	X	X	Y	HMGP, BRIC	HMGP, BRIC	H	H	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal**: Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
recommended just upstream of SR62 to collect 100 peak flows and direct them into a culvert crossing under SR62. A rock lined levee is also recommended for a short reach on the west side of Covington Wash upstream of Avalon Ave. and Arcadia Trail. This levee will protect against flow breakout during severe flood events.														
FLD-21 As identified in the FY 23-24 – 28-29 Unfunded CIP, fund and construct improvements to OWS Channel. The existing OWS Springs Debris Basin has a rock lined inlet channel. Tributary to	Public Works	1-5 years	X	X	X	X	X	Y	HMGP, BRIC	HMGP, BRIC	H	H	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
this inlet channel are two main washes, San Rafael Wash/OWS Wash and Farello Wash. It is recommended the upstream portion of San Rafael Wash/OWS Wash adjacent to OWS Road be a rock lined channel. The rock lined channel continues within reach until the drainage course heads north westerly away from OWS Road. From this point to approximately 1000 feet upstream, a rock revetted soft bottom channel is recommended. The drainage course upstream of this point is to be floodplain managed. The culvert under OWS Road will be														

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
enlarged to carry the 100-year peak flow.														
FLD-22 As identified in the FY 23-24 – 28-29 Unfunded CIP, fund and construct improvements to Buena Vista Wash. Buena Vista Wash will consist of soft bottom channel and street flow conveyances from the Yucca Wash confluence of Palm Avenue. From Palm Avenue upstream, a soft bottom channel and street flow conveyances are recommended. This wash will confluence with Sage Channel prior to discharging into Yucca Wash.	Public Works	1-5 years	X	X	X	X	X	Y	HMGP, BRIC	HMGP, BRIC	H	H	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
FLD-23 As identified in FY 23-24 – 28-29 Unfunded CIP, fund and construct improvements to Water Canyon Basin. Five new detention and/or debris basins are included in the recommended Master Plan of Drainage. The purpose of these basins is to reduce peak 100-year peak inflows and manage sediment. The basins allow the use of smaller drainage facilities downstream because of reduced flow rates and the elimination of the need to apply debris bulking factors. Physical and hydrologic characteristics are: Tributary area-3.4 miles; storage capacity-438 acre-feet;	Public Works	1-5 years	X	X	X	X	X	Y	HMGP, BRIC	HMGP, BRIC	H	H	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
debris capacity-126,000 cubic yards; peak inflow-6398 cfs; peak outflow-1419 cfs; percent peak reduction-77; basin footprint-35 acres; embankment height-38 feet.														
FLD-24 As identified in the FY 23-24 – 28-29 Unfunded CIP, fund and construct improvements to Acoma Basin. Five new detention and/or debris basins are included in the recommended Master Plan of Drainage. The purpose of these basins is to reduce peak 100-year peak inflows and manage sediment. The basins allow the use of smaller drainage facilities downstream	Public Works	1-5 years	X	X	X	X	X	Y	HMGP, BRIC	HMGP, BRIC	H	H	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
because of reduced flow rates and the elimination of the need to apply debris bulking factors. Physical and hydrologic characteristics are: Tributary area-1.9 miles; storage capacity-90 acre-feet; debris capacity-57,000 cubic yards; peak inflow-2744 cfs; peak outflow-596 cfs; percent peak reduction-78; basin footprint-10 acres; embankment height-41 feet.														
FLD-25 As identified in the FY 23-24 – 28-29 Unfunded CIP, fund and construct improvements to Long Canyon Basin. The intent is to expand the existing Long Canyon Basin	Public Works	1-5 years	X	X	X	X	X	Y	HMGP, BRIC	HMGP, BRIC	H	H	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
easterly, westerly and southerly to achieve the required capacity. The purpose of these basins is to reduce peak 100-year peak inflows and manage sediment. The basins allow the use of smaller drainage facilities downstream because of reduced flow rates and the elimination of the need to apply debris bulking factors. Physical and hydrologic characteristics of the expansion are: Tributary area-3.4 miles; storage capacity-130 acre-feet; debris capacity-108,000 cubic yards; peak inflow-4846 cfs; peak outflow-1462 cfs; percent peak reduction-70; basin footprint-15														

