City of Temecula

Local Hazard Mitigation Plan

2023-2027

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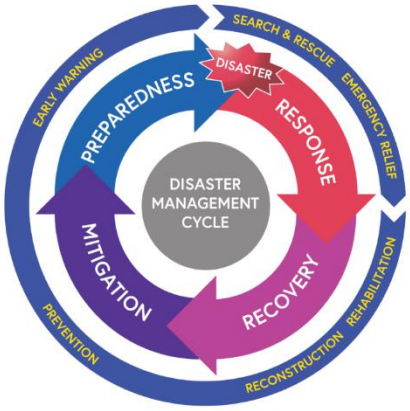
PREFACE

Disasters can cause loss of life, damage buildings and infrastructure, and have devastating consequences for a community's economic, social, and environmental well-being. Hazard mitigation, actions taken to reduce or eliminate long-term risk to life, property, and the environment from hazards, can significantly reduce these impacts. Impacts from hazards are a challenge to many jurisdictions, its leaders, and its citizens. After catastrophic disaster events, communities can experience power outages, loss of water and sewer service, loss of telecommunications, limited access to fuel, and closed roadways. Depending on the magnitude of the event, recovery from these events can take weeks, months, and in some cases, years. The goal of many communities is to reduce the potential impacts from disaster events thus effectively shortening the recovery time. In emergency management, this is generally called mitigation.



Mitigation is defined by the Department of Homeland Security (DHS) – Federal Emergency Management Agency (FEMA) as "*any action taken to reduce and/or eliminate the long-term risk to human life and property from natural hazards.*" Mitigation is one of the primary phases of the Disaster Cycle and is the only phase specifically dedicated to breaking the cycle of damage. The goal of mitigation is to build resiliency within the community, enabling a more efficient and effective response to and recovery from disasters and/or major emergencies.

To assist communities become more resilient to hazards, FEMA developed a program and guidance around the creation of Local Hazard Mitigation Plans (LHMPs). LHMPs promote a comprehensive planning process, requiring an assessment of local capabilities against impacts from hazards in order to identify potential projects and/or strategies.

Within an approved and adopted LHMP, cities, counties, and special districts are eligible for Federal Hazard Mitigation Assistance (HMA) grants offered through FEMA: Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC; formerly Pre-Disaster Mitigation – PDM), and Flood Management Assistance (FMA). The HMA grants are a great source of funding to help implement local mitigation actions identified in the LHMP.

This update to the City of Temecula LHMP is built upon previous mitigation efforts within the City and incorporated new, relevant information into the plan. Part of this update process includes reassessing and reevaluating: local capabilities (personnel resources, governance, technical skills, and fiscal resources); community hazards (identification, impacts, and prioritization); and mitigation goals, objectives, and measures/actions. Significant consideration was given to acknowledging new (and existing) challenges and issues facing the City (i.e., pandemic, civil

disturbance, technology disruption, and wind driven fire events). During this update, the city tried to take a more comprehensive, strategic approach to the LHMP. This led to reorganizing the plan and also adding, renaming, and expanding hazards as well as mitigation actions.

Because the LHMP must include information to meet federal requirements and guidance, it includes information not traditionally found in other planning documents. This can lead to a large, cumbersome document, making it difficult to easily access specific information. In an attempt to ensure the LHMP contains all required information and is user-friendly; it has been organized as follows:

Chapter 1: ***Introduction*** – provides information on the purpose of the plan, outlines the scope of the work, and presents the adoption process and authority.

Chapter 2: ***Planning Process*** – provides information on the methodology used to prepare the LHMP, including a list of the Planning Team members and the public outreach efforts.

Chapter 3: ***Community Profile*** – provides background information on the city, ensuring all Planning Team members have a common understanding of the dynamics within the community.

Chapter 4: ***Capability Assessment*** – provides information on the current mitigation efforts by the city, including department roles and responsibilities, existing plans/programs/codes, and available funding.

Chapter 5: ***Hazard Assessment*** – provides information on hazards within the city and assesses the priority of each hazard.

Chapter 6: ***Risk & Vulnerability Assessment*** – provides information on the potential impacts, through exposure and loss (damage) estimates for each hazard within the city.

Chapter 7: ***Mitigation Strategies*** – provides information on the actions/projects the city is proposing to address the vulnerabilities to the high-risk hazards within the city.

Chapter 8: ***Plan Administration*** – provides information on how the city intends to keep the LHMP current, incorporate it into other efforts, and share it with the public.

1. INTRODUCTION

The Local Hazard Mitigation Plan (LHMP) is a "*living document*" that should be reviewed, reevaluated, monitored, and revised to reflect changing conditions and new information. As required, the LHMP must be updated every five (5) years to remain in compliance with regulations to receive Federal Hazard Mitigation Assistance (HMA) grants. At a minimum, this plan shall be reviewed annually. The City of Temecula has had several approved and adopted LHMP's, the last being in 2017. This LHMP is an update to the 2017 City of Temecula LHMP.

The City of Temecula's efforts to update the LHMP began in early 2022. The goal was to bring all members of the city (local business, community members) together to create a plan that identified and assessed the various hazards within the city. The desire was to have the city develop a comprehensive LHMP that was inclusive of all potential hazards that could affect the city.

1.1 Purpose of the Plan

The purpose of this plan is to outline a mitigation strategy to help reduce and/or eliminate impacts from hazards within the City of Temecula.

1.2 Scope of the Plan

The scope of this plan is to: 1) assess relevant existing conditions and capabilities within the city; 2) identify potential hazards and their impacts to the city; and 3) propose additional mitigation measures to address the impacts to the high-priority hazards within the city. In support of this scope, this update will: evaluate mitigation progress since the approved and adopted LHMP; implement and document a comprehensive planning process; present actions to maintain and integrate the LHMP with other City plans; and establish methods to continuously inform and educate the public on hazards and actions that can be taken to reduce and/or eliminate the impact.

1.3 Hazard Mitigation Planning Directive

In 2000, the Federal Emergency Management Agency (FEMA) adopted revisions to Title 44 of the Code of Federal Regulations (44 CFR). This revision is known as "Disaster Mitigation Act (DMA) 2000". Section 322 (a-d) of DMA 2000 requires that local governments, as a condition of receiving federal disaster mitigation funds, have an approved and adopted Hazard Mitigation Plan (HMP) that describes the process for assessing hazards, risks, and vulnerabilities; identifying and prioritizing mitigation actions; and soliciting input from the community (public), key stakeholders, and adjacent jurisdictions/agencies.

A LHMP must be approved every five (5) years per DMA 2000. While the County of Riverside is responsible for adopting the 2022 Riverside County Operational Area Multi-Jurisdictional Local

Hazard Mitigation Plan, the City of Temecula is responsible for adopting the annex to the County's plan – more specifically, the 2022 City of Temecula Local Hazard Mitigation Plan.

1.4 Promulgation Authority

The City Council is the legislative body of the City of Temecula. It decides policy for the municipal government, enacts laws, and oversees all activities of the City. The City Council also serves as the governing body of the City of Temecula Redevelopment Agency. This promulgation authority is vested in the members of the City Council. A list of members of the Temecula City Council include:

Mayor	Zack Schwank	**Council Member**	Brendan Kalfus
Mayor Pro-Tem	James "Stew" Stewart	**Council Member**	Curtis Brown
Council Member	Jessica Alexander		

1.5 Local Hazard Mitigation Plan Adoption

The City of Temecula will submit plans to the Riverside County Emergency Management Department (EMD) who will review and collate prior to forwarding to the California Governor's Office of Emergency Services (CalOES) for review prior to being submitted to the Federal Emergency Management Agency (FEMA). The City of Temecula will wait to receive an "Approval Pending Adoption" letter from FEMA before taking the plan to the City Council for adoption.

The update of the City of Temecula LHMP was reviewed and adopted by the City Council on 25 July 2023 under Resolution NUMBER. A copy of the Resolution is located in **Appendix 1**.

1.6 California Environmental Quality Act (CEQA)

Categorical Exemption: This planning activity is categorically exempt under Title 14 of the Cal. Admin. Code Section 15061(b)(3)(common sense exemption) and Section 15262 (feasibility and planning studies), on a separate and independent basis. The commonsense exemption applies because it can be seen with certainty that the adoption of the LHMP and its' incorporation into the General Plan by reference, will not have a significant effect on the environment. The LHMP is a planning study which informs the City of vulnerabilities to natural hazards and potential future actions to mitigate risks. Adoption of the LHMP is not a commitment to any future action, nor is it a decision to approve, adopt, or fund any of the potential mitigation actions identified.

2. PLANNING PROCESS

2.1 Overview

This section demonstrates the methodology used by the City of Temecula to develop the LHMP. FEMA's LHMP development guidance outlines recommended actions, emphasizing the *"whole community"* approach in the planning process. The whole community concept promotes inclusion of not only emergency managers but other City department representatives (e.g., public works, economic development, community development, planning, building & safety), as well as outside partners (e.g., surrounding cities, special districts, business leaders) to participate in the LHMP planning effort. Soliciting and considering input from diverse interests is essential to building a comprehensive plan and gaining community-wide support for the plan.

2.2 Methodology and Timeline

To complete the update of the LHMP, the City of Temecula incorporated a three (3) phase planning process: 1) Prepare; 2) Develop; and 3) Finalize **(Figure 2.1)**. Phase 2 – Develop, has three (3) sub-phases that establish the current conditions, determine the risk and vulnerabilities, and identifies strategies and projects. In addition, **Figure 2.2** depicts the timeline to complete the project. While this methodology is in alignment with the FEMA guidance, sequence and naming of the phases were adjusted to better suit the needs of the City of Temecula.

Figure 2.1 – Planning Methodology (2022)

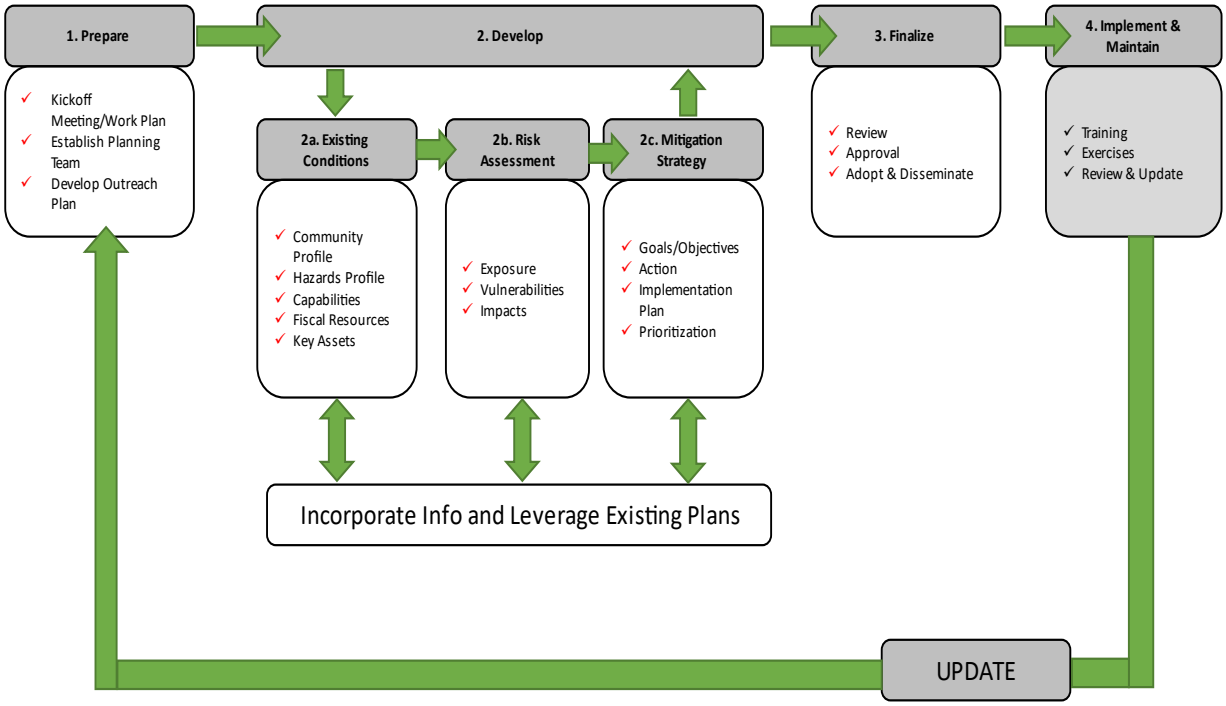
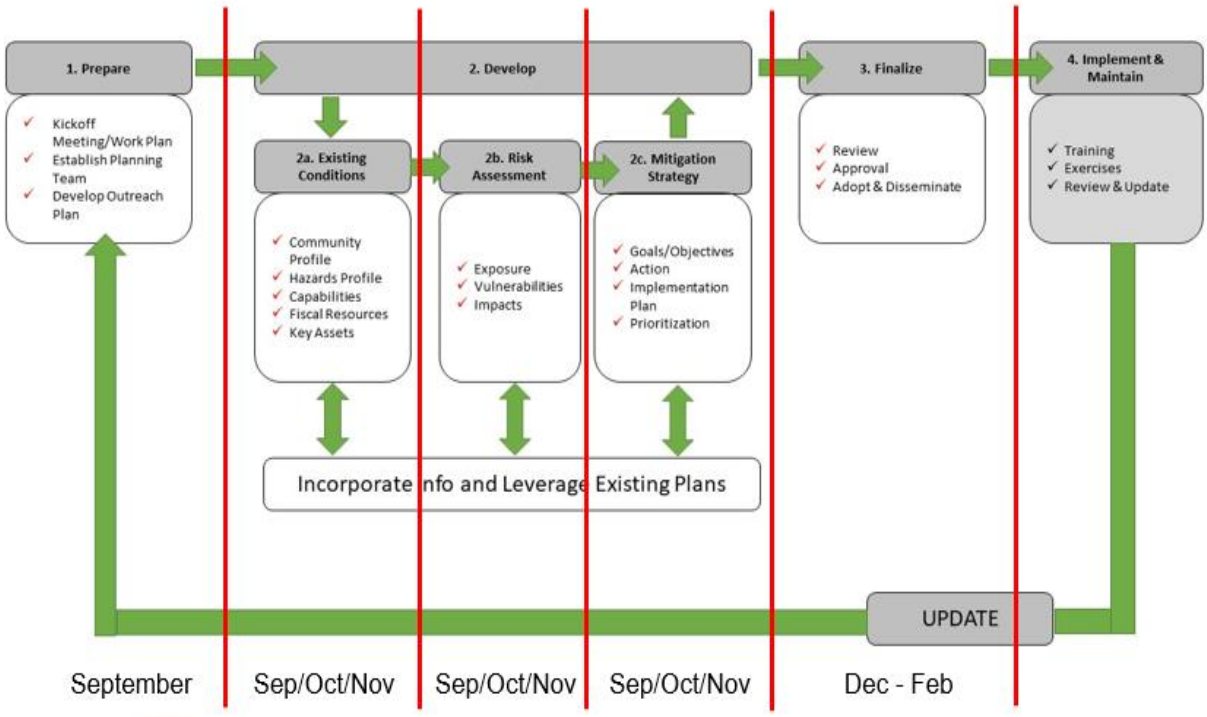


Figure 2.2 – Planning Timeline (2022)



Under the *Prepare* phase, general project tasks were completed. This included conducting an Administrative Kick-Off meeting with the Hazard Mitigation Planning Team (HMPT), an identification of the Public Outreach effort, and a Kick-Off meeting with the city's executive team.

As mentioned, the *Develop* phase had three (3) sub-phases. During the Existing Conditions sub-phase, the Planning Team confirmed current City mitigation capabilities, including identification of departments supporting mitigation, current governance guiding mitigation efforts, identification of fiscal resource availability to possibly support mitigation, discussion of key assets, and identification and description of local hazards within the City. Under the Risk Assessment sub-phase, the Planning Team reviewed exposure and impacts of hazards within the City, and prioritized hazards. The final sub-phase, Mitigation Strategies, had the Planning Team discuss previous mitigation efforts, identify, and prioritize new mitigation projects, and develop and implementation plan for each project.

Throughout the *Develop* Phase, plans and other documents, both internal and external, were also analyzed and leveraged to ensure decisions were based on the best available information and that proposed actions were compatible with other efforts. And conversely, efforts were made to encourage results from the LHMP planning process were considered and incorporated into other planning efforts.

The last phase of the planning process methodology was *Finalize*. During this phase, the Planning Team reviewed and provided additional comments on the complete LHMP before being

forwarded to the County of Riverside, California Governor's Office of Emergency Services (CalOES) and FEMA. This phase also included addressing both CalOES and FEMA comments and working with the City Council to adopt the LHMP.

During the planning process, draft LHMP sections (i.e., capabilities, hazards, vulnerability, mitigation strategies) were disseminated for review and comment as the Planning Team moved through each phase and sub-phase. This helped the Planning Team focus their review on the subject matter at hand and enforced the relationship between the phases. At the end of the planning process, another review cycle was provided, this time with all draft sections under one cover.

2.2.1 Participation in Regional (OA) Planning Process

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

The City of Temecula participated in Riverside County workshops, conferences, and meetings, including:

- 1 May 2022: Riverside County Emergency Management Department reached out to the City of Temecula to ascertain their intent to participate in the multi-jurisdiction LHMP planning process and obtain a letter of commitment.
- 17 May 2022: The City of Temecula processed their letter of commitment to participate in the Riverside County Multi-Jurisdictional LHMP Planning Process and provided it to the Riverside County Emergency Management Department.
- 1 June 2022: The City of Temecula received an invitation to participate in the Riverside County LHMP Multi-Jurisdiction Workshop that was scheduled to occur on 15 June 2022.
- 15 June 2022: The City of Temecula participated in the Riverside County LHMP Jurisdiction Workshop to begin the planning process.
    - During this meeting, an introduction to the OA planning process was introduced. Numerous tools were provided to the participants to ensure they had a building block in which to begin their individual planning processes
- 14 July 2022: Attended the Riverside County Emergency Managers Association (RCEMA) Meeting where the OA LHMP was discussed.
- 3 August 2022: Attended the Riverside County OA LHMP Steering Committee Planning Meeting where the membership continued to discuss the process, where the OA was at within the planning process, and discussed measures to assist the local jurisdictions in completing their individual plans.
- 10 August 2022: Attended the Riverside County OA LHMP Workshop to work on planning updates to the current jurisdictional LHMP.
- 5 Oct 2022: Attended the Riverside County OA LHMP Steering Committee Planning Meeting where the membership continued to discuss the process, where the OA was at

within the planning process, and discussed measures to assist the local jurisdictions in completing their individual plans.

- 4 Jan 2023: Attended the Riverside County OA LHMP Steering Committee Planning Meeting where the membership continued to discuss the process, where the OA was at within the planning process, and discussed measures to assist the local jurisdictions in completing their individual plans.

2.3 Planning Team

Building on the whole community concept, a Planning Team was established to assist with the updating of the City of Temecula LHMP. The primary goal of the Planning Team is to help define and identify the strategies within the LHMP. The Planning Team was led by representatives from the Office of Emergency Management. The Office of Emergency Management representatives took on the responsibility of Project Manager and facilitated and coordinated Planning Team activities. Additionally, the City of Temecula Office of Emergency Management utilized their organic Emergency Manager to provide technical support and provide the final updated LHMP.

2.3.1 Members

The City of Temecula Hazard Mitigation Planning Team (HMPT) was comprised of subject matter experts who could provide the greatest benefit to the team or represented specific topics covered by the LHMP. Leveraging the list of Planning Team members during the last update to the LHMP, the Office of Emergency Management evaluated, expanded, and confirmed the list of Planning Team members. An email invite was sent out to each Planning Team member and a series of follow-up phone calls were conducted to discuss the project and confirm participation. Keeping the Planning Team to a manageable number of members while ensuring that all perspectives are captured and/or included in the process is challenging. To balance this, the Planning Team members were urged to act as liaisons to community groups with whom they regularly interact with, exchanging thoughts on the LHMP with other groups in the community. Planning Team members were encouraged to communicate the direction and status of the planning effort to their outside members and in return they were expected to bring outside perspectives to the Planning Team. The City of Temecula took great efforts to engage and include as many Planning Team members as possible. A list of the Hazard Mitigation Planning Team members can be found in **Appendix 2**.

2.3.2 Meetings

There were a series of meetings held with the Planning Team. Each meeting had a primary focus and provided an opportunity to discuss/review information and exchange ideas. Below is a list of the Planning Team meetings **(Table 2.1)** and Planning Team member attendance at each meeting can be found at **Appendix 3**.

Table 2.1 – Planning Team Meetings

Date	Purpose of the Meeting
14 Sep 22	Kickoff Meeting
12 Oct 22	Capabilities Planning Meeting #1 (Community Profile / Key Assets)
27 Oct 22	Public Meeting – Public/Traffic Safety Commission
2 Nov 22	Capabilities Planning Meeting #2
17 Nov 22	Hazard Assessment Meeting #1
15 Dec 22	Hazard Assessment Meeting #2
18 Jan 23	Planning Review Meeting (Post Public Comment)
26 Jan 23	Public Meeting – Public/Traffic Safety Commission
01 Feb 23	Public Meeting – Planning Commission

2.4 Community Stakeholder Involvement

2.4.1 Recurring Coordination

The City of Temecula attends and coordinates several meetings with community stakeholders focused on Emergency Management topics (i.e., response, recovery, mitigation, preparedness, and prevention). Prior to the LHMP update process, the city leverages these meetings to announce and discuss the City's intent to update its LHMP and solicit participation from stakeholder representatives. A large number of these stakeholder meetings are organized by the Riverside County Emergency Management Department (RIVCO EMD). The Riverside County EMD leads the Riverside County Operational Area (OA) efforts. It's role as lead is to support local governments response and recovery operations. The Riverside County EMD also encourages coordination across local governments and community stakeholders. Some of these efforts include:

- Riverside County LHMP Steering Committee – meetings focused on maintaining, coordinating, and updating the OA Multi-Jurisdictional LHMP and the individual agency LHMP annexes.
- Operational Area Planning Committee (OAPC) – The OAPC was established by the County of Riverside Emergency Management Department (EMD) as the lead County department to ensure coordinated operation area level activities and administer the Emergency Management Program on behalf of the County of Riverside, Operational Area (OA), and the Director of Emergency Services.
- Riverside County Emergency Managers Association (RCEMA) – To coordinate notification and information management for the Operational Area (OA); to maximize situational awareness; and to provide a common operating picture for all emergency management participants and stakeholders.
- City of Temecula Planning Commission - The Planning Commission (PC), serving as the designated statutory planning agency for the City of Temecula, reviews and makes

recommendations on topics related to subdivisions, specific plans, zone changes, plot plans and conducts legally required public hearings.

- City of Temecula Public/Traffic Safety Commission - The Public/Traffic Safety Commission (PTSC) reviews and makes recommendations on topics related to speed zones, stop signs, signals, pavement markings, traffic design and engineering.
- Citizen Corps Advisory Board - The Temecula Citizens Corps (TCC) Advisory Board is an important and vital volunteer group that directly supports the TCC's efforts to be a more prepared and disaster ready volunteer group within the city. As an advisory component, the team provides mentorship, advise, guidance and support in growing the program, increasing membership, and showcasing abilities and capabilities across the region.

The City of Temecula also meets quarterly with the Voluntary Organizations Active in Disaster (VOAD) group. The Riverside County chapter of the VOAD group is a community network of non-partisan membership organizations that serves as the forum to share knowledge and resources to help communities prepare for and recover from disasters. Further, VOAD fosters efficient delivery of available member resources to persons with unmet needs affected by disaster.

At the local level, the City of Temecula meets with the faith-based organizations monthly through the Murrieta/Temecula Valley Interfaith Council. This group coordinates all faith-based organizations within the City of Temecula. The group promotes positive interfaith relationships, enhances non-violent attitudes and behavior, supports peace, and promotes goodwill in Temecula and surrounding communities. During disasters, this group supports this city not only in having volunteers, but also in providing emotional and religious support upon request.

2.4.2 Stakeholder Mitigation Related Planning Resources

To ensure consistency with the region, the City of Temecula's Office of Emergency Management ensured the Planning Team reviewed and was aware of the State of California's Hazard Mitigation Plan (HMP) and several LHMP's from surrounding jurisdictions. This list included:

- State of California Hazard Mitigation Plan
- Riverside County Multi-Jurisdictional Local Hazard Mitigation Plan
- City of Menifee Local Hazard Mitigation Plan
- City of Murrieta Local Hazard Mitigation Plan
- Pechanga Band of Luiseno Indians Tribal Hazard Mitigation Plan
- Rancho California Water District Hazard Mitigation Plan

While not technically considered a mitigation plan, the Planning Team also reviewed the new draft of the City's Emergency Operations Plan, the General Plan and Quality of Life Master Plan. The value of reviewing EOP's is to understand how the City of Temecula and other communities within the region will respond to events and the type of equipment and facilities that they will rely on. Gaining this perspective, the Planning Team was able to incorporate these considerations into its LHMP. Although there is a concerted effort to incorporate LHMP information into the

General Plan Safety Elements, that is not always the case. A review of the Safety Elements can provide additional insight into hazards within the community and present a closer tie to community-wide goals and objectives.

2.5 Public Outreach

For the purposes of the LHMP, the public is defined as any person within the jurisdiction or adjacent areas, not part of the planning team, not acting in an official capacity of a recognized form or level of government. There were two (2) different Public Outreach campaigns used during the City of Temecula LHMP update process: first informing the community of the efforts to update the LHMP and the second by educating the community of hazards and mitigation process. Below is a summary of the campaigns.

2.5.1 LHMP Awareness Campaign

This campaign presents the strategy for how the City of Temecula engaged the public during the LHMP update process. A significant piece of FEMA's LHMP guidance is to ensure the *"whole community"* is involved. A significant element of FEMA's *"whole community"* is based on the general public.

The public outreach strategy worked in conjunction with the LHMP planning process and the timeline. As the Hazard Mitigation Planning Team (HMPT) completed critical milestones, key information was disseminated to the public for consideration and input. This information was published via the Office of Emergency Management webpage. All public outreach events were conducted in person and within the local community. The City of Temecula held three (3) public meetings: one (1) at the start of the project; and two (2) at the end of the project. In addition to the public meetings, pop-up booths at events across the city were used in providing update information on the LHMP to the general public in keeping with the intent of including the *"whole community."* In between these meetings were a series of status updates provided through the city website, keeping the general public aware of the progress and status of the project.

This outreach strategy shared information about the project kickoff, hazards and potential impacts within the community, current mitigation capabilities, and proposed mitigation actions. The information was shared through presentations, status updates, and a community-based survey. Additionally, social media platforms (Facebook, Twitter, Instagram, LinkedIn, Nextdoor) and email blasts were used heavily to promote the update to the plan and the need for the community's input ensuring a comprehensive and inclusive plan.

The for the update process, the City of Temecula leveraged the Public/Traffic Safety Commission to engage the public. This commission holds regular, ongoing meetings with the public and its purpose was in alignment with the LHMP efforts in promoting the public safety. On October 20, 2022, the City of Temecula published the commission agenda to the public announcing the LHMP as an agenda item for the October 27th Public/Traffic Safety Commission meeting.

A second public outreach meeting was held on 26 Jan 23 and presented to the Public/Traffic Safety Commission to provide an overview of the draft LHMP; a meeting announcement went out on 19 Jan 23. The presentation informed the community of the LHMP planning process and the hazards identified for validation for the updated plan. The presentation provided an overview of the chapters in the LHMP, highlighting the proposed mitigation actions; inviting the public to review and submit comments on the draft LHMP.

Attendance at the three Public Outreach meetings were nominal. The presentations were prepared for each meeting to inform the public on mitigation, the LHMP update planning process, and to walk the public through the LHMP content. During the meetings, some comments were received, most requesting clarification of the content provided within the LHMP presented material as well as a few questions on local topics. The draft LHMP was made available through the City of Temecula's Office of Emergency Management website. This website also provided a function that allowed the public to submit comments on the LHMP after their review. The HMPT received zero comments during the Public Outreach review and comment period.

There were no public comments received during the 30 days comment period, however, comments received from the public survey were shared with the HMPT; and revisions were incorporated into the LHMP where appropriate. The public announcements and presentations for all meetings can be found at **Appendix 4**.

2.5.2 Mitigation Awareness Campaign

Over the last 2 years, the City of Temecula has established both regular and AdHoc meetings and events geared towards the exchange of information on preparedness and mitigation efforts. AdHoc meetings/events consist of events run by the city or other organizations that may provide opportunities to share and exchange information about hazard mitigation. The City organized and/or participated in a number of local initiatives to inform the public of hazards in the community and discussed possible mitigation actions. The City sponsors and staff information booths at local events, annual State of the City addresses, and volunteer events where the promotion of hazard mitigation is one of the components to regular outreach. The City encourages increased participation within our Citizen Corps Council, the Temecula Citizen Corps, and promotes preparedness through the Community Emergency Response Team (CERT) program of instruction. CERT training helps educate the community about hazards and trains citizens to be self-sufficient and resilient immediately following a major emergency or disaster. The Office of Emergency Management conducted a citizen survey during the LHMP process to gauge and determine the level of knowledge local citizens have about potential disasters and assess areas of vulnerability to various types of disasters within their individual communities. The survey further discussed the level of preparedness from each respondent to determine the readiness level of families which will lead to better engagement of the publics needs during emergencies.

The city also leverages its social media platforms (Facebook, Twitter, Instagram), media (print, broadcast), and other general public announcements to disseminate vital information about

hazards in the community, relevant programs being undertaken to safeguard the public from effects of hazards, and actions the public can take to protect themselves during an emergent event. This information can be found at **Appendix 4 – Public Outreach**.

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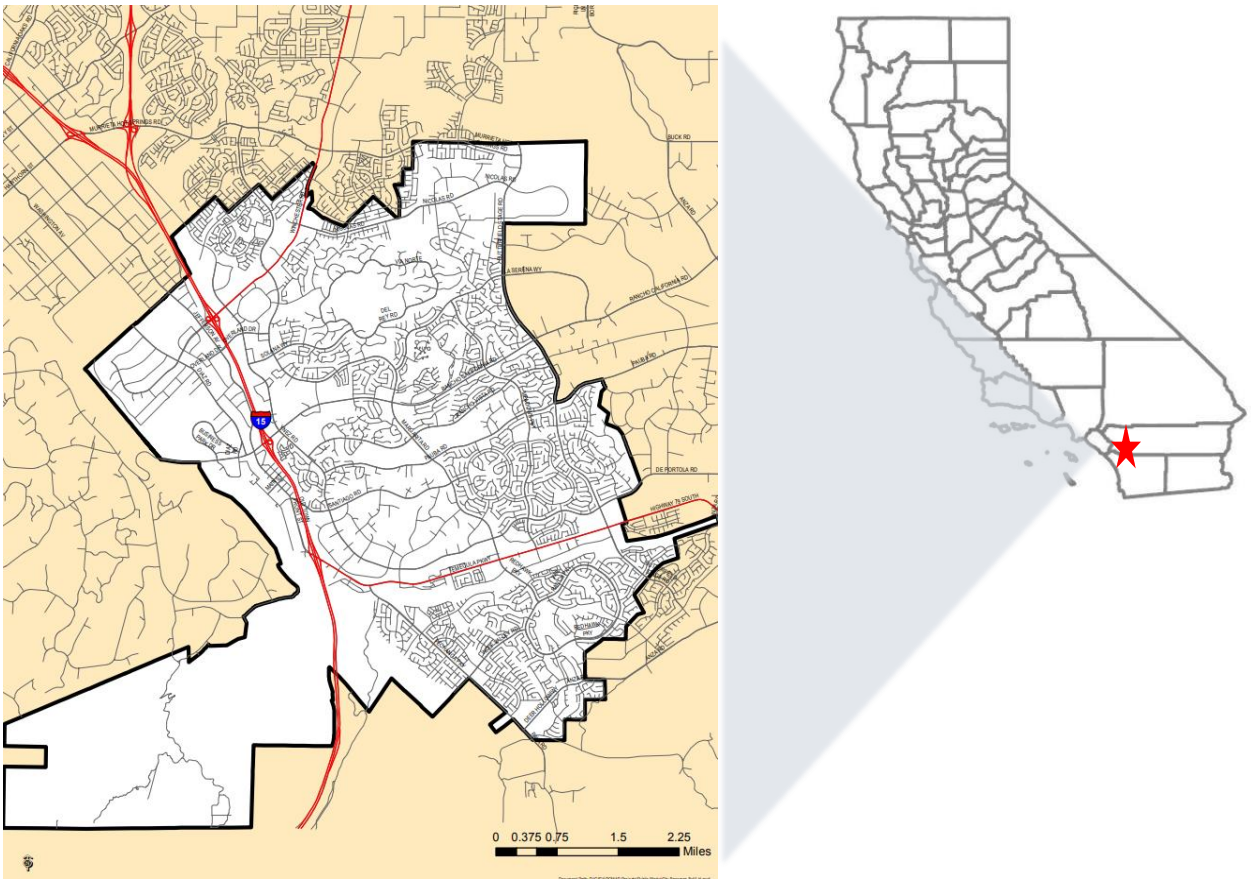
3. COMMUNITY PROFILE

The purpose of this section is to present an overview of the City of Temecula, providing the Planning Team with a common understanding of the existing conditions and perspective on select aspects within the community. Gaining a common understanding of the existing conditions provides the basis on which the Planning Team can assess the impacts of hazards, as well as identify needed mitigation actions.

3.1 Location

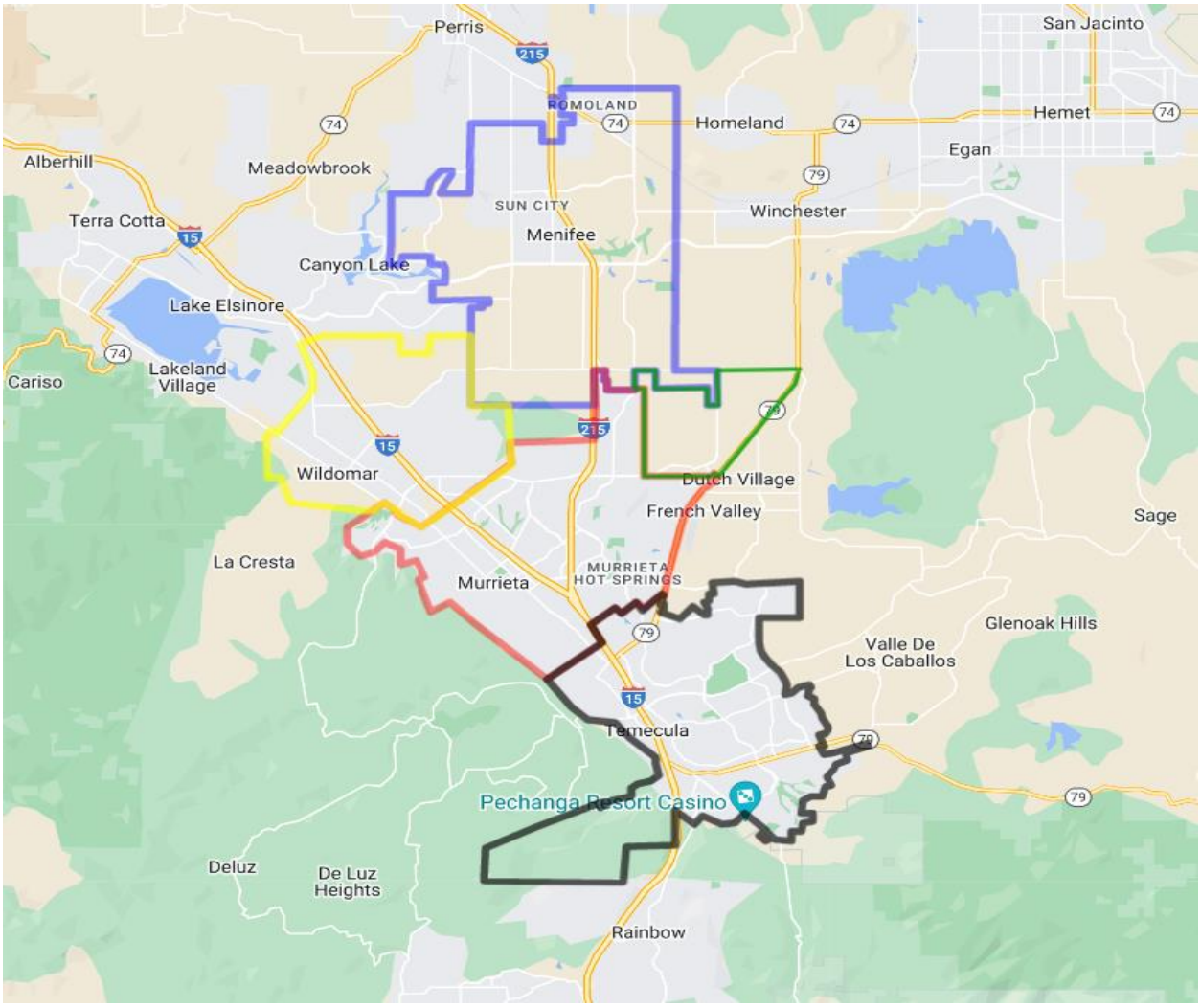
The City of Temecula is located in the most southwestern portion of Riverside County and is the first city backing up to the San Diego County line. Temecula resides ninety (90) miles from downtown Los Angeles, forty-one (41) miles from downtown Riverside, and eighty (80) miles from the U.S. – Mexico border **(Figure 3.1)**. The City of Temecula planning areas covers approximately 30.17 square miles.

Figure 3.1 – City of Temecula (2022)



The City is bordered by other local jurisdictions **(Figure 3.2)**. The County of Riverside has jurisdiction over the unincorporated land surrounding Temecula on the western and eastern sides. The City of Temecula shares a border with the City of Murrieta along Murrieta Hot Springs Road, San Diego County on the southern section of town and at the Interstate 15 Border Checkpoint and Riverside County unincorporated areas of DeLuz to the west and Temecula Valley Wine Country to the east.