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
acres; embankment height-26 feet.														
FLD-26 As identified in the FY 23-24 – 28-29 Unfunded CIP, fund and construct improvements to West Burnt Mountain Basin. Five new detention and/or debris basins are included in the recommended Master Plan of Drainage. The purpose of these basins is to reduce peak 100-year peak inflows and manage sediment. The basins allow the use of smaller drainage facilities downstream because of reduced flow rates and the elimination of the need to apply debris bulking factors. Physical	Public Works	1-5 years	X	X	X	X	X	Y	HMGP, BRIC	HMGP, BRIC	H	H	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
and hydrologic characteristics are: Tributary area-1.7 miles; storage capacity-96 acre-feet; debris capacity-50,000 cubic yards; peak inflow-2309 cfs; peak outflow-284 cfs; percent peak reduction-88; basin footprint-20 acres; embankment height-23 feet.														
FLD-27 Work with the San Bernardino County Flood Control District to update and implement the Master Plan of Drainage for the near and long-term protection of the community and its residents. Encourage the county to develop and include strategies to address local drainage	Public Works	1-5 years	X	X	X	X	X	Y	GF	GF	H	L	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
issues unique to Yucca Valley's desert environment, such as drainage over private properties in semi developed areas and unpaved roads that cross natural drainage areas that cannot be remedied by standard measures in the existing Master Plan, which typically applies to more urbanized areas. (Source: GP Safety Element – Implementation Actions)														
FLD-28 Continue to disseminate information on flooding, flood control on private property, floodplains, and flood preparedness to the public at Town Hall and on the Town's	Community Development	As needed	X	X	X	X	X	Y	GF	GF	H	L	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
website (Source: GP Safety Element – Implementation Actions)														
FLD-29 Periodically review county, state, and federal flood control best practices and incorporate appropriate standards into the Municipal Code. (Source: GP Safety Element – Implementation Actions)	Community Development	1-5 years	X	X	X	X	X	Y	GF	GF	H	L	H	New
FLD-30 Map areas that frequently flood to track priority places for infrastructure improvements. Use this data to apply for grant funding that will finance local drainage controls. CalEPA and the CA	Community Development, Public Works	5 years	X	X	X	X	X	Y	GF	GF	H	L	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal**: Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
State Water Resources Control Board both offer grants to municipalities throughout California (Source: GP Safety Element – Implementation Actions)														
FLD-31 Enforce on-site retention of stormwater and runoff, plus a minimum of 10 percent above the incremental increase, through the development review process and routine site inspections. (Source: GP Safety Element – Implementation Actions)	Community Development	As needed	X	X	X	X	X	Y	GF	GF	H	L	H	New
FLD-32 Communicate with FEMA regarding Flood Insurance Rate Maps to keep these documents updated on a	Community Development	Annual	X	X	X	X	X	Y	GF	GF	H	L	H	New

Mitigation Action Item	Lead Department	Timeline	**Goal**: Protect Life and Property	**Goal**: Public Awareness	**Goal**: Natural Systems	**Goal:** Partnerships and Implementation	**Goal:** Emergency Services	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	**Funding Source:** GF-General Fund, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure & Communities, GR-Other Grant, CIP-Capital Improvement Program	**Planning Mechanism:** GP-General Plan, GF, CIP, HMGP, BRIC	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Comments and Status:** Completed, Revised, Deleted, New, Deferred, and Notes
regular basis. (Source: GP Safety Element – Implementation Actions)														
FLD-33 Examine the possibilities for raising the existing curb heights. There are concerns from the community that the curb heights in residential areas is ineffective at controlling flow of rainwater and other sources of urban flooding. (Source: Community Outreach suggestion)	Public Works	1-2 years	X	X	X	X	X	Y	GF	GF	M	L	H	New
FLD-34 Prior to storm season, stockpile sandbags. (Source: Community Outreach suggestion)	Public Works	Immediately	X	X	X	X	X	Y	GF	GF	H	L	H	New

Chapter 6: Plan Maintenance

The plan maintenance process includes a schedule for monitoring and evaluating the Plan annually and producing a plan revision every five years. This section describes how the Town of Yucca Valley will integrate public participation throughout the plan maintenance process.

Q&A | ELEMENT D: PLAN MAINTENANCE | D2-a.

Q: Does the plan describe the process that will be followed to track the progress/status of the mitigation actions identified within the Mitigation Strategy, along with when this process will occur and who will be responsible for the process? (Requirement 44 CFR § 201.6(c)(4)(i))

A: See **Local Mitigation Officer, Method and Scheduling of Plan Implementation, Monitoring and Implementing the Plan, Annual Implementation Matrix** below.

Local Mitigation Officer

The Planning Team that was involved in research and writing of the Plan will also be responsible for implementation. The Planning Team will be led by the Planning Team Chair Jessica Rice who will be referred to as the Local Mitigation Officer. Under the direction of the Local Mitigation Officer, the Planning Team will take responsibility for plan maintenance and implementation. The Local Mitigation Officer will facilitate the Planning Team meetings and will assign tasks such as updating and presenting the Plan to the members of the Planning Team. Plan implementation and evaluation will be a shared responsibility among all of the Planning Team members. The Local Mitigation Officer will coordinate with the Town of Yucca Valley leadership to ensure funding for 5-year updates to the Plan as required by FEMA. The Planning Team will be responsible for coordinating implementation of plan action items and undertaking the formal review process. The Local Mitigation Officer will be authorized to make changes in assignments to the current Planning Team.

The Planning Team will meet no less than annually. Meeting dates will be scheduled once the final Planning Team has been established. These meetings will provide an opportunity to discuss the progress of the action items and maintain the partnerships that are essential for the sustainability of the mitigation plan. The Local Mitigation Officer or designee will be responsible for contacting the Planning Team members and organizing the annual meetings.

Plan updates will need to be approved by FEMA every 5 years. However, adequate time should be allowed to secure grant funding (if necessary), allow adequate time for a thorough planning process, and time for the formal review by Cal OES and FEMA. All said, if grant funding is going to be needed, the update timeline should begin 3 years prior to the plan's due date to FEMA

Method and Scheduling of Plan Implementation

	Year 1	Year 2	Year 3	Year 4	Year 5
Monitoring	X	X	X	X	X
Evaluating					
Internal Planning Team Evaluation	X	X	X	X	X
Cal OES and FEMA Evaluation					X
Updating					X

Monitoring and Implementing the Plan

Monitoring the Plan

The Local Mitigation Officer will hold annual meetings with representatives from the coordinating agencies (as identified in the Mitigation Actions Matrix) in order to gather status updates on the mitigation action items. These meetings will provide an opportunity to discuss the progress of the action items and maintain the partnerships that are essential for the sustainability of the mitigation plan. See the **Annual Implementation Report** discussed below which will be a valuable tool for the Planning Team to measure the success of the Hazard Mitigation Plan. The focus of the annual meeting will be on the progress and changes to the Mitigation Action Items.

Q&A | ELEMENT D: PLAN MAINTENANCE | D3-a.

Q: Does the plan describe each community will follow to integrate the ideas, information and strategy of the mitigation plan into other planning mechanisms? (Requirement 44 CFR § 201.6(c)(4)(ii))

A: See **Integration into Other Planning Mechanisms** below.

Integration into Other Planning Mechanisms

The Town of Yucca Valley addresses statewide planning goals and legislative requirements through the General Fund, Capital Projects, and Grants. The Mitigation Plan provides a series of recommendations - many of which are closely related to the goals and objectives of existing planning programs. The Town will implement recommended mitigation action items through existing programs and procedures.

The Town is responsible for adhering to the State of California's Building and Safety Codes. In addition, the Town may work with other agencies at the state level to review, develop and ensure Building and Safety Codes are adequate to mitigate or present damage by hazards. This is to ensure that life-safety criteria are met for new construction.

Some of the goals and action items in the Mitigation Plan will be achieved through activities recommended in the strategic and other budget documents. The various departments involved in developing the Plan will review it on an annual basis. Upon annual review, the Planning Team will work with the departments to identify areas that the Mitigation Plan action items are consistent with the strategic and budget documents to ensure the Mitigation Plan goals and action items are implemented in a timely fashion.

Upon FEMA approval, the Planning Team will begin the process of incorporating risk information and mitigation action items into existing planning mechanisms including the General Fund (Operating Budget and Capital Projects - see Mitigation Actions Matrix for links between individual action items and associated planning mechanism). The annual meetings of the Planning Team will provide an opportunity for Planning Team members to report back on the progress made on the integration of mitigation planning elements into the Town's planning documents and procedures. The timing of integration will depend on the cycles of the various planning mechanisms. As an example, state regulations require the Emergency Operations Plan to be updated every 3 years while the General Plan may not be updated for another 20 years. The department representatives should be mindful of update opportunities for the action items assigned to their departments.

The 2018 HMP was integrated into the 2022 General Plan Safety Element with numerous references to hazard-related content.

Specifically, the Planning Team will utilize the updates of the following documents to implement the Mitigation Plan:

- ✓ Risk Assessment, Community Profile, Planning Process (stakeholders) – Emergency Operations Plan, General Plan.
- ✓ Mitigation Actions Matrix – General Fund, Capital Improvement Projects, Grants

Annual Implementation Matrix

The Annual Implementation Matrix is the same as the Mitigation Actions Matrix but with a column added to track the annual status of each Action Item. Upon approval and adoption of the Plan, the Annual Implementation Reports will be added to the Plan's **Attachments**. Following is a view of the Annual Implementation Matrix:

Annual Implementation Matrix will be inserted here following FEMA approval

An equal part of the monitoring process is the need to maintain a strategic planning process which needs to include funding and organizational support. In that light, at least one year in advance of the FEMA-mandated 5-year submission of an update, the Local Mitigation Officer will convene the Planning Team (as well as any other departments with responsibilities on the Mitigation Actions Matrix) to discuss funding and timing of the update planning process. On the fifth year of the planning cycles, the Planning Team will broaden its scope to include discussions and research on all of the sections within the Plan with particular attention given to goal achievement and public participation.

Economic Analysis of Mitigation Projects

FEMA's approach to identifying the costs and benefits associated with hazard mitigation strategies, measures, or projects fall into two general categories: benefit/cost analysis and cost-effectiveness analysis.

Conducting benefit/cost analysis for a mitigation activity can assist communities in determining whether a project is worth undertaking now, in order to avoid disaster-related damage later. Cost-effectiveness analysis evaluates how best to spend a given amount of money to achieve a specific goal. Determining the economic feasibility of mitigating hazards can provide decision-makers with an understanding of the potential benefits and costs of an activity, as well as a basis upon which to compare alternative projects.

Given federal funding, the Planning Team will use a FEMA-approved benefit/cost analysis approach to identify and prioritize mitigation action items. For other projects and funding sources, the Planning Team will use other approaches to understand the costs and benefits of each action item and develop a prioritized list.

The "benefit", "cost", and overall "priority" of each mitigation action item was included in the Mitigation Actions Matrix located in Part III: Mitigation Strategies. A more technical assessment will be required in the event grant funding is pursued through the Hazard Mitigation Grant Program. FEMA Benefit-Cost Analysis Guidelines are discussed below.

FEMA Benefit-Cost Analysis Guidelines

The Stafford Act authorizes the President to establish a program to provide technical and financial assistance to state and local governments to assist in the implementation of hazard mitigation measures that are cost effective and designed to substantially reduce injuries, loss of life, hardship, or the risk of future damage and destruction of property. To evaluate proposed hazard mitigation projects prior to funding FEMA requires a Benefit-Cost Analysis (BCA) to validate cost effectiveness. BCA is the method by which the future benefits of a mitigation project are estimated and compared to its cost. The end result is a benefit-cost ratio (BCR), which is derived from a project's total net benefits divided by its total project cost. The BCR is a numerical expression of the cost effectiveness of a project. A project is considered to be cost effective when the BCR is 1.0 or greater, indicating the benefits of a prospective hazard mitigation project are sufficient to justify the costs.

Although the preparation of a BCA is a technical process, FEMA has developed software, written materials, and training to support the effort and assist with estimating the expected future benefits over the useful life of a retrofit project. It is imperative to conduct a BCA early in the project development process to ensure the likelihood of meeting the cost-effective eligibility requirement in the Stafford Act.