Figure 3.2 – Surrounding Jurisdictions (2022)



3.2 Geography

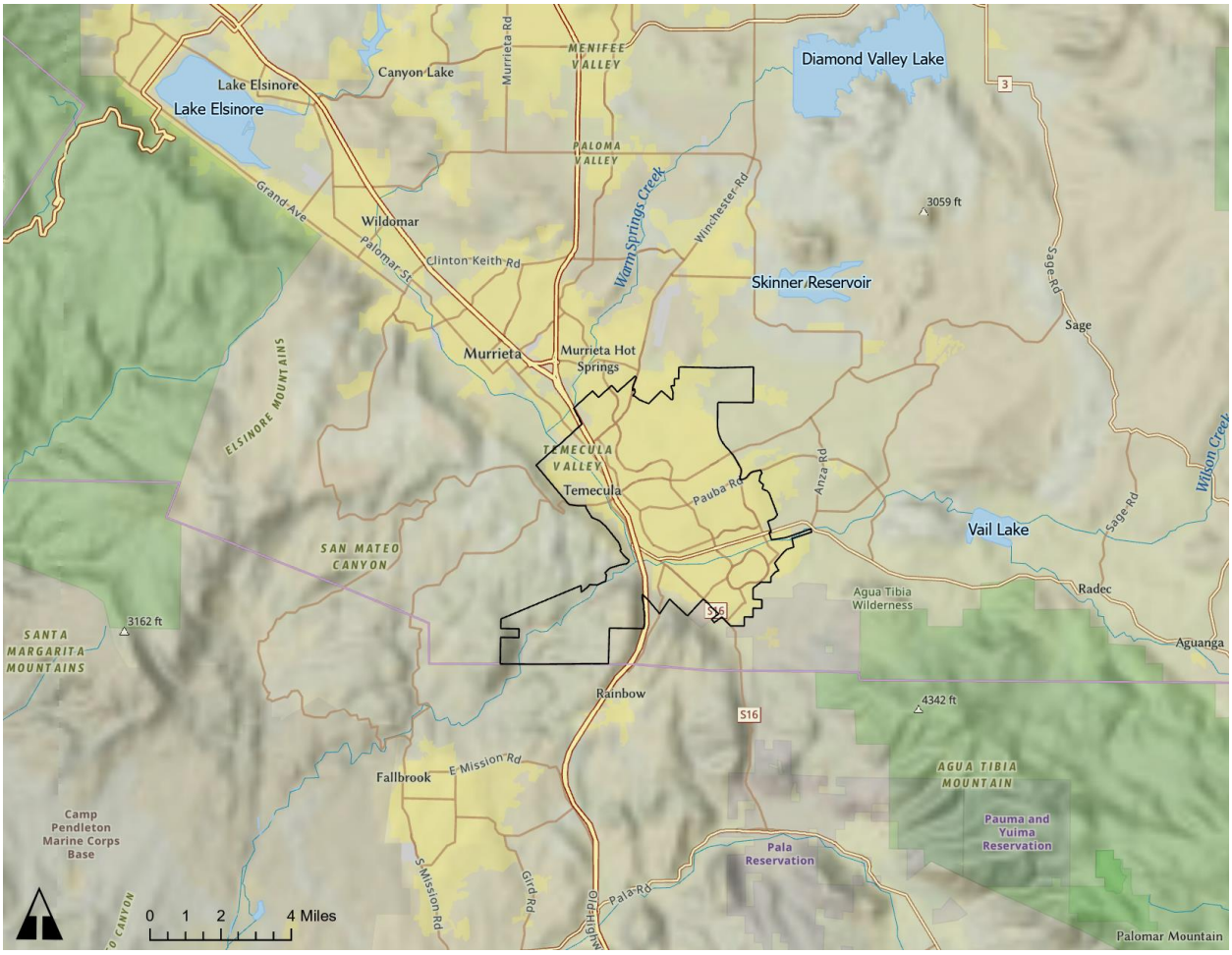
The city of Temecula's elevation is 1,010 feet above sea level and spans 30.17 square miles. It is a graben rift valley making up portions of the Elsinore Trough created over time by the major fault lines of the Elsinore Fault Zone. The city is flanked by Rainbow Valley and Gavilan Mountain to the south, De Luz and Margarita Peak to the west, the City of Murrieta, and Lake Skinner to the north and Temecula Wine Country and Cahuilla Mountain in the distance to the east. The city harbors 6.1 miles of the Interstate 15 north and south from San Diego County to San

Bernardino County. State Highway 79 flanks the city north and south ends and offers travel from Santa Ysabel to the south end of Juniper Flats.

The geographical coordinates of Temecula are 33.494 deg latitude, -117.148 deg longitude, and 1,010 ft elevation. The topography within 2 miles of Temecula contains very significant variations in elevation, with a maximum elevation change of 915 feet and an average elevation above sea level of 1,179 feet. Within 10 miles contains very significant variations in elevation (4,055 feet). Within 50 miles also contains extreme variations in elevation (11,490 feet).

The area within 2 miles of Temecula is covered by shrubs (56%), artificial surfaces (31%), and grassland (10%), within 10 miles by shrubs (69%) and grassland (18%), and within 50 miles by shrubs (52%) and water (18%).

Figure 3.3 – Physical Features Surrounding the City of Temecula (2022)



There are two (2) principal streams/creeks that drain into the City of Temecula, each present identifiable hazards at peak flows:

- **Temecula Creek** – The Temecula Creek, formerly known as the Temecula River, runs 32.6 miles through southern Riverside County, California, United States, past the rural

communities of Sage and Aguanga, and ending 0.5 miles southeast of the original city center of Temecula. The creek is filled with boulders and is typically dry and sandy. It is a relatively undeveloped coastal-draining watershed. Until the 1920s, water flowed in Temecula Creek year-round.

- **Murrieta Creek** - The Murrieta Creek runs 13 miles southeasterly through southwestern Riverside County, through the cities of Wildomar, Murrieta, and Temecula, ending 0.5 miles southeast of the city center of Temecula, where it has its confluence with Temecula Creek and forms the head of the Santa Margarita River. Murrieta Creek drains over 220 square miles. The creek has several minor tributaries, including flows from Lake Skinner whose outlet is Tucalota Creek below the reservoir, which then flows to Santa Gertrudis Creek, then Murrieta Creek.

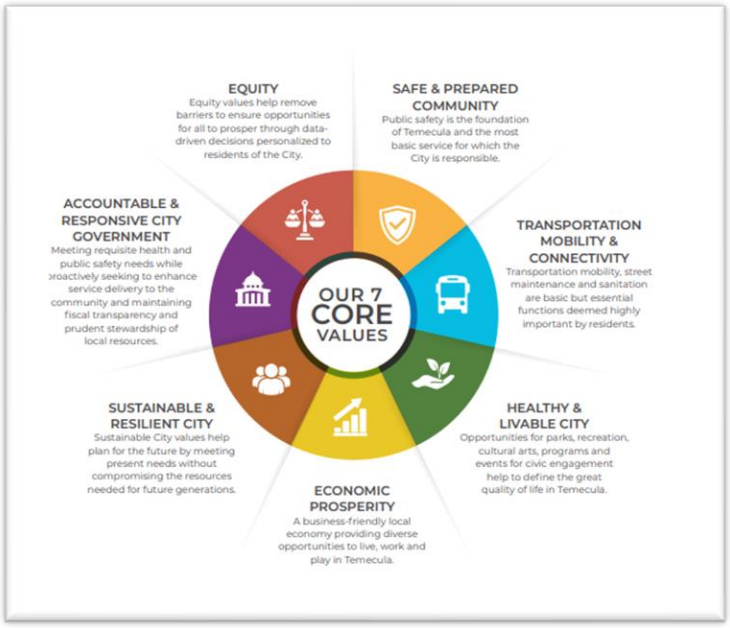
The Santa Margarita River, one of the last free-flowing rivers in Southern California extends 30.9 miles from the confluence of Temecula Creek and Murrieta Creek and is formed as a river where the creeks meet. It flows southwest through the 5 miles of the Temecula Canyon at the south end of the Santa Ana Mountains. Along its lower 10 miles the river forms a large floodplain as it crosses Marine Corps Installations-West (MCI-West) Marine Corps Base Camp Pendleton (MCB Camp Pendleton). It enters the Gulf of Santa Catalina on the Pacific Ocean approximately 3 miles northwest of the City of Oceanside.

There are three (3) primary reservoirs that surround the City of Temecula that possess the ability to catastrophically flood the city along the north, west, and southern sections of the city limits. These are:

- **Vail Lake Reservoir** – Vail Lake sits to the east of Temecula City at a surface elevation of 1,460'. The lake has a holding capacity of 45,000 acre-feet but due to drought currently holds 1/3 of its capacity. Temecula Creek and Wilson Creek provide inflow, and the lake outflows back into Temecula Creek.
- **Lake Skinner Reservoir** - 10 miles northeast of the city at a surface elevation of 1,500 '. The lake has a capacity of 44,200 acre-feet. The lake is supplied by the Colorado River Aqueduct and the State Water Project and outflows into Tucalota Creek and the Santa Margarita River.
- **Diamond Valley Lake** - Northeast of Temecula in unincorporated Hemet is one of the largest reservoirs in Southern California. The lake has a surface elevation of 1,748' and a capacity of 800,000 acre-feet. The reservoir is supplied by the State Water Project and supplies potable water to the Metropolitan Water District customers.

3.3 History

Temecula is one of the most historic communities in Southern California. Rancho California was incorporated into a city on the 1st of December in 1989 and the citizens themselves voted to officially name their city "Temecula". Today, Temecula is a vibrant and healthy City, culturally diverse and encompassing all the elements that represent a high quality of life: built and natural environment, economic and educational opportunities, recreation, shopping and entertainment resources, and the ability to have a safe and healthy lifestyle. Yet despite such rapid growth, the City of Temecula retains a sense of its past and a connection to its history. Since incorporation, Temecula has grown from a small bedroom community to a regional center of business and economic growth, which continues to prioritize a high quality of life for its 110,000 residents. In its 30+ years as a City, the Temecula City Government, in partnership with residents, has set high standards for excellence and clear priorities of safety that have made Temecula a great place to live, work and play. The City's approach to safety continues to evolve to meet the everchanging needs of its residents and businesses as exampled by the creation of the City of Temecula comprehensive Emergency Management Program and the update to our Local Hazard Mitigation Plan so that Temecula may be a well-prepared and resilient City in the event of natural and other disasters. Sustaining a safe community is the City's most important obligation and number one priority.



3.4 Climate

Temecula's climate is typical of Southern California inland areas. Residents of the City experience hot, arid summers and mostly clear winters that are long, cool, and partly cloudy. The temperature typically varies from 41 to 89 degrees Fahrenheit and is rarely below 34 degrees Fahrenheit or above 96 degrees Fahrenheit. **(Table 3.1)**

Table 3.1 – Average Temperatures – City of Temecula (2022)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max Avg. Temp	66°F	66°F	68°F	72°F	76°F	82°F	87°F	88°F	85°F	79°F	71°F	66°F
Min Avg. Temp	42°F	44°F	46°F	49°F	54°F	58°F	62°F	63°F	60°F	54°F	47°F	42°F
Precipitation (inches)	2.3″	2.8″	1.8″	0.7″	0.2″	0.1″	0.1″	0.2″	0.2″	0.5″	1.0″	1.8″

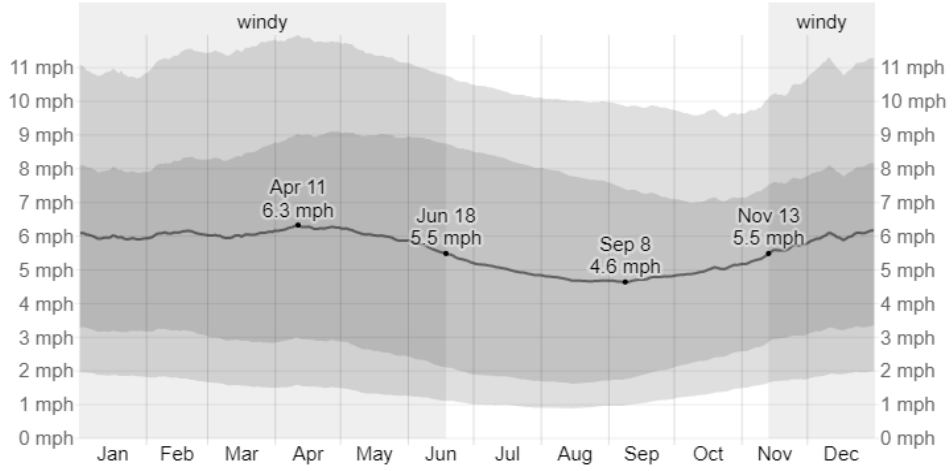
3.4.1 Precipitation and Rainfall

Precipitation - A wet day is one with at least 0.04 inches of liquid or liquid-equivalent precipitation. The chance of wet days in Temecula varies throughout the year. The wetter season lasts 4.4 months, from November 21 to April 4, with a greater than 11% chance of a given day being a wet day. The month with the most wet days in Temecula is February, with an average of 5.6 days with at least 0.04 inches of precipitation. The drier season lasts 7.6 months, from April 4 to November 21. The month with the fewest wet days in Temecula is June, with an average of 0.3 days with at least 0.04 inches of precipitation. Among wet days, we distinguish between those that experience rain alone, snow alone, or a mixture of the two. The month with the most days of rain alone in Temecula is February, with an average of 5.6 days. Based on this categorization, the most common form of precipitation throughout the year is rain alone, with a peak probability of 21% on February 21.

Rainfall - To show variation within the months and not just the monthly totals, we show the rainfall accumulated over a sliding 31-day period centered around each day of the year. Temecula experiences significant seasonal variation in monthly rainfall. The rainy period of the year lasts for 6.2 months, from October 18 to April 24, with a sliding 31-day rainfall of at least 0.5 inches. The month with the most rain in Temecula is February, with an average rainfall of 2.8 inches. The rainless period of the year lasts for 5.8 months, from April 24 to October 18. The month with the least rain in Temecula is June, with an average rainfall of 0.1 inches

3.4.2 Wind - The average hourly wind speed in Temecula experiences mild seasonal variation over the course of the year. The windier part of the year lasts for 7.2 months, from November 13 to June 18, with average wind speeds of more than 5.5 miles per hour. The windiest month of the year in Temecula is April, with an average hourly wind speed of 6.2 miles per hour. The calmer time of year lasts for 4.8 months, from June 18 to November 13. The calmest month of the year in Temecula is August, with an average hourly wind speed of 4.7 miles per hour.

Figure 3.4 – Average Wind Speeds City of Temecula (2022)

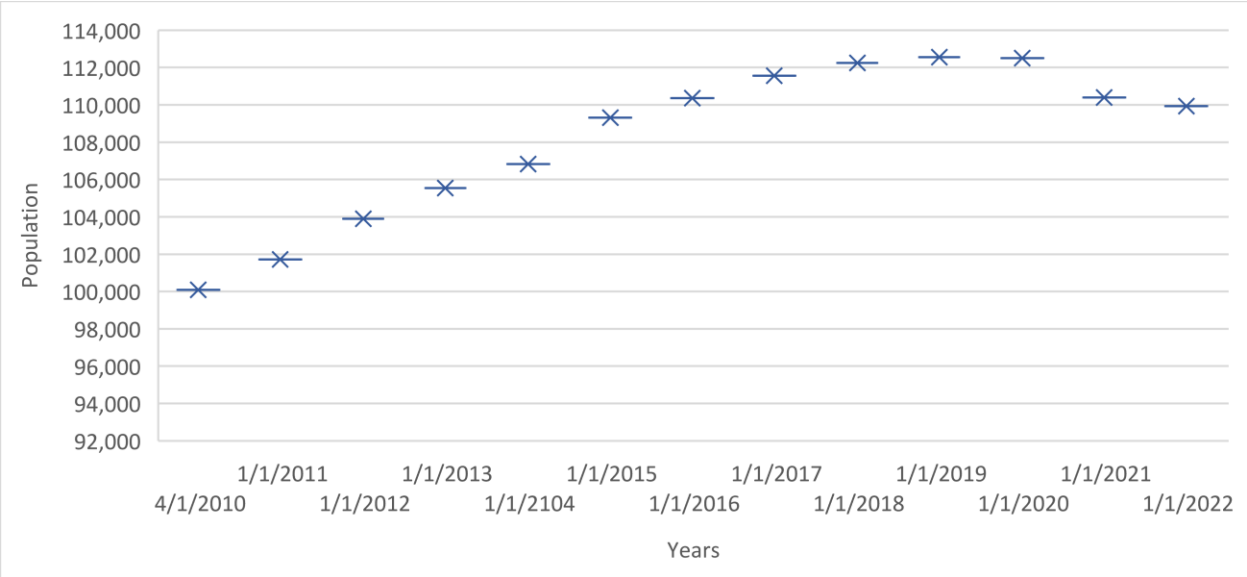


3.5 Demographics

According to the U. S. Census Bureau 2021 estimates, the total population of Riverside County is approximately 2,458,395 people. The majority of the County's population resides in the Western and Southwestern portions of the county. The County's population has grown by approximately 228,544 people (10.5 %) since the 2010 population of 2,189,641.

The population of the City of Temecula is estimated to be 110,394 (U.S. Census, 2021 estimate), slightly down from the 2020 estimate of 112,512. The City of Temecula's population represents approximately 4.5 % of the population residing within Riverside County. The City of Temecula's population has increased approximately 9.8 % since 2010 however, the overall population has steadily decreased over the past three (3) years. The historical population estimates for the City of Temecula are shown in **Figure 3.5.**

Figure 3.5 – Historical Population Estimates for the City of Temecula, 2012-2022

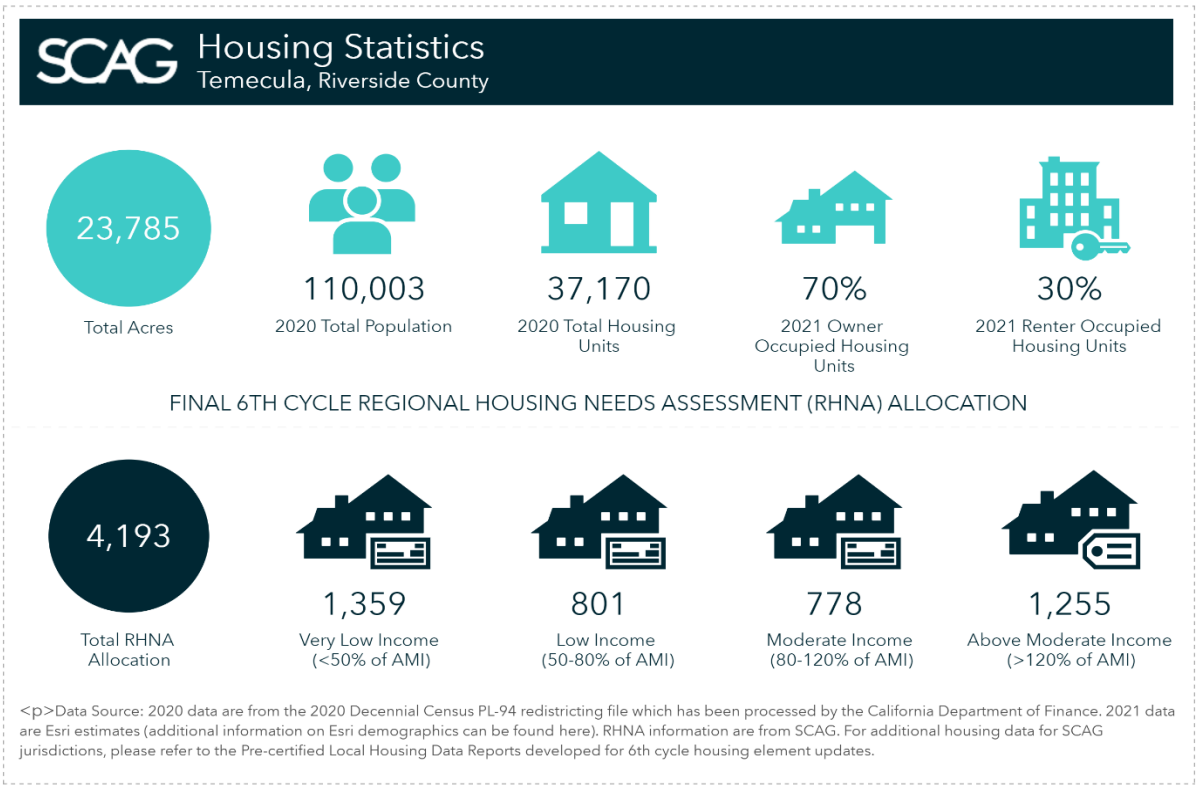


Below are some additional relevant statistics from the 2021 U.S. Census estimate for the City of Temecula.