The BCA program consists of guidelines, methodologies, and software modules for a range of major natural hazards including:

- ✓ Flood (Riverine, Coastal Zone A, Coastal Zone V)
- ✓ Hurricane Wind
- ✓ Hurricane Safe Room
- ✓ Damage-Frequency Assessment
- ✓ Tornado Safe Room
- ✓ Earthquake
- ✓ Wildfire

The BCA program provides up to date program data, up to date default and standard values, user manuals and training. Overall, the program makes it easier for users and evaluators to conduct and review BCAs and to address multiple buildings and hazards in a single BCA module run.

Evaluating and Updating the Plan

Q&A | ELEMENT D: PLAN MAINTENANCE | D2-b.
Q: Does the plan describe the process that will be followed to evaluate the plan for effectiveness? This process must identify the criteria that will be used to evaluate the information in the plan, along with when this process will occur and who will be responsible. (Requirement 44 CFR § 201.6(c)(4)(i))
A: See **Evaluation** below.

Evaluation

As discussed at the beginning of this section, the representatives from the coordinating agencies (as identified in the Mitigation Actions Matrix) will meet annually to gather status updates on the mitigation action items. During that meeting, the Local Mitigation Officer will lead a discussion with the coordinating agencies on the success (or failure) of the Mitigation Plan to be effective and to meet the plan goals. Examples of measuring the plan's effective will include assessing effectiveness include evaluating whether new hazards have emerged, whether community vulnerability has shifted, and whether stated mitigation strategies are still appropriate for the community's circumstances. The plan goals are defined in the beginning of the Mitigation Strategies Section and each of the mitigation action items is aligned with a goal or goals.

The results of that discussion will be added to the Evaluation portion of the Annual Implementation Report and inclusion in the 5-year update to the Plan. Efforts will be made immediately by the Local Mitigation Officer to address any failed plan goals.

Q&A | ELEMENT D: PLAN MAINTENANCE | D2-c.
Q: Does the plan describe the process that will be followed to update the plan, along with when this process will occur and who will be responsible for the process? (Requirement 44 CFR § 201.6(c)(4)(i)) **A:** See **Formal Update Process** below.

Formal Update Process

As identified above, the Mitigation Action Items will be monitored for status on an annual basis as well as an evaluation of the Plan's goals. The Local Mitigation Officer or designee will be responsible for contacting the coordinating agency members and organizing the annual meeting which will take place based on the month of the Plan's approval. Planning Team members will also be responsible for participating in the formal update to the Plan every fifth year of the planning cycle. In the event the Town desires to seek grant funding for the update, the application process should begin 2 years in advance of the plan's expiration. Even without grant funding, the planning process should begin at least 1.5 years ahead of the plan's expiration.

The Planning Team will begin the update process with a review of the goals and mitigation action items to determine their relevance to changing situations within the Town as well as changes in state or federal policy, and to ensure they are addressing current and expected conditions. The Planning Team will also review the Plan's **Risk Assessment** portion of the Plan to determine if this information should be updated or modified, given any new available data. The lead departments responsible for the various action items will report on the status of their projects, including the success of various implementation processes, difficulties encountered, success of coordination efforts, and which strategies should be revised. Amendments will be made to the Mitigation Actions Matrix and other sections in the Plan as deemed necessary by the Planning Team.

Q&A | ELEMENT D: PLAN MAINTENANCE | D1-a.

Q: Does the plan describe how communities will continue to seek future public participation after the plan has been approved? (Requirement 44 CFR § 201.6(c)(4)(iii))

A: See **Continued Public Involvement** below.

Continued Public Involvement

The Town is dedicated to involving the public directly in the continual review and updates to the Mitigation Plan. Copies of the plan will be made available at the Town Hall and on the Town's website. The existence and location of these copies will be publicized in the Town's newsletter and on the website. This site will also contain an email address and phone number where people can direct their comments and concerns. At the discretion of the Local Mitigation Officer, a public meeting may be held after the Annual Implementation Meeting. The meeting would provide a public forum in which interested individuals and/or agencies could express their concerns, opinions, or ideas about the plan.

The Local Mitigation Officer will be responsible for using the Town's resources to publicize any public meetings and always free to maintain public involvement through the public access channel, web page, newsletter, and newspaper.

Chapter 7: Plan Review, Adoption and Approval

The plan is required to go through a formal review with Cal OES and FEMA. Once the Planning Team reviewed the Initial Draft Plan and revisions made, the First Draft Plan was made available to the general public, external agencies, and other stakeholders. The plan was posted and notices distributed advertising the plan's available for input. See **Chapter 1: Planning Process** for details.

Comments gathered on the First Draft Plan were incorporated into the Second Draft Plan which was submitted to Cal OES along with a completed FEMA Plan Review Tool. In the event changes were required, a revised version and updated Plan Review Tool was submitted to Cal OES or FEMA. The resulting version will become the Final Draft Plan. Upon acceptance by FEMA, an Approvable Pending Adoption notice will be sent to the Town requesting that the Final Draft Plan be submitted to the Town Council for adoption. Once proof of adoption is forwarded to FEMA, a Letter of Approval will be issued. The Letter of Approval will be entered into the Final Plan.

Q&A | ELEMENT F: PLAN ADOPTION | F1-a.
Q: Does the participant include documentation of adoption? (Requirement 44 CFR § 201.6(c)(5))
A: See **Plan Adoption Process** below.

Plan Adoption Process

Adoption of the plan by the local governing body demonstrates the Town of Yucca Valley's commitment to meeting mitigation goals and objectives. Governing body approval legitimizes the plan and authorizes responsible agencies to execute their responsibilities.

The Town Council must adopt the Hazard Mitigation Plan before the Plan can be approved by FEMA.

The Second Draft Plan was submitted to Cal OES and FEMA for review and approval. Following that review, the Planning Team conducted more research and analysis to satisfy concerns documented by Cal OES. Those changes were incorporated into a Third Draft Plan and submitted to Cal OES. FEMA issued an Approvable Pending Adoption notice on _____ requiring the adoption of the Final Draft Plan by the Town Council. The adoption resolution was submitted to FEMA along with a request for a FEMA Letter of Approval.

In preparation for the public meeting with the Town Council, the Planning Team posted the Final Draft Plan on the Town's website. Notification of the Plan's availability was also distributed via the mediums utilized during the community outreach phase. Also, the Team prepared a Staff Report including an overview of the Planning Process, Risk Assessment, Mitigation Goals, and Mitigation Actions. The staff presentation concluded with a summary of the input received during the community outreach phase of the planning process. The meeting participants were encouraged to present their views and make suggestions on possible mitigation actions.

The Town Council heard the item on _____. The Council voted to adopt the Final Draft of the Hazard Mitigation Plan. The Resolution of adoption by the Town Council is below:

Plan Approval

Upon adoption by the Town Council, the resolution was forwarded to FEMA. The FEMA Letter of Approval was issued on _____. FEMA issued a Letter of Approval on _____and is below:

Attachments

Planning Team Invitation – June 21, 2023

Jessica Rice Wed, Jun 21, 2023 at 3:48 PM

From: jrice@yucca-valley.org
To: Curtis Yakimow, Shane Stueckle, Debra Breidenbach, Lesley Copeland, Alex Qishta, Susan Earnest, Jordan Gumbish, Scalise, John, stuttle@sbcfire.org Hide
Cc: Carolyn Harshman

Hello everyone,

As most of you know, the Town is required to develop and adopt a Local Hazard Mitigation Plan (LHMP) as a condition for receiving certain types of non-emergency disaster assistance, including funding for mitigation projects. The Town must update our Plan and re-submit it for FEMA approval every five years to maintain eligibility. Well, it's time to update the Town's LHMP again, and we have contracted with Carolyn Harshman of Emergency Planning Consultants, who has successfully helped the Town update the last two Plans.

In the past, all members of EMT were on the Planning Team, and luckily most of those people are still here today. We will have John Scalise join our Planning Team from the Sheriff's Department and Scott Tuttle join us from the Fire Department. The others on the Planning Team will be me, Curtis, Shane, Alex, Lesley, Debra, Sue, and Jordan. I will lead the project and work with Carolyn on fulfilling all of the requirements necessary to update the Plan.

As required by FEMA, the Planning Team will need to meet 4 times, with each meeting about 1.5 - 2 hours in length. All of the meetings will be virtual, except the first meeting will be held in person. In order to get things moving, we are fast-tracking the planning process and will hold the first three Planning Meetings on a consecutive weekly basis. The fourth meeting (also virtual) will be held a couple of months later, probably in mid-October, when we review the draft Plan before submitting it to CalOES.

I propose the following schedule for the Planning Meetings:

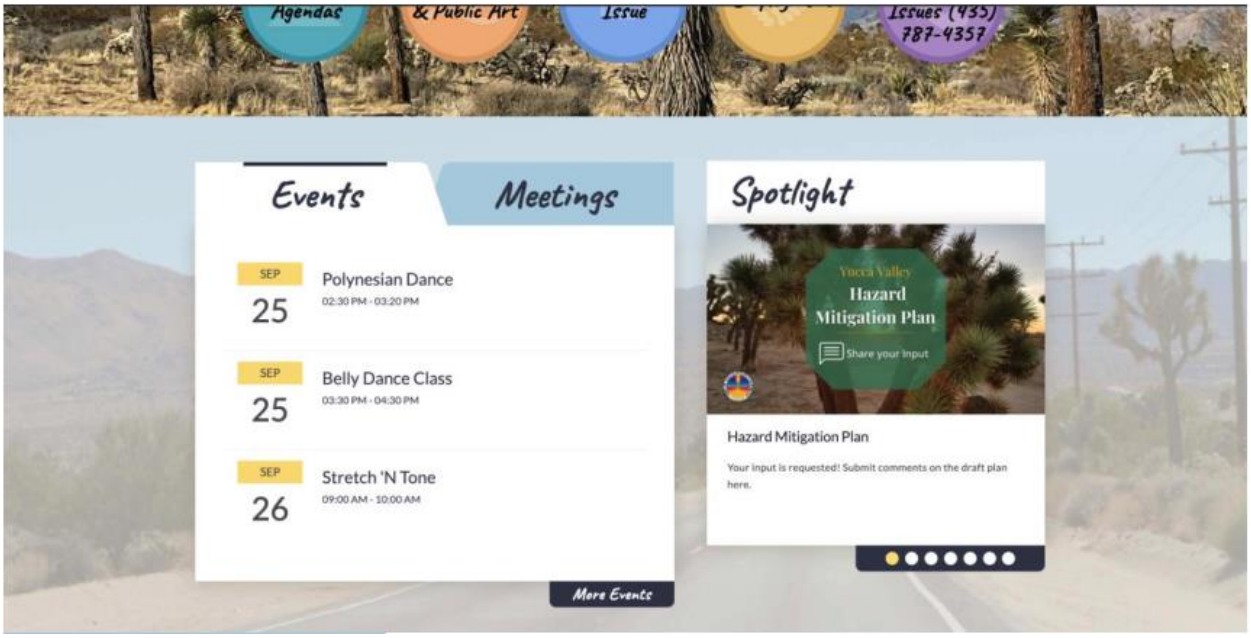
1st Meeting - in person - Thursday, July 27th at 9:30 a.m.
2nd Meeting - virtual - Wednesday, August 2nd at 9:30 a.m.
3rd Meeting - virtual - Wednesday, August 9th at 9:30 a.m.