- Persons under 18 years: 29.1%
- Persons 65 years and over: 10.5%
- Persons between the years of 18 and 65: 39.6%
- Persons speaking a language other than English at home: 23.8%
- Persons over the age of 25 that are High School graduates: 94.1%
- Persons that have attained a bachelor's degree or higher: 35%
- Persons under the age of 65 with a disability: 6.6%
- Median household income: $98,631
- Living below the poverty level: 7.2%

In addition to the above information, the HMPT reviewed information from the Southern California Association of Governments (SCAG). In 2008, the SCAG initiated the Local Profiles which provided a variety of demographic, economic, education, housing, and transportation information about each member jurisdiction and is updated every two years. The SCAG region includes six (6) counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura) and 191 incorporated cities. Additionally, the SCAG region is a major hub of global economic activity and considered the nation's gateway for international trade with two of the largest ports in the nation. **Figure 3.6** below is some information from the SCAG Local Profile for the City of Temecula (2020):

Figure 3.6 – SCAG Housing Statistics, Temecula 2020



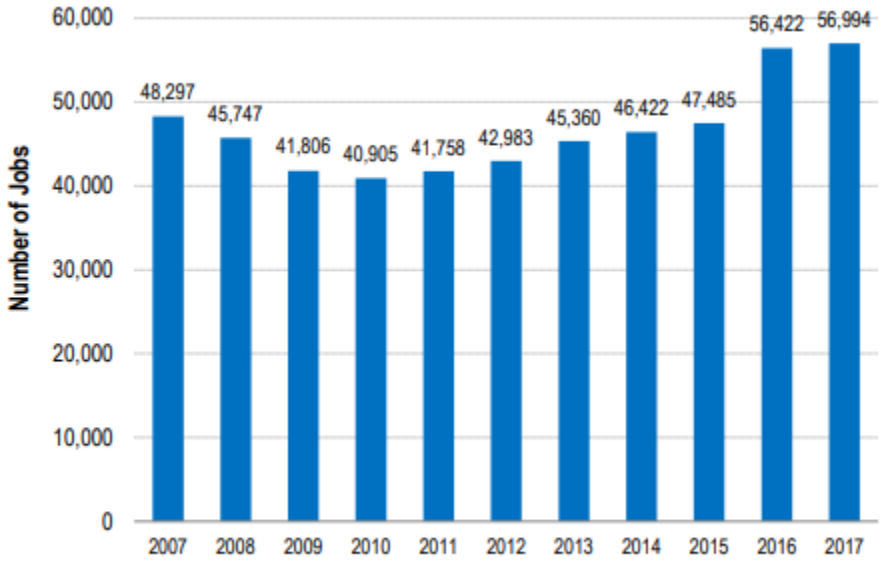
3.6 Economy

According to the SCAG report (2017), the total number of jobs within the City of Temecula is 56,994. The total number of jobs in Temecula reflects an 18% increase from 2007 **(Figure 3.7 [**

2022]). A more detailed breakdown of the jobs in the City of Temecula is reflected in **Figure 3.8 (2022)**. Below is a summary of some of the larger losses in job sectors since 2007.

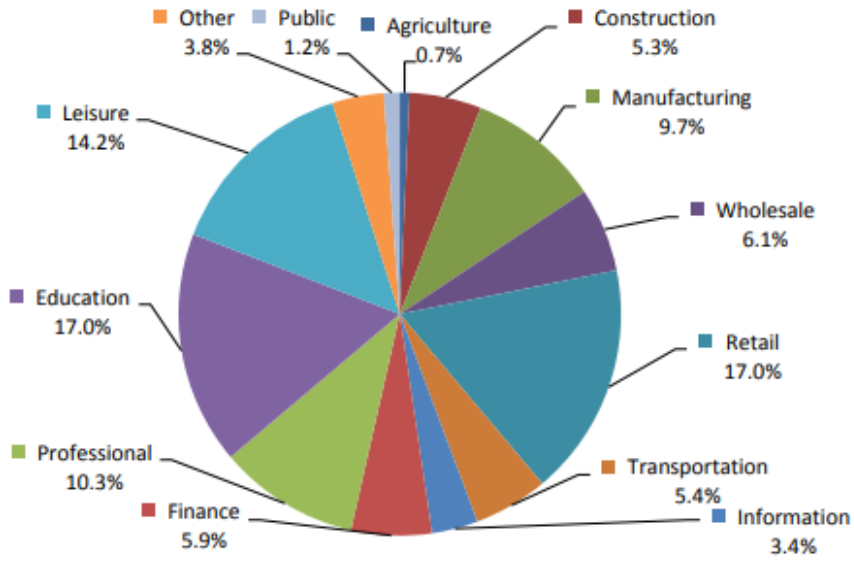
- Manufacturing: 1,285 jobs in 2017 (20.1% decrease)
- Construction: 1,629 jobs in 2017 (37.2% decrease)
- Professional/Management: 1,380 jobs in 2017 (20.3% decrease)

Figure 3.7 – Total Number of Jobs in the City of Temecula 2007-2017

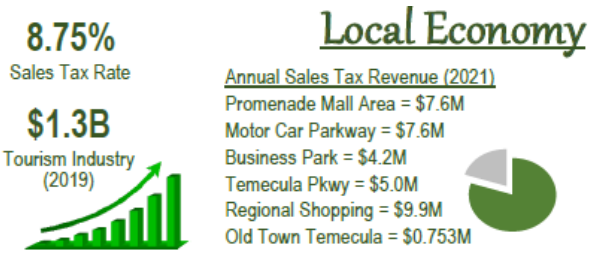


Sources: California Employment Development Department, 2007 - 2017; InfoGroup; & SCAG

Figure 3.8 – Total Number of Jobs in the City of Temecula by Industry 2007-2017

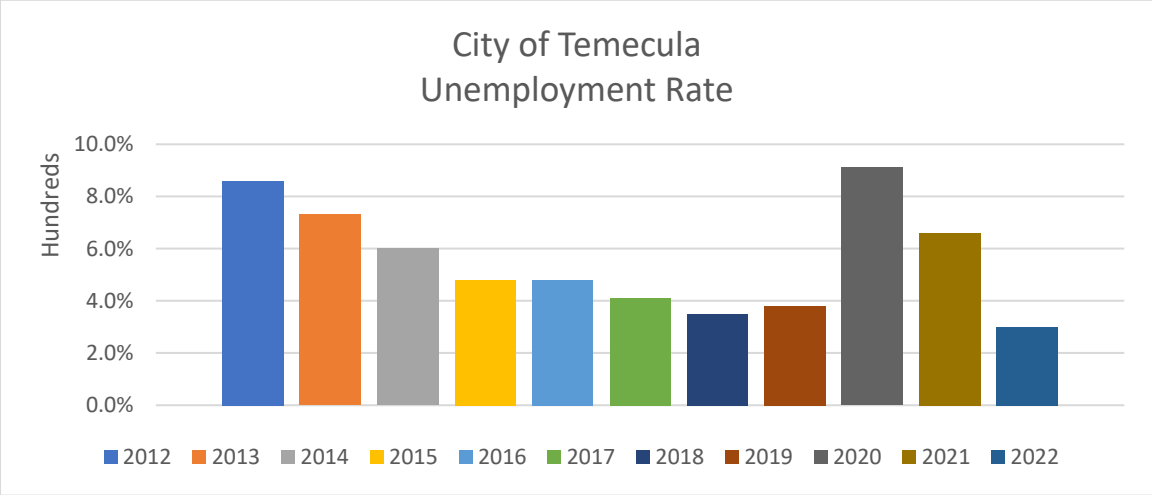


Sources: California Employment Development Department, 2018; InfoGroup; & SCAG



As presented in the Comprehensive Annual Financial Report, the City of Temecula's economy is based largely on the service and trade sectors (health care, retail trade, real estate) and light manufacturing. From 2007 to 2017, education jobs increased by 4% while retail was responsible for the largest job sector growth and accounting for 17% of the total jobs within the City. Since the last update, the vacancy rate for industrial and manufacturing space has declined significantly as the City has expanded its manufacturing and industrial base. During the height of COVID, the city's unemployment rate rose to a staggering 9.1% in 2020, up from 3.2% in 2019. According to the Bureau of Labor Statistics (Aug 2022), Temecula's unemployment rate has dropped back down to 3%, a change of 46.43% from the year before **(Figure 3.9).**

Figure 3.9 – Unemployment Rate, City of Temecula (2022)



3.6.1 Major Employers in Temecula and Surrounding Vicinity

Major industries with headquarters or division located within the City's boundaries (or in close proximity) include computer technology manufacturing, financial and insurance institutions, educational institutions, medical, and warehouse distribution centers as presented in **Table 3.2**.

Table 3.2 – Major Employers (2022)

Employer	Number of Employees City
Temecula Unified School District	3,000
Abbott Laboratories	1,500
Temecula Valley Hospital	1,045
Infineon Technologies	566
Walmart	538

Employer	Number of Employees City
Costco Wholesale	520
Southwest Traders Inc.	484
Milgard Manufacturing Inc.	468
The Scotts Company	456
FFF Enterprises	366

3.7 Land Use

Land use within the City of Temecula is guided by the General Plan, Zoning Laws, and Municipal Building Codes. The Land Use element of the General Plan supports opportunities to create a cohesive and attractive image for each district and neighborhood. The City of Temecula's Land Use Plan includes three (3) related parts: 1) description of allowed land uses; 2) overlay districts; and 3) the location of allowed land use. **Table 3.3** provides a summary of the permitted Land Uses and the maximum density.

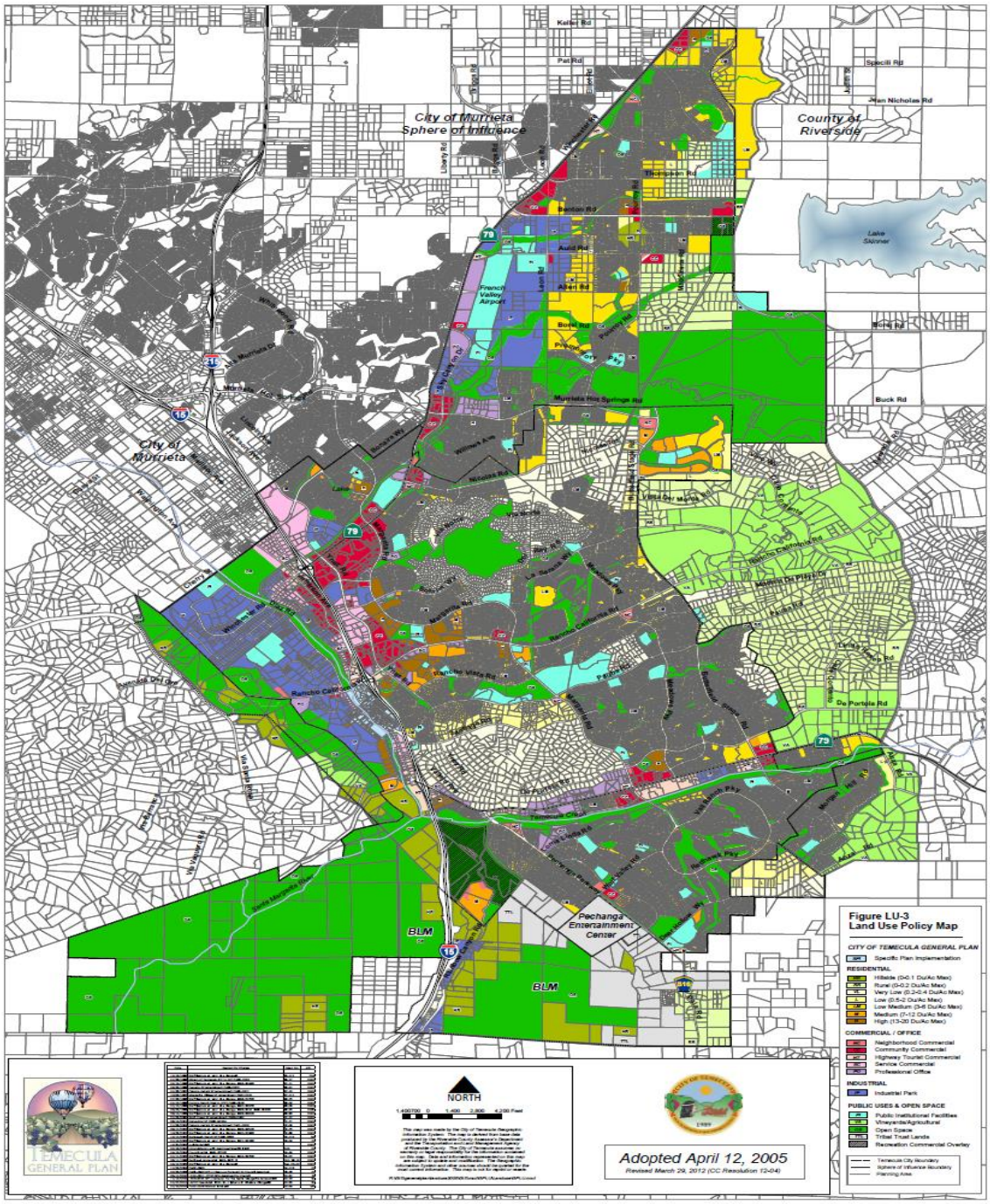
Table 3.3 – Land Use Categories (2022)

Land Use	Maximum Density
Residential	
Hillside	*0.1 dwelling unit/gross acre*
Rural	*0.2 dwelling unit/gross acre*
Very Low	*0.4 dwelling unit/gross acre*
Low	*2.0 dwelling unit/gross acre*
Low Medium	*6.0 dwelling unit/gross acre*
Medium	*12.0 dwelling unit/gross acre*
High	*20.0 dwelling unit/gross acre*
Office, Commercial, Industrial	
Neighborhood	*0.4 floor to area ratio*
Community	*1.0 floor to area ratio*
Highway/Tourist	*1.0 floor to area ratio*
Service	*1.5 floor to area ratio*
Professional Offices	*1.0 floor to area ratio*
Industrial	
Industrial Park	*1.5 floor to area ratio*
Public/Institutional and Open Space Use	
Public/Institutional	*0.7 floor to area ratio*
Vineyards/Agriculture	*0.2 dwelling unit/gross acre/0.1 floor to area ratio*
Open Space	*0.1 floor to area ratio*
Tribal Trust	*N/A*
Overlay Designation	
Mixed Use	*Varies*

3.7.1 Potential Land Use

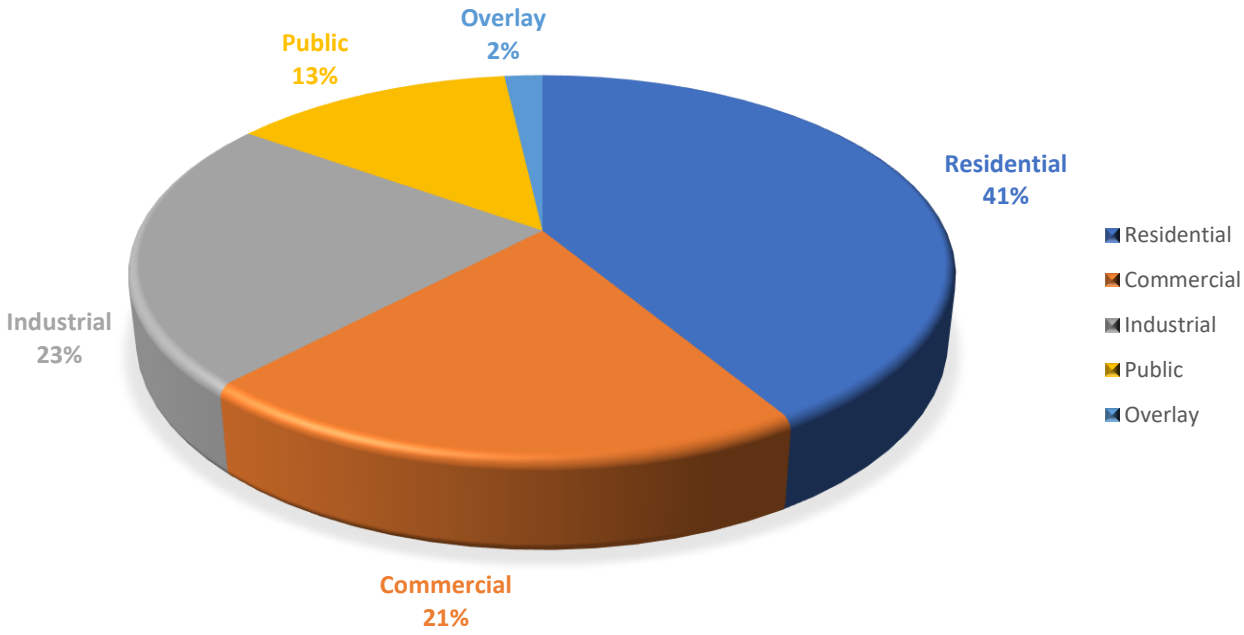
The Land Use in the City of Temecula consists of the following categories: Agriculture; Commercial; Industrial; Office; Residential; Public/Institutional; Open Space; and mixed use. As presented in the City of Temecula General Plan, the proposed distribution of the land uses within the City limits can be seen in **Figure 3.10**.

Figure 3.10 – General Plan Land Use Map (2012)



According to the City of Temecula General Plan, the breakdown of Land Use in the Planning Area (**Figure 3.11**) includes Residential (41%); Commercial (21%); Industrial (23%); Public/Institutional (13%); and Overlay (2%).

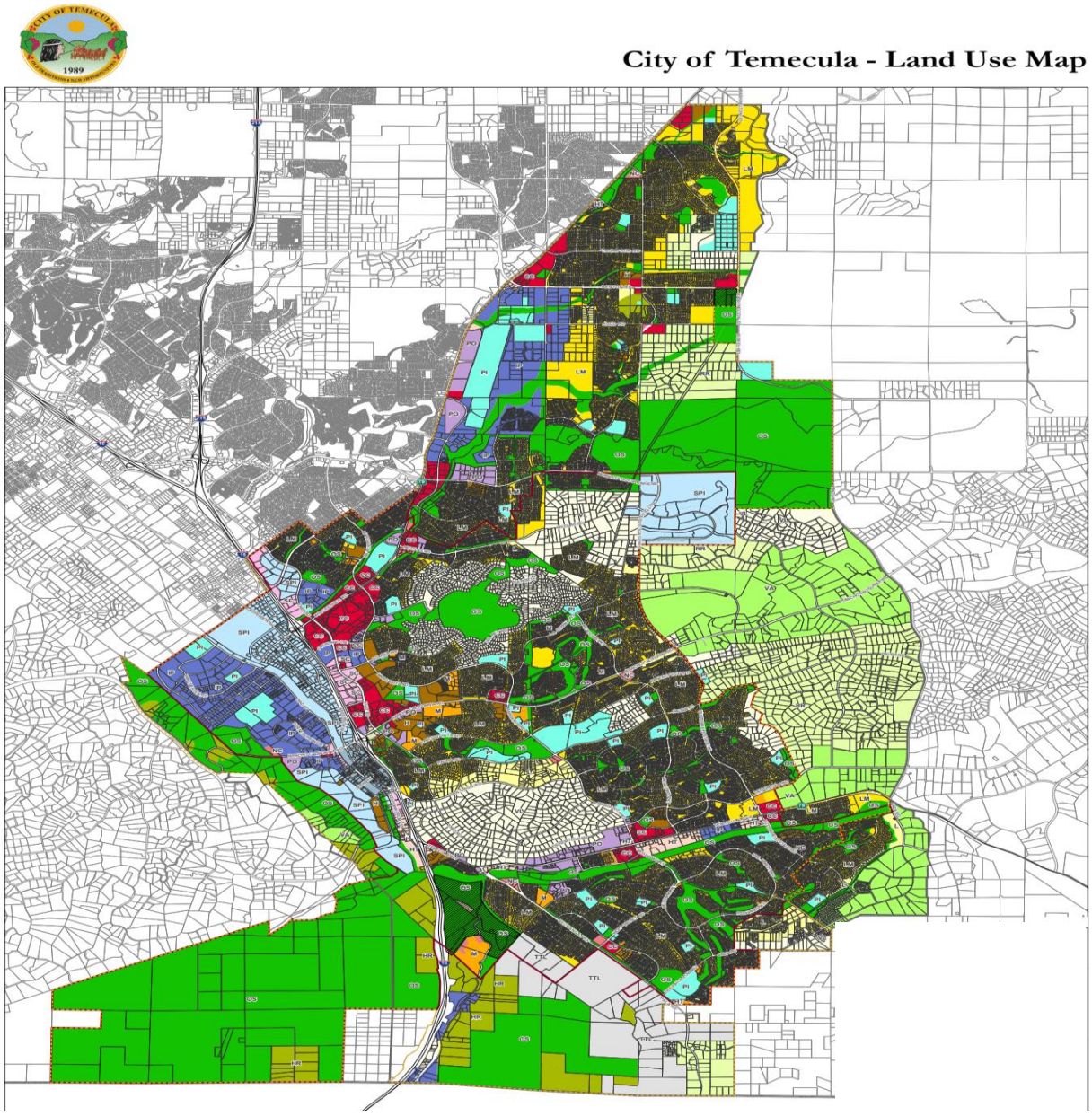
Figure 3.11 – Land Use Distribution (2022)



3.7.2 Existing Land Use

While the General Plan Land Use illustrates the potential build out of the City, **Figure 3.12** depicts the current, existing Land Use within Temecula.