I know we all have a lot going on and adding more meetings to your schedule can be a pain, but it's important to have well-attended Planning Meetings, so please respond to this email letting me know these dates work for you or let me know if you have any scheduling conflicts with these dates/times. Also, feel free to reach out with any questions.

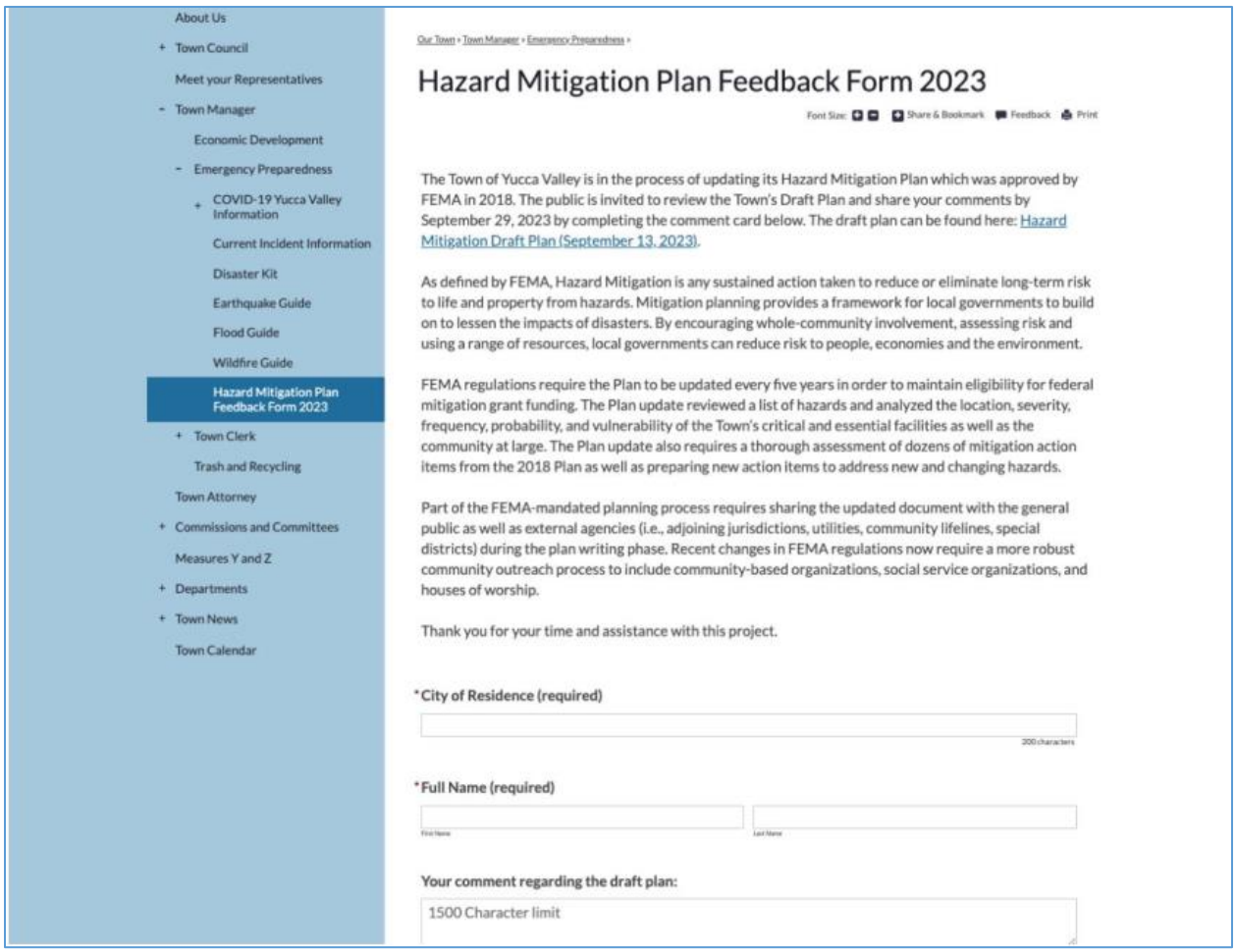
Thanks so much!

Jessica Rice
Senior Management Analyst
Town of Yucca Valley
57090 Twentynine Palms Hwy.
Yucca Valley, CA 92284
(760) 369-7207 x227
Fax: (760) 369-0626
Email: jrice@yucca-valley.org<mailto:jrice@yucca-valley.org>

Web Posting Landing Page – September 18-29, 2023



Web Posting LHMP Content Page – September 18-29, 2023



Press Release – September 18, 2023

Press Release

FOR IMMEDIATE RELEASE
September 18, 2023

CONTACT
Jessica Rice
(760) 369-7209 x226

Public Input Requested for Updating Hazard Mitigation Plan

The Town of Yucca Valley is updating its Hazard Mitigation Plan and is inviting the public to review it and share comments by September 29, 2023, by completing the comment card here. Residents may also view the Plan and submit feedback at Town Hall, located at 57090 29 Palms Hwy, Yucca Valley, which is open Monday through Thursday from 9 a.m. to 5 p.m. The Town's Draft Plan can be found here: https://www.yucca-valley.org/our-town/town-manager/emergency-preparedness/hazard-mitigation-plan-feedback-form-2023

As defined by FEMA, Hazard Mitigation is any sustained action taken to reduce or eliminate long-term risk to life and property from hazards. Mitigation planning provides a framework for local governments to build on to lessen the impacts of disasters. By encouraging community-wide involvement, assessing risk and using a range of resources, local governments can reduce risk to people, economies and the environment.