Figure 3.12 – Existing Land Use Map (2020)



The LHMP also leveraged information from a city-sponsored GIS project. The GIS project improved model data to reflect what was currently "on-the-ground" and use it for flood and earthquake loss estimation analysis (damage) and exposure assessments for wildfire. **Table 3.4** presents the "improved" data for the City of Temecula.

Table 3.4 – Building Stock Inventory – City of Temecula (2022)

Building Stock	Building Count	Building Replacement Value ($1,000)
Residential	30,969	$13.43 Billion
Commercial	940	$4.056 Billion
Industrial	2,455	$697.01 Million
Vacant	485	$234.95 Million
Other	61	$387.06 Million
TOTAL	**34,910 ***	
Mfg. Housing	196	$16.68 Million
Precast Concrete	719	
Reinforced Masonry	9	
Steel (Pre-Engineered)	24	
Steel (Fireproof)	22	
URM	>5	
Wood Frame (Other)	483	
Wood Frame (SFR)	31,242	
Undisclosed	175	
TOTAL	**32,875 ***	

* Totals differ based on how units are counted in differing data sets

3.7.3 Development Trends

The residential growth of the City of Temecula will continue to expand as there are many people attracted to the City and the amenities it offers within the community. Steady growth has occurred within the City of Temecula since the adopted 2017 LHMP. As anticipated, light commercial growth will follow residential growth in these parts of the city, such as along the Jefferson Corridor. Heavy commercial and industrial growth will continue to develop along the western portions of the city, along the base of the hills making up the Santa Margarita Ecological Preserve and along Interstate 15 and Highway 79. All development occurring over the past few years was constructed in accordance with all local land use, building codes, zoning, and environmental requirements, and applicable State and Federal regulations. Because of this growth and rigorous project review over the past five (5) years, there have been no changes to the community's vulnerability.

Because much of the City of Temecula has already been developed, no major growth is anticipated over the next five (5) years. Projected development is expected to center around the Jefferson Corridor and the Promenade Mall. The City has prepared specific plans for both of these areas to ensure measured and safe development. The City anticipates adding more than 4,000 housing units by 2028, which will increase the population by more than 12,000 residents. Many of these units will be pedestrian oriented multi-family housing.

According to the 2005 General Plan (currently under revision), the projected population at buildout in the City of Temecula is approximately 118,900 persons. Buildout projections in the update to the General Plan only factor in the potential maximums based on Land Use and Zoning designations; it does not consider other factors that may limit growth (e.g., downturn in the economy, building material shortages, etc.). We must acknowledge that there will be a slight difference in the text above since the calculations were based upon the 2005 plan. Based on current population with the anticipated increase in residents by 2028, this will push the number upwards of 122,000.

3.8 Key Assets

A subset of the general building stock are key buildings the City will rely on when responding to and recovering from disaster events. Because of the role and importance of these facilities, the City needs to ensure the facilities are maintained and will be functional during and after disasters. Also, part of these key assets are systems and equipment used to perform certain functions and/or operations. The list of key assets includes, but are not limited to: Police Stations, Fire Stations, City Hall, Water facilities, Hospitals/Medical facilities, Community Centers, Maintenance Yards, Mass Care & Shelter Sites, Libraries and Schools. A list of key assets can be found in **Appendix 5**.

4. CAPABILITY ASSESSMENT

The purpose of this section is to capture the different resources available to the City of Temecula in support of mitigation. In an effort to efficiently demonstrate these resources, this section has been organized by: Personnel Resources; Mitigation Governance Resources; Technical Resources; and Fiscal Resources.

4.1 Personnel Resources

This sub section demonstration the City of Temecula's capability to dedicate and/or assign, long-term or short-term, workforce to mitigation efforts. There are four (4) primary ways that the City of Temecula can provide personnel resources: directly from the City of Temecula workforce; through contracts and volunteer organization; through mutual aid; and through existing partnerships.

4.1.1 Government

General Law City
Council-Manager Form of Government
Incorporated December 1, 1989

Temecula
The Heart of Southern California Wine Country

City Motto:
"Old Traditions,
New Opportunities"

The City of Temecula is a full service, general law city. The major services provided include Police, Fire, Water, Wastewater, Solid Waste, Engineering, Public Works, and Community Development. The City is governed by a five-member City Council, who also chair several Boards, Committees, and Commissions. The City Council is supported by the City Clerk's Office, the City Treasurer, and the City Manager. The City Manager oversees the City Manager's Office staff, Assistant City Manager, Deputy City Manager (Community Development), City Clerk, Finance, Police and Fire. The Assistant City Manager oversees the Directors of Community Services, Human Resources & Risk Management, and Information Technology. The organization structure of the City of Temecula is depicted at **Figures 4.1 and 4.2**.

Figure 4.1 - City of Temecula Organizational Structure (1) [2022]

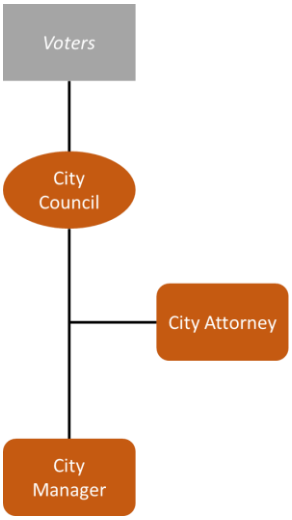
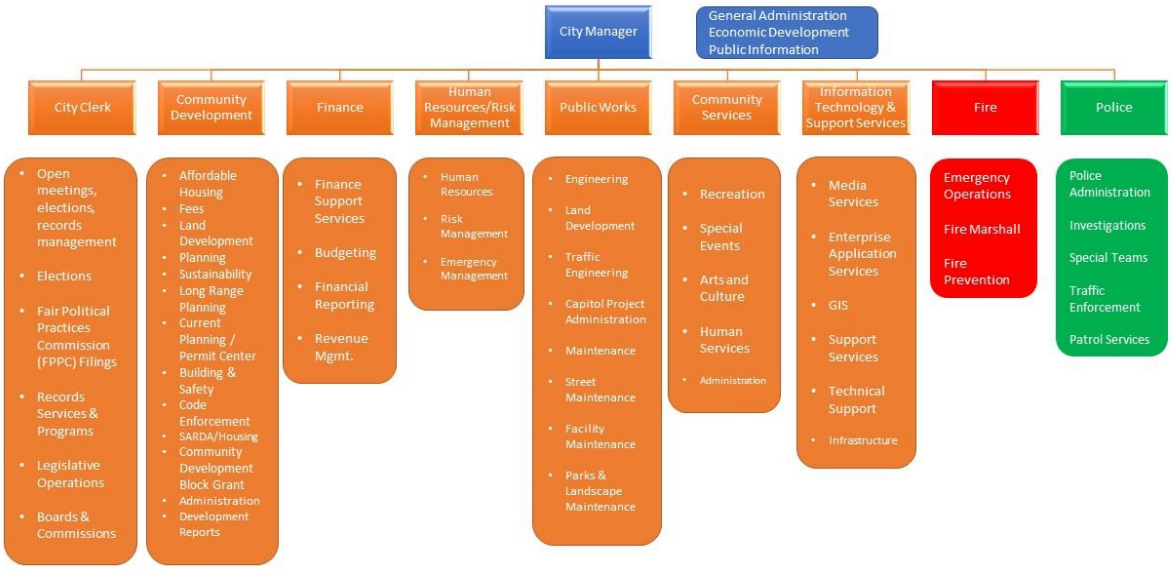


Figure 4.2 - City of Temecula Organizational Structure (2) [2022]



Legend

Blue: City Manager

Orange: City Staff

Red: CALFire (Contract)

Green: Riverside County Sheriff's Department (Contract)

While each department plays a role with regard to emergency preparedness and response, not all will have a direct role in mitigation. This section demonstrates the City of Temecula's capability

to dedicate and/or assign workforce to mitigation efforts. There are five (5) primary ways the City of Temecula can provide personnel resources: Directly from the City of Temecula government workforce, through contracts, through volunteer organizations, through mutual aid agreements, and through partnerships.

The City of Temecula 's major services include Police, Fire, Water, Wastewater, Solid Waste, Engineering, Public works and Community Development. The city is governed by a five-member City Council and the appointment to the position of Mayor and Mayor Pro Tempore is made on rotating basis among all Council Members. The City Manager oversees the Office of the City Manager Staff, Development Services, Management Services, Municipal Utilities and Engineering, Facilities and Community Services. The City of Temecula has established its first Office of Emergency Management nestled under the Human Resources and Risk Management Department. Below is a summary of the city departments and their roles:

- **Office of the City Clerk** - The City Clerk's office of the City of Temecula is committed to ethically serving the needs of the citizens of our community by: Bridging internal and external communication pathways, enhancing the public's trust in local government, ensuring the integrity of the participatory process, providing equal access to open and transparent government.
    - *Election and Voter Information* -The City of Temecula is a general law city with a five-member legislative body. Each of the five City Council Members are directly elected by the registered voters of their district. The positions of Mayor and Mayor Pro Tempore are ceremonial in nature and not directly elected. The City Council selects the Mayor and Mayor Pro Tempore amongst themselves and the positions typically serve a calendar year.
    - *Redistricting Information and Archives* -The City Council completed its redistricting process on March 8, 2022, selecting Map B below. This webpage is being preserved for 10 years for informational purposes pursuant to AB 849 (2019) and AB 1276 (2020) codified in Elections Code Section 21600 et seq.
    - *Public Records and Municipal Code* – Requests for public records, Fair Political Practices Commission Forms, and the Municipal Code can be accessed or made online and in person.
    - *Public Notices and Comment Opportunities*- Public comments for City Council meetings may be made in person at the meeting by submitting a speaker card or submitting electronically to CouncilComments@TemeculaCA.gov for inclusion into the record pursuant to the rules outlined on the agenda. Notices for upcoming public hearing dates are published on the city website.

- **Office of the City Manager** - The City Manager Department serves as the City's executive office responsible to the City Council for implementing their priorities and objectives and effectively delivering exceptional services, projects, and programs to the citizens of

Temecula. The City Manager is responsible for implementing all City Council policies, as guided by the Quality-of-Life Master Plan (QLMP), overseeing the preparation and administration of a balanced annual budget, providing organizational leadership to City staff and operations.

- *City Attorney* - The mission of the City Attorney's Office is to provide quality, timely, and cost-effective legal analysis, opinion, and advice to the City's elected officials, departments, appointed commissions and boards on a broad range of legal, administrative, legislative, and procedural matters, including application of constitutional, statutory, administrative, and local government law. The City Attorney's Office strives to effectively provide timely research, analysis, evaluation, and drafting of legal and other documents necessary to the accomplishment of the City's municipal functions and goals. The City Attorney's mission includes representation of the city in judicial, administrative, and appellate proceedings in an efficient and cost-effective manner.
- *Community Service Funding Grants* - The City's annual nonprofit organization grant program entitled Community Service Funding has historically awarded up to $5,000 per nonprofit organization, for a total of $100,000 budgeted annually. This Fiscal Year, beginning July 1, 2022, and next Fiscal Year, beginning July 1, 2023, the program will be revitalized as Community Service Funding - Reinvestment in Temecula and the budgeted amount will be increased by $1 million to $1.1 million each year, for a total of $2.2 million over two years. The program will be administered by the City Manager's Office and eligible nonprofit organizations are invited to apply for a grant up to $50,000 each year to fund services or programs that serve Temecula residents.
- *City News and Updates* - The City Manager publishes a monthly e-newsletters to provide brief, informative updates intended to keep Temecula residents and businesses engaged with City Hall, and informed about current citywide projects, programs, and events.
- *Citizen Survey* -The Community Opinion Survey is a study designed to provide a statistically reliable understanding of citizen satisfaction, priorities, and concerns on a variety of services that the city provides. The survey results help to ensure that the City's priorities and goals remain aligned with citizen input
- *Economic Development* - Our mission is to create a wide spectrum of job opportunities for Temecula residents by expanding the City's economic base and increasing local economic activity, and to generate new tax revenues for essential public service by expanding the City's tax base.
- *Public Information* - In person, on paper and digitally, the City of Temecula Office of Public Information Team is committed to disseminating timely and factual information to all Temecula residents and businesses, the Press, and all other parties while adhering to our Core Values as outlined in the Quality-of-Life Master Plan.

- Temecula TV: Channel 3-The Temecula TV Program is a comprehensive effort focused on providing public information in a timely manner as well as creating opportunities to educate our residents about local government, upcoming projects, and services.
- Social Networking - Find out the latest information about City of Temecula initiatives, opportunities, and fun things to do in the heart of Southern California Wine Country.
- Inside Temecula Newsletter - Annual newsletter published by the City of Temecula and mailed to residents and businesses within the City of Temecula.
- City's Mobile App - The City of Temecula App is designed to enhance citizen engagement by streamlining access to City information. In addition to providing information, the City of Temecula App allows access to City services. Residents will have the ability to report non-emergency issues to the City at any time of the day or night. Issues such as potholes, graffiti, homeless concerns and more can be reported quickly and easily using photographs, location, and other information about the issue. Once the issue is submitted, staff is notified, and the resident can track the status of their issue through the app.

- **Community Development -** Community Development is a multi-disciplinary department providing a range of planning and development services to appointed boards, citizens, city departments, commissions, elected officials. This is accomplished by promoting positive community and economic development within the city and includes adequate affordable housing and providing social service programs.
    - *Affordable Housing* - The City of Temecula has a variety of affordable housing opportunities for all economic segments of the community. By partnering with government agencies, non-profit organizations, and private property owners, we work to create safe and affordable housing for all residents of our community.
    - *Building and Safety* - The Building and Safety Division is responsible for the administration and enforcement of all applicable regulatory clearances, codes and standards, fees, plan review, inspections and application of City, State, and Federal laws and ordinances.
    - *Planning Department* - The primary goal of the Planning Department is to implement orderly and compatible development which creates livable neighborhoods, supports economic development, and sustains a high quality of life for Temecula's citizens. The Planning Department is responsible for zoning, land use entitlements, current and long range planning, the General Plan, and California Environmental Quality Act (CEQA).

- *CEQA* - The California Environmental Quality Act (CEQA) is a state law that establishes a procedure for all California public agencies such as the City of Temecula for evaluating the environmental effects of a proposed project.
- *Long Range Planning* - On June 27, 2012, Governor Brown signed into law Assembly Bill 1484 (AB 1484), a budget trailer bill that made substantial changes to the redevelopment agency dissolution process implemented by Assembly Bill 1X 26. One of the key components of AB 1484 is the requirement that all successor agencies develop a Long-Range Property Management Plan that governs the disposition and use of the former non-housing redevelopment agency properties.
- *SARDA* - In June 2011, ABXI 26 dissolved all California redevelopment agencies, effective October 1, 2011. This legislation prevents redevelopment agencies, such as the Temecula Redevelopment Agency, from engaging in new activities. It also outlined a process for winding down the Agency's financial affairs.
- *Code Enforcement* - The City of Temecula Code Enforcement team works with residents, property owners, business owners, and other partners to mitigate and resolve negative impacts in our community. Through voluntary compliance and cooperation, our Code Enforcement team works to address potential issues and ultimately make Temecula an even better place to live.
- *Community Development Block Grants (CDBG)* - The City of Temecula receives Community Development Block Grant (CDBG) funds from the U.S. Department of Housing and Urban Development (HUD) each year. CDBG funds are provided by the federal government to help people with extremely low, low, and moderate incomes and those who may be particularly vulnerable (for example people with disabilities). Assistance provided by CDBG funds is targeted toward affordable housing, establishing suitable living environments, and expanding opportunities for lower income residents. CDBG funds are broken down into three categories:

    1. Capital Improvements – physical improvements to the private or public built environment to support low income and protected populations (e.g., people with disabilities).

    2. Public Service Allocation – funds to support other organizations or nonprofits (known as public service providers) that serve low income and/or protected populations.

    3. Administrative Funds – funds to administer the CDBG program and enforce the federal government's stringent regulatory requirements.

CDBG funds follow a regular cycle and process that ensures analysis, data collection, community involvement, transparency, and performance measurement.

- *Development Reports* - Building Permits Issued, Planning Activity Report.

- *Fees* - Budget Management, Business Licenses, Debt Management, Fees, Financial Reports, Property Tax, Purchasing & Contract Administration, Transient Occupancy Tax.
- *Inspections* - Building Inspections, Fire Inspections, Land Development Inspections, Planning/Landscape Inspections.
- *Land Development* - The Land Development Division in the Department of Public Works provides for the review and engineering approval of all proposed private developments and residential/commercial subdivisions within City limits to ensure compliance with City and engineering standards, codes, ordinances, policies, and procedures as well as all applicable state and federal regulations.
- *Planning* - The primary goal of the Planning Department is to implement orderly and compatible development which creates livable neighborhoods, supports economic development, and sustains a high quality of life for Temecula's citizens.
- *Sustainability* - Temecula's Sustainability Plan was adopted by the City Council on June 22, 2010. This plan is a comprehensive program that includes 8 areas of focus: Air Resources, Community Outreach, Energy, Green Buildings, Open Space, Transportation, Waste Management, Water Resources.

- **Community Services** - The Community Services Department is dedicated to providing an award-winning complement of recreational and cultural programs, community and human services and special events activities aimed at enhancing the high quality of life for our youth, teens, adults, seniors, and special needs population - We create community through people, parks, and programs.