The Town of Yucca Valley is in the process of updating its Hazard Mitigation Plan, which was approved by FEMA in 2018. FEMA regulations require the Plan to be updated every five years in order to maintain eligibility for federal mitigation grant funding. The Plan update reviewed a list of hazards and analyzed the location, severity, frequency, probability and vulnerability of the Town's critical and essential facilities as well as the community at large. The Plan update also requires a thorough assessment of dozens of mitigation action items from the 2018 Plan as well as preparing new action items to address changing hazards.

Part of the FEMA-mandated planning process requires sharing the updated document with the general public as well as external agencies (i.e., adjoining jurisdictions, utilities, community lifelines, special districts) during the plan writing phase. Recent changes in FEMA regulations now require a community outreach process to include community-based organizations, social service organizations and houses of worship.

The Town thanks participants in advance for their time and assistance in providing feedback.

###

Facebook Posting - September 18 and 25, 2023

Instagram Posting – September 18 and 25, 2023

Nextdoor Posting – September 18 and 25, 2023

X Posting – September 18 and 25, 2023

Stakeholder Invitation to Participate – September 18, 2023

External agencies and houses of worship listed above were invited via email or mail with an electronic link to the Town of Yucca Valley's website posting of the Second Draft Plan. Following is the message that was distributed.

Town of Yucca Valley's Local Hazard Mitigation Plan

From: Jessica Rice (jrice@yucca-valley.org)

To: stuttle@sbcfire.org; rwarrick@sbcsd.org; james.addison@dpw.sbcounty.gov; forlett@burrtecdesert.com; Ashley.flores@dph.sbcounty.gov; Sharon.Mitchell@dpw.sbcounty.gov; shane.massoud@sce.com; dmcgarrey@semprautilities.com; ronw@hdwd.com; kjradnich@gmail.com; David_daniels@morongo.k12.ca.us; myles_landry@nps.gov; dotten@cmccd.edu; mradford@chp.ca.gov; michael.f.burns1@usmc.mil; fluckino@29palms.org; emarshall@29palms.org; grumpy@joshuasprings.org; aaceves.atc@gmail.com; cbcyucca@gmail.com; suzydick12@gmail.com; drhanna24@gmail.com; deserthillspastor@gmail.com; sheprdbildr@hotmail.com; yuccamark@gmail.com; borneoglenn@hotmail.com; stjosephyv@gmail.com; magre@sbdiocese.org; louie.lobato.jr@gmail.com; jake@vcchapel.org; pastornesi@gmail.com; pastor.gateway@gmail.com; skyviewfarm29@gmail.com; Wayne.Hamilton@morongo.k12.ca.us

Cc: cyakimow@yucca-valley.org; epc@pacbell.net

Date: Monday, September 18, 2023 at 02:24 PM PDT

Good Afternoon,

The Town of Yucca Valley is in the process of updating its Local Hazard Mitigation Plan (LHMP). The LHMP identifies the natural risks and manmade hazards within our community. The Plan also provides a list of mitigation action items that can be used to reduce the impacts from these hazards.

Part of the FEMA-mandated approval process for the LHMP requires the Town to share this document with key organizations within the community (e.g., adjoining jurisdictions, utilities, community lifelines, special districts) and solicit comments during the plan writing phase. Recent changes in FEMA regulations now require a more robust community outreach process to include community-based organizations, social service organizations, and houses of worship.

I am asking you to please review this draft version of the LHMP and share any comments you may have with me by September 29, 2023. You can access the Draft Plan on the Town's website: https://www.yucca-valley.org/our-town/town-manager/emergency-preparedness/hazard-mitigation-plan-feedback-form-2023. Copies of the Draft Plan are also available at Town Hall for review.

Thank you in advance for your time and assistance with this project.

Thank you,
Jessica Rice

Jessica Rice
Senior Management Analyst
Town of Yucca Valley
57090 Twentynine Palms Hwy.
Yucca Valley, CA 92284
(760) 369-7207 x227
Fax: (760) 369-0626
Email: jrice@yucca-valley.org

Q&A | ELEMENT C: Mitigation Strategy | C2-a.
Q: Does the plan contain a narrative description or a table/list of their participation activities? (Requirement 44 CFR § 201.6(c)(3)(ii)) **A:** See **Floodplain Ordinance** below.