- **Finance** - The Finance Department serves as the City's fiscal custodian and is responsible for managing the Accounting, Purchasing and Budgeting operations. The Department consists of 4 divisions:
  - Budget Management
  - Finance Support Services
    - Debt Administration
    - Procurement
  - Financial Reporting
  - Revenue Management
  - *Budget Management* - The Annual Operating Budget is developed after a considerable review process. Departmental budget submittals are prepared and reviewed by line-item in connection with projected revenues. Detailed measurable performance objectives are developed utilizing a unified set of Citywide strategic goals. Expenditure and 5-year revenue projections are developed to identify the future impacts of proposed staffing and program changes, as well as the impact of proposed capital improvement projects. The

result is that this document is a conservative, balanced budget that provides for quality services while effectively utilizing available resources.

- The CIP Budget document is to serve as a planning tool, which coordinates the financing and scheduling of major projects undertaken by the city. The CIP Budget document has been prepared in accordance with generally accepted accounting principles. This document is dynamic and, consequently, must be revised annually to address changing needs, priorities, and financial conditions. The capital improvements presented **in** this document are the City's major projects, which exceed $25,000 in cost, have long-term life spans, and are generally non-recurring. These projects include land and right of way acquisition, design, construction or rehabilitation of public buildings or facilities, public infrastructure design and construction, park design and construction, and redevelopment projects.

- *Business Licenses and Property Taxes* - Guides and manages the process of obtaining a business license and/or paying property taxes in Temecula.
- *Debt Management* - It is the mission of the Debt Management Division to effectively manage all of the City, Redevelopment Agency, and Temecula Public Financing Authority debt obligations by investing available funds responsibly, evaluating refinancing opportunities to save the City money and lower taxes on its citizens, and to provide outstanding customer service to all property owners, developers, and consultants while ensuring that all requirements are met for all debt obligations administered by the City and its legal authorities.
- *Financial Reports* - Annual Comprehensive Financial Report (ACFR) - The Annual Comprehensive Financial Report (ACFR) contains information that can be utilized to evaluate the City's financial condition and its operational and fiscal accountability for the year. The ACFR consists of a comprehensive summary of the City's finances and other relevant information for the audit year, including economic overviews, financial analyses, financial statement note disclosures, budgetary and other compliance schedules, and other statistical data. The ACFR is prepared in conformity with accounting principles generally accepted in the United States of America and is audited by the City's independent auditors.

The City participates in the Certificate of Achievement for Excellence in Financial Reporting Program established by the Government Finance Officers Association. This is the highest recognition Program in the area of government accounting and financial reporting. The City has received the Certificate of Achievement for Excellence in Financial Reporting annually since fiscal year 1991.

- **Fire Department (CALFire/Riverside County Fire Department – Contracted Services)** - The Temecula Fire Department is dedicated to the protection of life, property, and the environment. This is accomplished by following a comprehensive emergency service response program that utilizes a highly trained work force, progressive technology, modern equipment, and responsible fiscal management. The Temecula Fire Department is comprised of one (1) Division Chief, two (2) Battalion Chiefs and 60 firefighting personnel that serve from five (5) fire stations located within the city limits. Plan review and inspection services for development and construction throughout the city is provided by six (6) Fire Prevention staff members located at City Hall. There are 3 Administrative staff members that provide support for the implementation and management of the Temecula Fire Department. The Temecula Division encompasses 3 Riverside County Fire Department stations for a total of 8 stations within the Temecula Division.
    - *Community Programs* -The City of Temecula's Fire Department works in cooperation with other organizations to bring its citizens the most current fire safety information.
    - *Fire Prevention* - The mission of the Temecula Fire Prevention Bureau is to preserve and enhance the quality of life for the citizens of Temecula through the application of a comprehensive fire and hazard prevention program. This mission is carried out through the pursuit of the following goals: Conduct public information and education programs that emphasize fire and life safety and have a strong focus on fire prevention. Ensure a reasonable degree of life safety exists in all buildings through enforcement of applicable codes, regulations, and standards.
    - *Public Training Opportunities*

      1. CPR/AED Course - This course teaches Cardiopulmonary Resuscitation (CPR), the use of an Automated External Defibrillator (AED), and relief of Foreign Body Airway Obstruction (FBAO) for adult, child, and infant victims.

      2. First Aid Classes - The Heartsaver First Aid course, developed using the same evidence-based process as all American Heart Association courses, provides training in basic first-aid procedures (including the first-aid skills recommended by OSHA) in a format that can be delivered in a single day. Also offered are elective modules in CPR, AED, and environmental emergencies.

      3. Health Care Provider CPR-The Basic Life Support (BLS) for Healthcare Providers Course is designed to provide a wide variety of healthcare professionals the ability to recognize several life-threatening emergencies, proved CPR, use an AED, and relieve choking in a safe, timely and effective manner.

      4. Pediatric First Aid-The City is pleased to offer American Heart Association, Heartsaver Pediatric First Aid courses. This class is designed to meet the regulatory and credentialed training requirements for childcare workers in all 50 states.

- **Human Resources** - The Human Resources Department is responsible for administering Human Resources policies, procedures, and practices. They provide vision and leadership to promote an environment that values excellence, diversity, creativity, and productivity at all levels of the organization.
    - *Risk Management Division* - The mission of the Risk Management Division is to identify, assess, and manage the impacts of operational risk on city government business by having policies in place to protect City personnel, property, and liabilities.
    - *Office of Emergency Management* - The Office of Emergency Management provides Emergency Management (EM) services to the City of Temecula through the provision of an Emergency Manager. The Emergency Manager is responsible for the development of the City's disaster plans, disaster training and exercise program while providing direct oversight of the City's Emergency Operations Center (EOC).

- **Information Technology & Support Services** - The Information Technology department serves our community by researching, developing, implementing, and supporting effective and innovative use of technology through teamwork, collaboration, innovation, and accountability to our departmental partners. Responsibilities include planning, developing, implementing, supporting the technology systems and networks and use of Media Services to increase community involvement throughout the City of Temecula.

  The IT Department is divided into the following 6 divisions:

    - Enterprise Application Services (EAS)
    - Geographic Information Systems (GIS)
    - Media Services
    - Network Infrastructure
    - Tech Support and Support Services

- **Temecula Police Department (Riverside County Sheriff's Department – Contracted Services)** - The Department employs officers at the rate of about 1 Officer per 1,063 residents. In addition to the main station, there are two substations available to the public for police services at the Promenade Mall Substation, and a second location in Old Town. The Department has a Promenade Mall Team, Traffic Team, Investigation Bureau, SET/Gang team, a Homeless Outreach Team, School Resource Officers, Volunteers, and a METRO Team.

- **Public Works** - The mission of the Public Works Department is to provide quality services that support the infrastructure demands of the City of Temecula and enhance the safety, welfare and aesthetic environment of the residents, businesses, and visitors. This is

accomplished through the development and maintenance of City streets, sidewalks, traffic systems, bike lanes, parks, buildings, trails, and drainage facilities; professional engineering oversight of public and private improvement projects; and implementation of erosion/sediment controls and storm water quality measures.

- *Administration & Special Projects* - The Administration and Special Projects Program within the Public Works Department provides coordination with other agencies and organizations involved in transportation, flood control, sanitary sewer, and water distribution.
  - Responsibilities:
    - Representing the City at technical advisory committee meetings involving the Riverside County Transportation Commission and the Western Riverside Council of Governments on issues concerning federal funding, air quality, and congestion management
    - Coordinating all programs within the Public Works Department
    - Being involved in the Water Planning Task Force, various Santa Margarita Watershed groups, and the Joint Temecula/Murrieta Traffic Committee
    - Tracking the division budget
- *Capital Improvement Projects (CIP)* - The Capital Improvement Division (CIP) administers the City's Five-Year Capital Improvement Program, which consists of projects for the construction of City facilities, roads, traffic signals, parks, and community centers. The primary sources of funding for the CIP are Developer Impact Fees (DIF), Measure A, General Fund, and grants from various sources, including local, state, and federal agencies.
  - The CIP Division is responsible for the project planning, environmental documentation, design, and property acquisition, for streets, bridges, facilities, and park projects. The Division also manages the bidding process for Capital Improvement Projects, as well as construction inspection duties. All functions are done in coordination with various agencies, including utility companies, other departments with the city, Caltrans, and other governmental agencies.
- *Land Development* - The Land Development Division in the Department of Public Works provides for the review and engineering approval of all proposed private developments and residential/commercial subdivisions within City limits to ensure compliance with City and engineering standards, codes, ordinances, policies, and procedures as well as all applicable state and federal regulations.
  - The responsibilities of the Land Development Division include a vast range of engineering reviews and inspections ranging from “conceptual design” engineering reviews to ultimately, Public Works inspectors’ clearance for

issuance of a certificate of occupancy. These engineering responsibilities include, but are not limited to, the following:

- Administer the Land Development program
- Collect, and ultimately release, the required securities for work within private developments and public rights-of-way
- Inspect all private developments during construction
- Issue Land Development permits including grading, haul route and encroachment permits
- Provide complete and comprehensive Land Development comments (i.e., engineering, water quality, etc.) during the Development Services' Pre-Application process
- Provide complete and comprehensive Public Works' Conditions of Approval for private developments
- Provide excellent customer service to the general public regarding Land Development concerns and
- Review, plan check and recommend approval of all private projects (including commercial, industrial, and residential developments, tract/parcel maps, legal documentation, etc.) within the City

  - The Land Development Division strives to accomplish these responsibilities for the benefit of the community, local businesses, neighborhoods, and its residents, with minimal disruptions and inconveniences.

- *Traffic Engineering* - The Traffic Engineering Division is responsible for day-to-day traffic operations, safety issues, and future transportation needs.
  - Responsibilities
    - Collecting and analyzing traffic volume data
    - Establishing future traffic signal priorities
    - Maintaining traffic devices inventories
    - Monitoring traffic and implementing changes from traffic operation center
    - Monitoring, maintaining, and adjusting timing of existing traffic signals
    - Performing speed surveys
    - Responding to citizens' requests for traffic control devices
    - Reviewing accident reports
    - Reviewing all traffic control plans for construction zones
    - Reviewing all traffic signal, signing, and striping plans
    - Reviewing private development plans for traffic impacts and mitigation measures
    - Technical support of the Public Traffic/Safety Commission

- *TRIP Report* - The purpose of the TRIP Report (Traffic Restrictions in Progress) is to advise citizens of conditions affecting traffic flow within the City.
- *Water Quality & Storm Water* - The City of Temecula is committed to improving water quality by implementing programs that systematically reduce and eliminate pollutants from urban runoff before reaching our local creeks. These creeks historically receive untreated runoff through numerous storm-drain systems throughout the city. Flows from each creek drain into the Santa Margarita River, which ultimately discharges into the Pacific Ocean.

4.1.2 Contractors

The City of Temecula is able to hire contract employees. A contract employee is an individual retained by the City for a predetermined time and price. Benefits of hiring contract employees include:

- Ability to hire workers for short-term projects, on an as needed basis
- Ability to hire highly skilled individuals for which there is no one in-house qualifications
  - Little to no downtime as noticed with onboarding new staff
- Lower overhead operating costs
  - Do not need to pay taxes (social security, workers compensation) or provide benefits (unemployment, health, sick leave, vacation time or retirement)
  - Usually do not need to provide office space or equipment

Disadvantages of hiring contract employees include:

- May work for several employers simultaneously and may not be available when needed
- Integrating with City staff can be difficult because of remote working and unfamiliar with city organization and resources

4.1.3 Volunteers

The City of Temecula has the ability to leverage volunteer workers. A volunteer worker generally means anyone who agrees to work for free, California labor laws narrow in on a more specific definition of a volunteer. According to California Labor Code Section 1720.4, which defines volunteering in California's labor law, an individual must perform services freely and without coercion for a civic, humanitarian, or charitable purpose to be considered a volunteer. The legally volunteer, an individual must offer his/her services to a public agency or non-profit organization. Businesses may not legally utilize volunteers.

California Labor Law permits the extension of workers' compensation to volunteers during their time in service. Workers' compensation is a type of insurance that covers employees in the event of industrial or occupational injury. Often, public agencies will grant volunteers insurance protection under workers' compensation to help encourage volunteering and avoid the potential for lawsuits. In order to be deemed an employee for workers' compensation, the organization –

whether public or private – usually must declare a volunteer as such prior to an injury incident. Under the law, this declaration should be in writing through a resolution of the governing body of the organization or agency, such as its board of directors.

Unpaid internships are another volunteer opportunity the City can leverage; however, some criteria must be met California Labor Relations Department has provided some clarification regarding unpaid internships. Unpaid internships are a type of volunteering that is intended to provide educational opportunities – and in some cases, school credit – for volunteers. As of April of 2010, the California Labor Relations Department applies six (6) criteria based on federal law when determining the legality of an unpaid internship: 1) the experience must resemble those of vocational schools, 2) the experience is primarily for the benefit of the intern, 3) the intern does not displace a regular employee, 4) the intern's services provide no immediate advantage to the employer, 5) the intern is not entitled to a job at the end of his/her internship, and 6) both the employer and intern have a mutual understanding that no compensation is expected for the internship.

4.1.4 Mutual Aid

The City of Temecula has several mutual aid agreements, most focused on public safety and emergency management. An emergency management mutual aid agreement defines and formalizes the arrangement to lend assistance across jurisdictional boundaries in situations that have exhausted internal resources or there is a need for increased capabilities. Some of the City of Temecula mutual aid agreements are with the State of California. This enables the state to request or fulfill requests for mutual aid from one region to another; enabling locals to maintain their readiness in their region.

4.1.5 Partnerships

The City of Temecula has the ability to enter into partnerships with surrounding cities and counties, outside agencies, special districts, and companies. Partnerships are an arrangement where parties agree to cooperate to advance their mutual interests. In most cases, partnerships are done through a Memorandum of Understanding (MOU) outlining the scope of work, the mission, and roles and responsibilities.

4.2 Mitigation Governance Resources

There are a variety of governance that are directly related to or influence mitigation efforts. This governance falls under: 1) Laws, Regulations, Codes, and Ordinances; 2) Plans, Studies, and Reports; and 3) Programs. While the intent is to capture city-level information, there are some state-level and/or county-level information that has direct implications on the city. As can be expected, the city has greater ability to revise, adjust, add, and remove governance to better reflect the needs of governance and its sponsors. The city regularly assesses and evaluates the effectiveness of its governance and incorporates changes to help meet the intended goal. The city does provide input and comments on governance sponsored by other organizations but

because the intended audience of the governance is usually greater than the city, it is not always incorporated. To ensure that there is a comprehensive list of governance, relevant state-level and/or county-level information is also captured.

4.2.1 Laws, Regulations, Codes, and Ordinances

Title: **Senate Bill (SB) 379**
Sponsor: State of California, Senate
Description: In 2017, the California State Senate approved Senate Bill (SB) 379 which requires the General Plan's Safety Element to address climate adaptation and resilience strategies. This must be done after the next revision to the Local Hazard Mitigation Plan (LHMP) or by January 2022 if the city/county does not have an LHMP. If the jurisdiction has an approved and adopted LHMP it can be summarized and incorporated by reference into the Safety Element.

Title: **Assembly Bill (AB) 477**
Sponsor: State of California, Assembly
Description: In 2019, the California State Assembly approved Assembly Bill (AB) 477. AB477 requires local jurisdictions (cities/counties) to include representatives from the access and functional needs population in the next update of the Emergency Plan. The primary focus areas include, but are not limited to emergency communications, emergency evacuations, and emergency sheltering.

Title: **Assembly Bill (AB) 2140**
Sponsor: State of California, Assembly
Description: In 2006, the California State Assembly approved Assembly Bill (AB) 2140. AB 2140 enables the state of California to provide greater than 75% of the eligible state share if a local jurisdiction (city/county) has an approved and adopted LHMP as part of the General Plan's Safety Element.

Title: **California Building Codes**
Sponsor: State of California
Description: The City abides by and is governed by California 2019 Building Codes including sections on electric, plumbing, mechanical, green, and residential requirements, standards, and regulations.

Title: **City of Temecula Municipal Code**
Sponsor: City of Temecula
Description: The City abides by and is governed by its Municipal Code to provide a scheme of organization for the classification and grouping of ordinances which the City Council may adopt. The Temecula Municipal code is made up of all ordinances that are of a general and permanent nature.

Title: **Riverside County Building Codes**
Sponsor: Riverside County
Description: State law requires that all cities and counties in California enforce the building codes as mandated by the California Building Standards Commission. The County of Riverside has adopted by ordinance the California Building Code, 2019 edition, as modified by the State of California.

Title: **California Zoning Ordinance**
Sponsor: State of California
Description: The City has adopted a Zoning Ordinances as part of the General Plan process. These ordinances regulate land use and map the official land use and hazard overlay districts, to include safety hazard and environmental protection areas.

Title: **Model Water Efficient Landscape Ordinance**
Sponsor: State of California
Description: Over the years, the State of California has been promoting water conservation for all new development within the State. In a drought-prone California, where approximately 60 percent of all residential water is used in landscape applications, California lawmakers have adopted such legislation as Assembly Bill (AB) 325 (1990), AB 2717 (2004), and AB 1881 (2006) that outline, and in some instances mandate, the practice of water conservation in landscape applications. As part of AB 325, the Department of Water Resources (DWR) prepare and promote the State's first Model Water Efficient Landscape Ordinance (MWELO). In 2006, State lawmakers adopted AB 1881, which gave guidelines and timelines for revision of the State's MWELO and mandated that every city, county, or other agency within the State of California adopt the State's revised MWELO or be in compliance with it through their own ordinance, by January 2010.

Title: **Emergency Planning and Right to Know Act**
Sponsor: State of California
Description: The Emergency Planning and Community Right-to-Know Act (EPCRA) was created to help communities plan for emergencies involving hazardous substances. EPCRA has four (4) major provisions: one (1) deals with emergency planning and three (3) deal with chemical reporting. EPCRA local emergency planning requirements (Sections 301 to 303) stipulate that every community in the United States must be part of a comprehensive emergency response plan. Facilities are required to participate in the planning process. State Emergency Response Commissions (SERCs) oversee the implementation of EPCRA requirements in each state.

4.2.2 Plans, Reports, Studies

Title: **General Plan**
Sponsor: City of Temecula
Description: All cities and counties in California are required to adopt a General Plan that lays out major policy and development goals. The General Plan includes elements, which are sections that address a variety of important topics. The element most closely related to Mitigation is the Safety Element, which focuses on natural, technological, and other human caused hazards. The aim of the Safety Element is to reduce the potential risk of death, injury, property damage, and economic and social dislocation resulting from fires, floods, earthquakes, landslides, and other hazards. The Safety Element identifies all significant hazards and risks in a community and defines policies to mitigate and respond to those risks. In addition to ensuring that the General Plan incorporates information from the LHMP into the Safety Element, the General Plan is also reviewed while producing the LHMP to ensure goals, objectives, and mitigation actions are compatible and in sync with each other.

Title: **Quality of Life Master Plan**
Sponsor: City of Temecula
Description: A framework of goals and performance measures that the City uses in its planning and budgeting process. Each City Department sets annual service goals in the budgeting process and is measured against those goals during the following year's budget process. In addition, each project included in the Capital Improvement Program is aligned with the QLMP Core Values and must be justified in terms of how it helps to achieve the Core Value objectives.

Title: **Emergency Operations Plan**
Sponsor: City of Temecula
Description: An all-hazards plan describing how the City will organize and respond to incidents. It is based on and is compatible with the laws, regulations, plans, and policies listed above. The Emergency Operations Plan (EOP) also addresses the integration and coordination of resources and activities with other Governmental Agencies, Special Districts, and private-sector partners.

Title: **Old Town Specific Plan**
Sponsor: City of Temecula
Description: The Old Town Specific Plan was adopted by the City Council in February of 1994. Since its adoption, the Specific Plan has been revised six (6) times. Old town is but a part, albeit an important part, of this larger community. New development surrounds the historic town site and while many of its historic structures have been torn down or moved, other still remain as a reminder of what Temecula was, and more importantly, as an inspiration for what it can be in the future. Based upon the visioning process, Old Town is envisioned to develop a vibrant pedestrian-friendly, walkable downtown destination in the heart of Temecula's historic district. The ambiance of Old Town will be created by a vibrant streetscape which includes buildings

reminiscent of architecture from the 1880's through the 1940's. The distinct charm of the Old Town area will attract a wide range of interest throughout the community, the region, and beyond.

Title: Uptown Temecula Specific Plan
Sponsor: City of Temecula
Description: The urban neighborhoods in Uptown Temecula are located within walking distance to a hub of quality and thriving business, technologically innovative employment centers, and higher education facilities. The vibe of Uptown Temecula fosters creativity, stimulates innovation, and provides a place for community members to work, learn, and refashion the world around them. In addition to expanding its service to traditional weekend-oriented tourism, the stronger presence of businesses and corporations fill hotel rooms and support small conventions and events that occur during the week. Uptown Temecula is designed and built from the collective, shared efforts of public participation, private development, and public investments. These efforts are driven by a community-based vision and priorities for strategic, feasible, and flexible revitalization.

Title: Altair Specific Plan
Sponsor: City of Temecula
Description: Altair is envisioned as the complimentary residential component to the Old Town Specific Plan area of the City of Temecula. The two plan areas are integral to a successful urban mixed-use environment. Altair will provide up to 1,750 new homes for a range of household sizes, incomes, and demographics. The homes of Altair will be a pedestrian-oriented community within walking distance of cycling distance of Old Town. The dense design will attract residents looking for an urban lifestyle, a demographic that tends to patronize the type of restaurants and shops already in Old Town.

Title: Mass Care & Shelter Plan
Sponsor: City of Temecula
Description: This plan describes the actions, roles, and responsibilities of coordinating and participating organizations within the City in their endeavor to manage the care and shelter process before, during, and after the emergency. This plan addresses only general strategies used for any emergency in general, and the EOC coordination efforts specifically. Tactical actions that are taken at the shelter or evacuation sites are described in individual Standard Operating Procedures (SOPs).

Title: Growth Management Plan
Sponsor: City of Temecula
Description: On March 21, 2000, the City Council adopted the Growth Management Plan (GMP). The GMP provided a formal policy to implement growth management measures for the City of Temecula. All projects are reviewed for compliance with the Growth Management Plan. Projects

that involve Zone Changes, General Plan Amendments, Planned Development Overlays, Planned Development Overlay Amendments, Specific Plans, Specific Plan Amendments, Area Plans, and Community Plans have rigorous expectations in order to meet the goals and policies of the GMP.

Title: **City of Temecula Sustainability Plan**
Sponsor: City of Temecula
Description: Adopted by the City Council in June of 2010, the city's sustainability plan is a comprehensive framework for sustainability policy related to air resources, community outreach, energy, green buildings, open space, transportation, waste management and water resources. The plan involves strategies to conserve water and energy, encourage green building, expand alternative transportation opportunities, increase open space, promote better air quality and reduce waste.

4.2.3 Programs

The City of Temecula currently has the following mitigation programs to address the top hazards which are transportation failures, fires, and flooding. It should be noted that some of these programs were listed under Mitigation Strategy under the previous LHMP. However, because they are ongoing programs, they have since been removed from the Mitigation Strategy section and only captured here.

Title: **Earthquake Program**
Sponsor: City of Temecula
Description: The City of Temecula employs mitigation efforts that rely heavily on public education and outreach, workshops for residents, businesses, schools, and government agencies. Communication through the use of and upgrades to the mass warning and notification system, local radio, improvement of cellular and Wi-Fi capabilities, building retrofits, building code compliance measures, improved inspections for local businesses, schools, and public facilities. Annual inspections of local bridges, sewer and water facilities, waterways, and strengthening of communications networks.

Title: **Wildfire Program**
Sponsor: City of Temecula
Description: As a city, mitigation efforts include aggressive weed abatement program, public education, and workshops on wildfire defense, enhancing of firefighting apparatus and equipment, fire inspections of established businesses, updating and implementing new building codes for community development, and consistent work with homeless outreach to prevent the unintentional spread of wildfire from open warming fires.

Title: **Mass Care and Shelter Program**
Sponsor: City of Temecula
Description: To increase Mass Care and Shelter capability of the county, grants from the Homeland Security Grant Program (HSGP) and Riverside Regional Urban Area Security Initiative (UASI) funded the Mass Care and Shelter Trailer/Cache Program. The program will have procured numerous trailers/caches equipped with mass care and shelter supplies, strategically placed throughout the County and ready for rapid deployment. As part of this program, the City of Temecula possesses two (2) forward deployed trailers within the city for use in mass care and shelter activations. Each trailer is equipped to support 100 persons. In addition to enhancing the comfort levels of shelter residents, the program will produce standardized documents and protocols for procuring and maintaining Mass Care and Shelter trailers/caches.

Title: **Community Emergency Response Team (CERT)**
Sponsor: City of Temecula
Description: Since 2003, the City of Temecula has had a robust CERT Team. Under the direction of the Fire Department, Temecula's CERT team helps provide critical support by giving immediate assistance to victims, providing damage assessment information, and organizing other volunteers at a disaster site. Volunteers trained in CERT also offer a potential workforce for performing duties such as shelter support, crowd control, and evacuation. The role of a CERT volunteer is to help others until trained emergency personnel arrive. Temecula's CERT Program sponsors four (4) training courses annually, two (2) for adults and tow (2) for teens.

Title: **Citizen Corps Advisory Program**
Sponsor: City of Temecula
Description: The Temecula Citizens Corps (TCC) Advisory Board is an important and vital volunteer group that directly supports the TCC's efforts to be a more prepared and disaster ready volunteer group within the city. Over the years the advisory board has provided direct support and linkage to city sponsored events as well as others across the southwest region in the hopes of providing non-profit access. TCC is the organization at the forefront of our efforts to have disaster trained citizens through their commitment to teach adults and teenagers in the 20-hour basic CERT Course providing over 100 hours of preparation and execution to this task alone each calendar year. As an advisory component, the team provides mentorship, advise, guidance and support in growing the program, increasing membership, and showcasing abilities and capabilities across the region.

Title: **Emergency Communications Group**
Sponsor: City of Temecula
Description: This group is responsible for redundant emergency communications and provides supplemental communication assistance to City agencies in the event of a disaster, emergency, or other designated event. The Federal Communications Commission (FCC) in Part 97, Sub-part E of the Commission's Rules provide for the Radio Amateur Civil Emergency Service (RACES). The

purpose of RACES is to provide communication support to government during periods of local, regional, or national emergency. Additionally, this group of individuals provide direct communication support to the Emergency Operations Center (EOC) in the use and maintenance of all radio equipment within the radio room.

4.3 Technical Resources

4.3.1 Proficiencies and Expertise

The City of Temecula has many proficiencies and expertise that can be leveraged in support of mitigation efforts. In addition to public safety and fire suppression capabilities, the City has access to staff with skills in Engineering/Construction, Planning, Environmental, Risk Management, Project/Grant Management, Economic Development, Debris Removal, and Emergency Management.

4.3.2 Technology

As with many jurisdictions, the City of Temecula has been increasing its technology capabilities. This includes providing secure platforms to store and access information, means of ensuring continuity of government, cyber security, and general technical support. A significant capability available to support mitigation efforts is through the Geographic Information Systems (GIS) section of the Information Technology and Support Systems (ITSS) Department. GIS is a computer system for capturing, storing, checking, and displaying data related to positions on the Earth's surface. By relating seemingly unrelated data, GIS can help individuals and organizations better understand spatial patterns and relationships. The GIS section of ITSS is able to analyze and generate reports of critical data (land use, built environment, natural environment), able to demonstrate potential ramifications of actions or events, and generate graphic representations of results.

4.3.3 Communications

The City of Temecula has several platforms in which to communicate with staff, surrounding jurisdictions, and the general public. In addition to the standard methods (telephone/cellular telephone, emails), the City has interoperable communications capabilities (radio communications and satellite communications). In addition to the above 2-way communications platforms, there are several "push" platforms that can be used. These consist of television (city owned TV channel), broadcast radio, websites, and social media (Facebook, Twitter, and Instagram).

The City of Temecula's Emergency Mass Notification System, Temecula ALERT, will communicate emergency and other urgent messages to residents of Temecula and any others that have opted into our system thought the self-registration portal or SRP. The system uses both text and voice message to keep residents in Temecula informed in case of emergencies that affect areas in which they live or work. With this information, residents and businesses can make informed

decisions that help ensure the safety of family members, employees, pets, and property in the event of fires, flood, earthquakes, or other types of disasters. In the event of an emergency, residents will receive a message with the latest information and safety instruction. The system is programmed to know whether or not the message has been delivered to a person, recorded to voicemail, or was not delivered due to a telephone system error. The system will continue to attempt to deliver its messages until the message is successfully delivered to a person, or until the message expires. The system utilizes the area's 9-1-1 database, provided by the local telephone company, and thus is able to contact land-line telephones whether listed or unlisted.

4.4 Fiscal Resources

The financial resources of the City of Temecula are allocated to and accounted for in various funds based upon the purposes for which the funds are to be spent and the means by which spending activities are controlled. The various funds include Governmental Funds; Proprietary Funds; and, Fiduciary Funds.

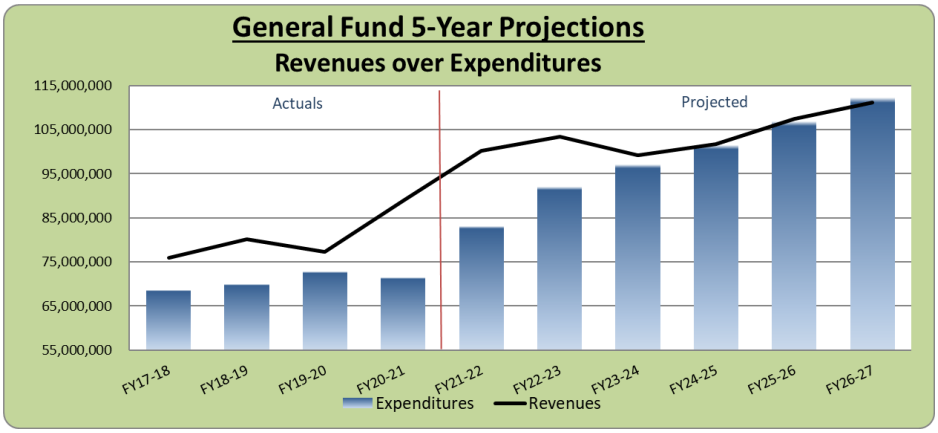
- **Governmental Funds** - Used for most of city governmental functions. There are four (4) types of Governmental Funds: General Fund; Special Fund; Debt Services Fund; and Capital Project Funds.
    - *General Fund* - The operating fund used to account for all activities, expect those requires to be accounted for in another fund
    - *Special Fund* - Used for proceeds of specific revenue sources that are restricted to expenditures of special purposes
    - *Debt Services Fund* - Used for accumulation of resources and the payment of principal, interest, and related costs of general long-0term debt
    - *Capital Project Funds* - Used for resources for the acquisition or construction of major capital facilities
- **Proprietary Funds** - Used for government's business-type activities. These funds recover the cost of providing services through fees and charges on those who use their services. There are two (2) types of Proprietary Funds: Enterprise Funds, and Internal Services Funds.
    - *Enterprise Funds* - used for services provided primarily to external customers and legal requirements or management policy required services, including capital, be fully recovered through fees and charges
    - *Internal Services Funds* - used for services provided to other funds, departments, or agencies of the government. Costs are allocated to the benefitting funds in the form of fees and charges in order to recover the full cost of providing services
- **Fiduciary Funds** - used for assets held in a trustee or agency capacity for outside parties, including individuals, private organizations, and other government.

4.4.1 Government Fund

The primary account for the City of Temecula under the Government Fund is the General Fund. Reallocation of funds from the General Fund is the main source of funds the City can access to implement mitigation projects. For the City of Temecula, the General Fund forecast over the coming (5) five years is balanced, with its Reserve for Economic Uncertainty and its Secondary Reserve fully funded in all (5) five years.

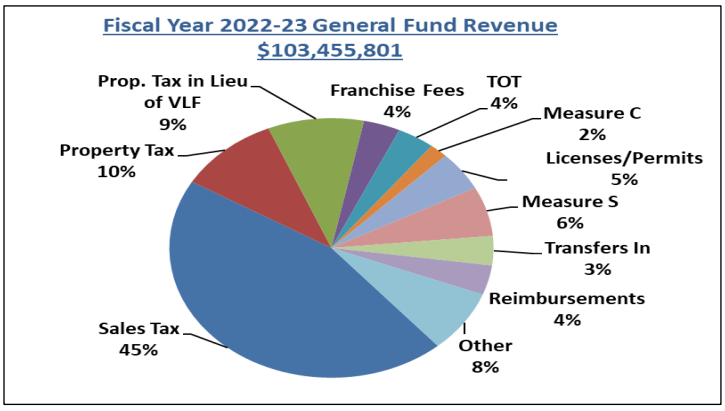
The City's General Fund is projected to increase by 3.2% over the prior year. Our tax revenues are projected to increase by 4.3% **(Figure 4.3)** providing for the City's stability and ability to fund mitigation projects should an immediate need arise.

Figure 4.3 – General Fund Projections (2022)



The majority of Fiscal Year 2022-23 General Fund revenue is made up of Sales Tax, Property Tax, Property Tax in Lieu of Vehicle License Fees, and contributions from the City's one-percent Transactions and Use Tax (Measure S). The City's Sales Tax base is fairly well diversified with 28% coming from the Autos and Transportation sector, 22% from General Consumer Goods, 15% from the County Pool which include sales tax from online retail sales, another 11% from Restaurants and Hotels, and the remainder from Business and Industry, Food and Drugs and the Construction sector of the local economy.

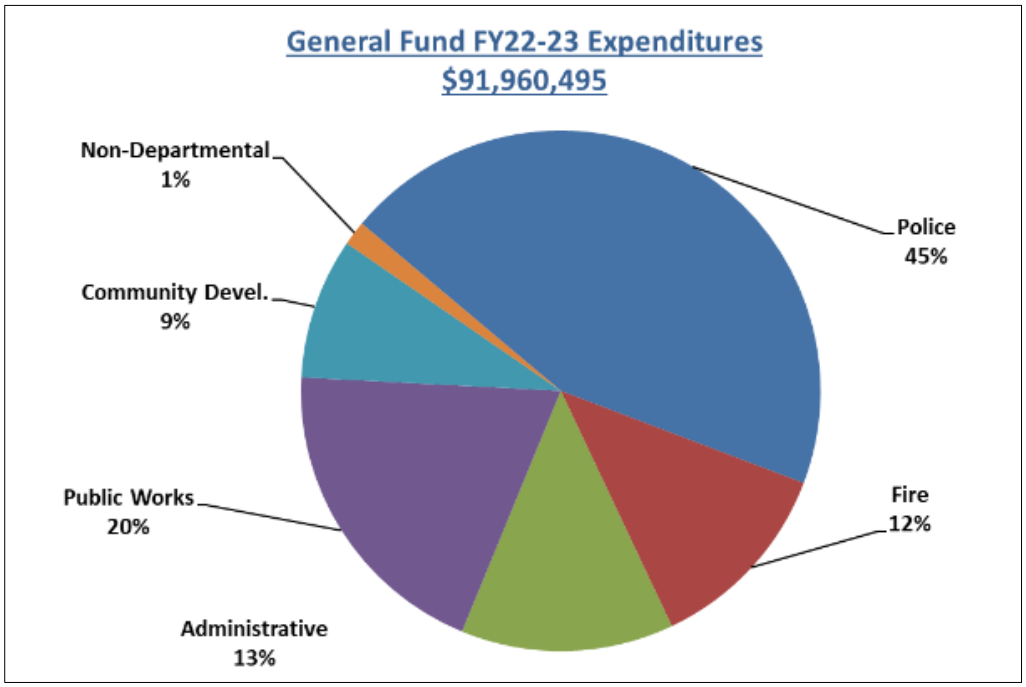
Figure 4.4 – General Fund Revenue (2022)



The largest expenditure of the General Fund is Public Safety, making up 57% of total General Fund expenditures. In accordance with the Measure S ballot language and City Council appropriation guidelines, the City has invested heavily in Public Safety over the past several years and continues to hold Public Safety as its highest priority.

Overall, the General Fund remains structurally balanced, with revenues exceeding expenditures, and reserves are fully-funded each year of the ensuing five-year financial forecast. The City continues to budget in a conservative, yet realistic, manner while keeping close watch on several economic indicators. As conditions change, adjustments to the Fiscal Year 2022-23 revenue or expenditure budgets will be recommended and presented to the City Council for their approval.

Figure 4.5 – General Fund Expenditures (2022)



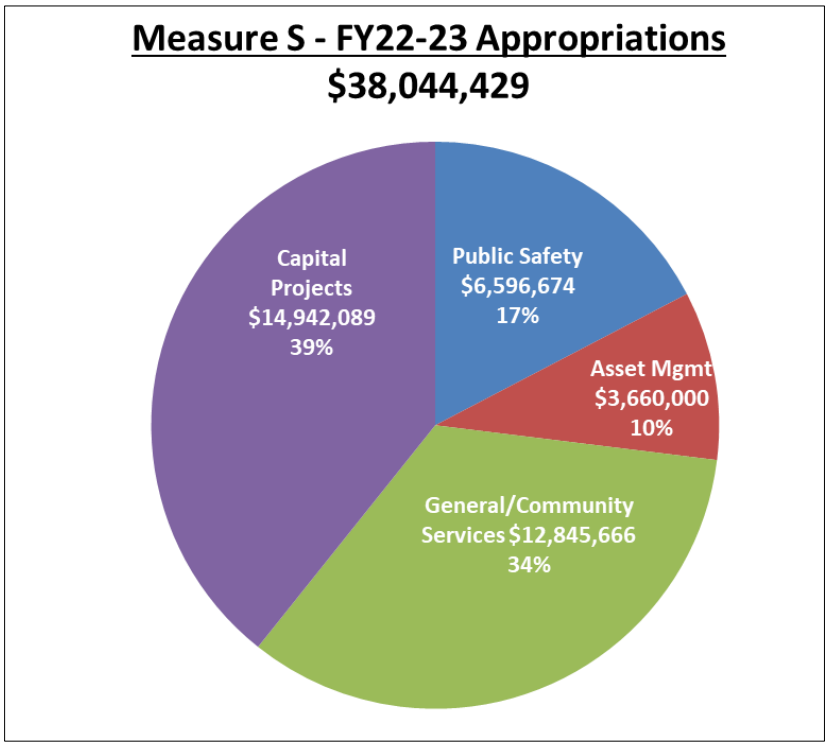
4.4.1.1 City of Temecula Measure S Fund

With the approval of a one-cent transactions and use tax measure in November 2016, the Measure S Fund was established to account for this new revenue source. Fiscal Year 2022-23 Measure S revenue is projected to increase by 4.0% to $37,610,081, as the local economy continues to expand.

Measure S appropriations of $38,044,429 for Fiscal Year 2022-23 reflect the priorities established in Budget Policy IV – Transactions and Use Tax Funding. The ending fund balance within the Measure S Fund is projected to be $11,021,315, which will carry-forward to the ensuing fiscal year. Over the ensuing five-year period, Measure S is projected to have adequate resources to fund public safety, asset management, capital projects and general services.

As depicted in **Figure 4.6** Measure S is an additional source of funding locally that provides for the City's ability to fund mitigation projects should federal or state hazard mitigation funding is unavailable.