Floodplain Ordinance

Source: https://codelibrary.amlegal.com/codes/yuccavalleyca/latest/yuccavalley_ca/0-0-0-2274#JD_8.04.041

8.04.041: DESIGNATION OF FLOODPLAIN ADMINISTRATOR: (amlegal.com)

Part I. General

8.04.010: Statutory Authorization
8.04.011: Findings Of Fact
8.04.012: Statement Of Purpose
8.04.013: Methods Of Reducing Flood Loss

Part II. Definitions

8.04.020: Terms Defined

Part III. General Provisions

8.04.030: Lands To Which This Chapter Applies
8.04.031: Basis For Establishing Areas Of Special Flood Hazards
8.04.032: Compliance
8.04.033: Abrogation And Greater Restrictions
8.04.034: Interpretation
8.04.035: Warning And Disclaimer Of Liability

Part IV. Administration

8.04.040: Establishment Of Development Permit
8.04.041: Designation Of Floodplain Administrator
8.04.042: Duties And Responsibilities Of Floodplain Administrator
8.04.043: Appeals

Part V. Provisions For Flood Hazard Reduction

8.04.050: Standards Of Construction
8.04.051: Standards For Utilities
8.04.052: Standards For Subdivisions
8.04.053: Standards For Manufactured Homes
8.04.054: Standards For Recreational Vehicles
8.04.055: Floodways
8.04.056: Mudslide (i.e., Mudflow) Prone Areas
8.04.057: Flood Related Erosion Prone Areas

Part VI. Variance Procedure

8.04.060: Nature Of Variances
8.04.061: Appeal Board
8.04.062: Conditions For Variances

PBS Article 2022

A **PUBLIC MEDIA** INITIATIVE FROM THE WNET GROUP

PERIL & PROMISE

Tip of the Iceberg

How Climate Change Impacts Each Type of Natural Disaster

SEPTEMBER 7, 2022

By Megan Crimmins

The term natural disaster is defined as "a sudden and terrible event in nature that usually results in serious damage and many deaths." According to the World Economic Forum, the most common natural disasters include floods, storms, earthquakes, extreme temperatures, landslides, droughts, wildfires, and volcanic activity. How does climate change impact each of these extreme events?

FLOODS

Floods are the most frequent natural disaster and have impacted every U.S. state and nearly every country. The connection between floods and climate change comes down to a few ways that climate change is impacting water. First, higher temperatures lead to increased levels of evaporation, creating denser clouds that hold more water. This eventually leads to heavier precipitation that can cause flooding. Second, more frequent and intense storms such as hurricanes can lead to floods. Finally, higher sea levels due to melting glaciers can also prompt coastal flooding.

Floods can also be exacerbated by how humans manage waterways and spur urbanization.

STORMS

Storms are impacted by climate change in the same way that some floods are, via the effect that higher temperatures have on evaporation and subsequent precipitation. With clouds holding increased amounts of water vapor, more powerful storms develop.

EARTHQUAKES

The connection between earthquakes and climate change is slightly less straightforward, and certainly less influential. Most earthquakes occur when tectonic plates within the Earth's crust change or move. Many things can lead to this, but where climate change comes into play is once again related to water. Earthquakes can be triggered or prevented by variability in stress on a fault

between tectonic plates. Stress on these faults is impacted by surface water from rain or snow. When there is heavier rainfall, this precipitation and any subsequent flooding increases stress and decreases seismicity. When the season dries up and there's less water, the weight on the Earth's crust decreases and this can lead to microseismicity.

As of now, the majority of the connection between earthquakes and climate change is with microseismicity, or tiny earthquakes, which have magnitudes of less than zero and are so small that humans can't feel them. While additional connections can be made, such as impacts from pumping groundwater during droughts, connections between larger earthquakes and climate change have largely not been proven, though the rapid movement of glaciers has also been shown to cause glacial earthquakes.

EXTREME TEMPERATURES

Climate change can lead to both extreme high temperatures and extreme low temperatures. The connection with extreme high temperatures is more intuitive — greenhouse gases are being trapped in the atmosphere and this leads to warming. However, the connection to extreme low temperatures can be harder for some people to make. Lower temperatures in some regions are a result of the polar vortex being warmer, causing it to weaken and dip down further than it normally would, bringing with it colder temperatures. This is further exacerbated by impacts to the jet stream that change the pattern of where and when hot and cold temperatures typically occur. These two combined have led to hotter summers and harsher winters in some areas.

LANDSLIDES

Landslides are connected to rainfall as well. Due to climate change's impact on evaporation and precipitation, more frequent and intense rainfall events can lead to more landslides.

DROUGHTS

On the other side of the water spectrum are droughts, though they result from the

same process. Droughts are a natural part of the climate cycle, but climate change is making them more frequent, severe, and prolonged. While higher levels of evaporation lead to eventual severe rainfall, in some regions, this shift means drier conditions due to the loss of the evaporated water, which can lead to drought and dried out soils and vegetation. With climate change, places that are traditionally dry are becoming drier through the higher levels of evaporation and places that are traditionally wet are becoming wetter through the higher levels of rainfall that result.

WILDFIRES

Wildfires are a consequence of the drier conditions caused by climate change in some areas. The wildfire season is much longer than in previous years and the number of wildfires per season has tripled. Severe heat and drought provide fuel for fires through drier soils and vegetation that is more flammable. Additionally, due to warmer temperatures, snowpacks are melting earlier, meaning that forests are drier for longer periods of time and increasingly at risk of fires.

VOLCANIC ACTIVITY

Similar to earthquakes, volcanic activity has a less direct relationship with climate change. Volcanoes do contribute to changes in Earth's atmosphere through spewing CO2, aerosols, ash, and metals into the atmosphere, but they have a net cooling effect. This is due to the impact that aerosols have on cooling versus warming.

On the flip side, there is some evidence to suggest that climate change could increase eruptions in a similar way that they impact seismic activity, through lessening the pressure on the Earth's surface. In this case, this decreased pressure causes more hot magma to come in contact with aquifers, which triggers eruptions. Additionally, melting glaciers are exposing more volcanoes.