Figure 4.6 – Measure S Appropriations (2022)



4.4.2 Proprietary and Fiduciary Funds

Other means to implementing mitigation projects is the utilization of Proprietary and Fiduciary Funds. While there are a variety of options that the City may be able to access under these funds, the primary funds will be those secured through project grants, such as the FEMA Hazard Mitigation Assistance (HMA) programs - Hazard Mitigation Grant Program - HMGP, Flood Mitigation Assistance - FMA, or Building Resilient Infrastructure and Communities - BRIC (formerly, the Pre-Disaster Mitigation- PDM program). Currently, the City has not received any FEMA HMA grants over the past five (5) years.

4.4.3 Education and Outreach Capabilities

Table 4.1 lists the City of Temecula's financial and public outreach capabilities. These capabilities include programs such as fire safety programs, hazard awareness campaigns, public information, or communications offices. Education and outreach capabilities can be used to inform the public on current and potential mitigation activities.

Table 4.1 – Education and Outreach Resources

Name	Description (Effect on Hazard Mitigation)	Lead Organization
Stop the Bleed	Starting after the Route 91 shooting in Las Vegas, it addresses preventing traumatic blood loss deaths. It would address any hazard that creates a traumatic injury that results in blood loss (e.g., earthquake, terrorism, etc.).	Temecula Fire and Office of Emergency Management (OEM)
County Emergency/Disaster Readiness App	The City promotes the Riverside County readiness app (RivCo Ready). It is a great tool for the community to use in preparation for all major disaster types.	Riverside County Emergency Management Department (EMD)
Telephone Emergency Notification System	The City operates the Telephone Emergency Notification System known as Temecula ALERT. A link is provided on the Office of Emergency Managements page. Since sixty percent (60%) of people only use cell phones, cell phone registration is encouraged.	Office of Emergency Management
Public Event Outreach and Awareness Programming	The City OEM provides information on training, emergency preparedness, and resources every year at public events. These events include neighborhood pop-ups, the City's Annual Preparedness Fair, and National Night Out. OEM performs outreach presentations to various community groups upon request.	Office of Emergency Management
CERT Team	A team of dedicated volunteers supporting the City's disaster response efforts. This team meets twice monthly and is a key asset to the City of Temecula.	Temecula Fire and Office of Emergency Management
City Website Office of Emergency Management	Site that hosts information on earthquake preparedness, heat risk, warming/cooling centers, floods, and fires.	Office of Emergency Management
Disaster Preparedness and Shelter Training	The American Red Cross offers free disaster preparedness for residents in addition to hands only CPR training. They also include free smoke alarm installations. A full shelter training curriculum consisting of Shelter Fundamentals, Shelter Supervisor and Shelter Operations Simulation is available upon request.	American Red Cross

4.4.4 National Flood Insurance Program Participation

The City of Temecula participates in the National Flood Insurance Program (NFIP), which Congress created in 1968 to subsidize flood insurance to homeowners who live in flood-prone areas. Individual communities have the option to participate in the NFIP. However, property owners who live in nonparticipating communities with flood-prone areas will not be able to buy flood insurance through the program. Additionally, nonparticipating communities with mapped flood plains cannot receive federal grants or loans for development activities in flood-prone areas and cannot receive federal disaster assistance to repair flood-damaged buildings in mapped flood plains. Temecula has participated in the NFIP since 10/25/1989.

Although participation is not a dedicated hazard mitigation action, Temecula will continue to participate in the NFIP and comply with the program's requirements through continued enforcement of the City's Floodplain Management Regulations. These regulations apply to all areas identified as flood-prone within the City and identify the purpose, methods of reducing flood losses, basis for establishing flood hazard areas, development permit requirements, duties and responsibilities of the City's Floodplain Administrator, development standards that apply in flood-prone areas, and required documentation and analysis for construction within these areas. As part of the City's efforts to comply with NFIP, Temecula will update and revise the Floodplain Management regulations to minimize the threat of harm from future flood events. These updates and revisions may be promoted by changes in local demographics, shifts in land use, changes to flood regimes such as frequency and intensity of flood events, and other factors that may warrant municipal action. The City will also continue to incorporate any changes to the locations and designations of mapped flood plains into future planning documents, including future updates to this Plan.

The City of Temecula has been designated on the Flood Insurance Rate Map (FIRM), as including Zone(s) A, AE, AH, D, and X, which are Special Flood Hazard Zones and Non-Special Flood Hazard Areas.

Areas located within Zones D and X are not in any immediate danger from flooding caused by overflowing rivers or hard rains. However, it is noted that structures within a Non-Special Flood Hazard Area are still at risk. Because the City is within Zone(s) A, AE, AH, D, and X, insurance purchase is required for those locations residing within zones that begin with an A. Notwithstanding, the City participates in the NFIP.

Special Flood Hazard Area(s)

- Zone A: The flood insurance rate zone that corresponds to the 1% annual chance floodplains. No base (1% annual chance) flood elevations or depths are shown within this zone.
- Zone AE: The flood insurance rate zone that corresponds to the 1% annual chance floodplains.

- Zone AH: The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet.
- Other Areas of Flood Hazard
- Zone D (Areas of Undetermined Flood Hazard): The flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.
- Zone X: Areas of 0.2% annual chance flood hazards and areas of 1% annual chance flood hazards with average depths of less than 1 foot or with drainage areas less than 1 square mile.

Table 4.2 – National Flood Insurance Program Participation

NFIP Participation							
CID	**Community Name**	**County**	**Initial FHBM Identified**	**Initial FIRM Identified**	**Current Eff. Map Date**	**Reg. Emer. Date**	**Tribal**
#060742	Temecula, City of	Riverside County	10/25/1989	09/02/1993	8/27/2008	8/28/1991	No

There are no repetitive loss or severe repetitive loss properties within the City of Temecula. Additionally, the City has adopted language consistent with the NFIP flood plain management program into City code.

4.5 Expansion of and Improvement Upon Mitigation Capabilities

There are a multitude of methods and processes that a jurisdiction may use to improve upon current capabilities to mitigate emergencies or disasters. The City of Temecula has identified the below to support this thought process:

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

- **Governance:** Continue to ensure that necessary regulations are put in place relating to building codes, ordinances, and state and federal requirements.
- **Administrative:** The administrative capabilities can be improved upon by developing a mitigation actions implementation plan that is reviewed and updated on a recurring basis. This process would be used to update the LHMP over the coming years providing updates to the status of projects and actions.

- **Technical:** Incorporate technical expertise resident within the City staff into the emergency management planning process to include the development of mitigation projects.
- **Fiscal:** Identify additional funding opportunities that can be expanded upon for mitigation. In previous years, hazard mitigation grants have not been utilized to complete any projects that have been identified by the hazard mitigation planning team.
- **Outreach:** Expand current capability through an increase in the number of events participated in, presentations conducted to the community through integration with HOA's and civic organizations. Promote preparedness through increased use of social media and the creation of an emergency management section to the City application.

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5. HAZARD ASSESSMENT

5.1 Overview

The purpose of this section is to capture the approach used by the City of Temecula's Hazard Mitigation Planning Team to identify and prioritize (screen) hazards within its community. This is an important step to ensure all potential hazards are considered and relevant hazards ranked as to the greatest concern within the community.

This section also presents relevant information (profiles) on each hazard in the community. The "Hazard Profiles" provide a description of the hazard, the location and/or extent of the hazard within the community, the history of the hazard within the community, the probability of the hazard occurring in the community, and a discussion of any considerations needed due to changing conditions (i.e., climate). This information was referenced when prioritizing hazards.

5.2 Hazard Identification

The HMPT went through an extensive effort to identify all of the hazards present in the community. The Planning Team started with the list of hazards in the City of Temecula 2017 LHMP and augmented the list as necessary. This augmentation considered adding, removing, and renaming of hazards to create a list of all potential hazards in the community. The HMPT utilized several external resources to ensure they were considering all potential hazards. These resources included the State of California HMP (2018), the Riverside County OA LHMP (2017), and several other surrounding community LHMPs (i.e., Lake Elsinore, Murrieta, Menifee). This helped the Planning Team understand statewide, countywide, and surrounding area hazard concerns. Each hazard identified in the external resources were reviewed and considered by the Planning Team. After careful review and consideration, the Planning Team identified the following top 10 hazards for inclusion in the City of Temecula's LHMP update:

- Transportation Failure
- Fire (Wildfire)
- Earthquake
- Electrical Failure (Public Safety Power Shutoff)
- Flooding
- Communications Failure
- Pandemic
- Hazardous Materials Incident
- Extreme Weather – Heat
- Drought

As a note, no hazards from the City of Temecula's 2017 LHMP were removed, however, the Planning Team did re-prioritize the list of hazards as listed above. It is also important to note that

the Planning Team did revise the name and description of some hazards to provide more clarity and understanding of the hazard. This step also led to separating and creating distinct individual hazards (i.e., Power Outage (PSPS)/Extreme Weather - Heat). The changes to the hazard descriptions and other relevant hazard information are captured under sub section 5.4 - Hazard Profiles.

The City of Temecula's identified hazards align with the Riverside County Multi-Jurisdictional Hazard Mitigation Plan for 2023 in totality. However, the prioritization of these hazards are specific to the County's threats as a whole while Temecula's are specific to the identified threats of our much smaller jurisdiction.

5.3 Hazard Screening and Prioritization

After the list of hazards was identified, the Planning Team went through a process to prioritize (screen) the hazards to determine which hazards created the greatest concern in the community. The Planning Team utilized a non-numerical ranking system that was implemented during this update to the City of Temecula LHMP. This process consists of generating a qualitative ranking, High, Medium, or Low rating for: 1) Probability; and 2) Impact from each hazard. As part of this process, the following criteria (definitions) were applied:

- **Probability**
    - *High*: (Highly Likely/Likely) There may or may not have been historic occurrences of the hazard in the community or region, but experts feel that it is likely that the hazard will occur in the community. Citizens feel that there is a likelihood of occurrence.
    - *Medium*: (Possible) There may or may not have been a historic occurrence of the hazard in the community or region, but experts feel that it is possible that the hazard could occur in the community. Citizens may feel that there is a likelihood of occurrence.
    - *Low:* (Unlikely) There have been no historic occurrences of the hazard in the community or region and both experts and citizens agree that it is highly unlikely that the hazard will occur in the community.
- **Impact**
    - *High*: (Catastrophic/Critical) Both experts and citizens feel that the consequences will be significant in terms of building damage and loss of life.
    - *Medium*: (Limited, but not insignificant) Consequences are thought to be modest in terms of building damage and loss of life, limited either in geographic extent or magnitude.
    - *Low*: (Negligible) Consequences are thought to be minimal in terms of building damage and loss of life, limited either in geographic extent or magnitude.

After each hazard was ranked using the above criteria, the results were displayed in a graph to assist the Planning Team validate the results **(Figure 5.1)**. The Planning Team determined all

hazards falling within the gray-colored boxes were Tier I priority hazards, those within the blue-colored boxes were Tier II priority hazards, and those within the purple-colored boxes were Tier III priority hazards. The higher priority hazards (Tier I and Tier II), reflect those hazards the Planning Team determined the community should focus on over the next five (5) years. This does not mean that the community will not address the lower priority hazards. It means if resources are limited (i.e., funding, staffing), the primary focus will be on the higher priority hazards.

Figure 5.1 - Hazard Prioritization Matrix (2022)

		IMPACT		
		High	**Medium**	**Low**
PROBABILITY	**High**	Earthquake Wildfire Transportation	Flood Drought Comm Failure	
	Medium	Extreme Heat Electrical Failure HAZMAT Pandemic	Aqueduct Failure Storm Cyber Attack Pipeline Disruption	Insect Infestation Landslide Nuclear Event Rad Incident
	Low	Tornado Dam Failure Terrorist MCI	Water Disruption Emergent Disease	Civil Disorder Jail/Prison Event

5.4 Hazard Profiles

The Hazard Profiles include the incorporation of all new information, material, and reports to better help the Planning Team and the community understand the hazard. The hazards are organized alphabetically as identified in the hazard priority matrix. The top 10 hazards assessed by the Planning Team are summarized below:

5.4.1 Top 10 Hazards

The hazards, in alphabetical order, include Communications Failure; Drought; Earthquake; Electrical Failure; Extreme Weather – Heat; Fire (Wildfire); Flooding; Hazardous Materials Incident; Pandemic; and Transportation Failure.

5.4.1.1 Communications Failure

- **Ranking**: *Probability* – Medium; *Impact* - Medium
- **Description**

Technology disruption includes both deliberate (cyber-attacks) or accidental (equipment failure or human error) actions that can cause the loss of use of technology and/or data. A cyber threat/attack is a circumstance or event that has or indicates the potential to exploit technology vulnerabilities and to adversely impact organizational operations, organizational assets (including information and information systems), individuals, other organizations, or society. Critical infrastructure, such as utilities and telecommunications, are also potential targets. Cyber threats/attacks are most easily described as either external threats (where attacks originate outside of established networks) or internal/insider threats (where attacks originate from users who have existing access to an internal network). Examples of cyber threats/attacks include malware and hacking, phishing, denial of service attacks, ransomware, and state-sponsored hacking. Any one of these threats, if initiated, and successful, can produce a cyber-attack that has major implications throughout the organization. Recent report produced by Verizon (2020) analyzes 32,002 security incidents and 3,950 confirmed breaches from 81 global contributors from 81 countries and indicate the following trends:

- ✓ *86% of data breaches for financial gain - up from 71% in 2019*
- ✓ *Cloud-based data under attack – web application attacks double to 43%*
- ✓ 67% of breaches caused by credential theft, errors, and social attacks
- ✓ *Clearly identified cyber-breach pathways enable a "Defender Advantage" in the fight against cyber-crime*
- ✓ *On-going patching successful - fewer than 1 in 20 breaches exploit vulnerabilities*
- ✓ 37% of credential theft breaches used stolen or weak credentials
- ✓ 25% involved phishing
- ✓ *Human error accounted for 22%*

- **Location and Extent**

Technology disruptions can happen anywhere within the City but will generally be targeted towards larger corporations or government organizations.

- **History**

While there have been several smaller cyber threats and hacking, none have reached a level of significance. However, the frequency of cyber-attacks on public and private sector organizations in general, continues to rise.

- **Probability**

The probability of technology disruptions is on the rise globally, national, and locally. The probability of occurrence of cyber threats is rapidly increasing, especially with increased reliance

on the Internet and cloud-based computing. However, cyber security threats/attacks will generally be targeted towards larger corporations or state/national governments which are not located within the county.

Local governments are increasingly being targeted by cyber criminals on the basis that they have fewer resources to defend themselves. Unlike natural hazards, where there is historical data, and some predictive modeling can occur, cyber-attacks are an emerging hazard, which are more challenging to anticipate.

- **Climate Change Considerations**

While there is little evidence to link climate change to increase in occurrences of cyber security threats/attacks, the target could be related to persons/groups with issues with individuals or companies they perceive to have effect on the climate (i.e., greenhouse gas producers) within the community. And much like terrorism, depending on the consequence of the cyber-attack, it could hinder the response and recovery efforts.

5.4.1.2 Drought

- **Ranking**: *Probability* – High; *Impact* - Medium
- **Description**

Drought can best be thought of as a condition of water shortage for a particular user in a particular location. Drought is a gradual phenomenon and generally are not signified by one or two dry years. California's extensive system of water supply infrastructure (reservoirs, groundwater basins, and interregional conveyance facilities) generally mitigates the effects of short-term dry periods for most water users. However, drought conditions are present when a region receives below-average precipitation, resulting in prolonged shortages in its water supply, whether its water supply is provided by atmospheric, surface, or ground water means. A drought can last for months or years or may be declared after as few as 15 days.

Drought is not a purely physical phenomenon, but rather an interplay between natural water availability and human demands for water supply. The precise definition of drought is made complex owing to political considerations, but there are generally four (4) types of conditions that are referred to as drought:

- *Meteorological drought is brought about when there is a prolonged period with less than average precipitation.*
- *Agricultural drought is brought about when there is insufficient moisture for average crop or range production. This condition can arise, even in times of average precipitation, owing to soil conditions or agricultural techniques.*
- *Hydrologic drought is brought about when the water reserves available in sources such as aquifers, lakes, and reservoirs fall below the statistical average. This condition can*

arise, even in times of average (or above average) precipitation, when increased usage of water diminishes the reserves.

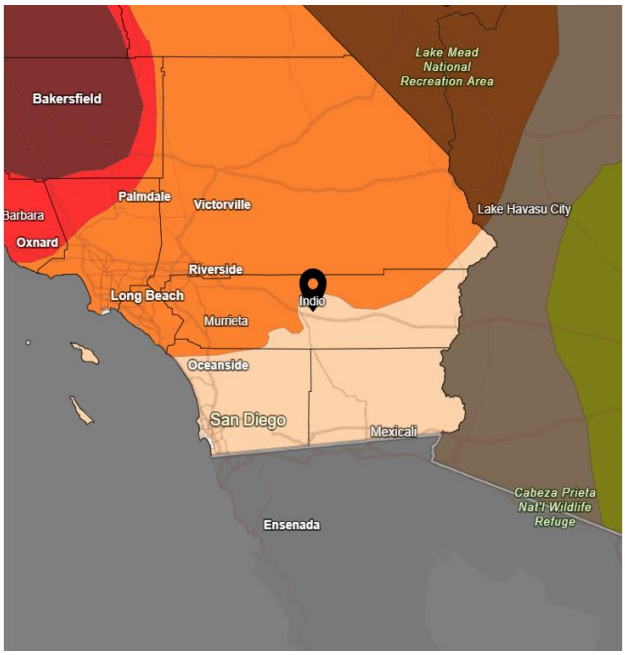
- *Socioeconomic drought associates the supply and demand of water services with elements of meteorological, hydrologic, and agricultural drought. Socioeconomic drought occurs when the demand for water exceeds the supply as a result of weather-related supply shortfall.*

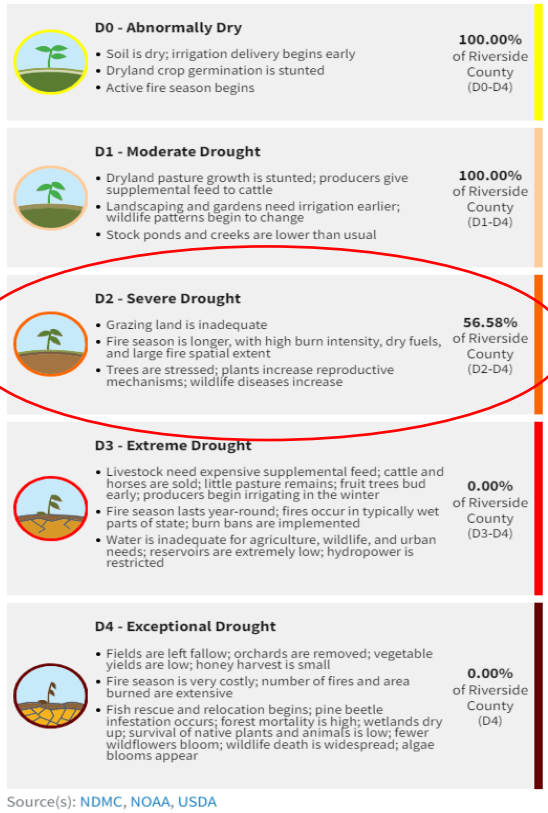
The U.S. Drought Monitor, established in 1999, is a weekly map of drought conditions produced jointly by the National Oceanic and Atmospheric Administration, the U.S. Department of Agriculture, and the National Drought Mitigation Center at the University of Nebraska-Lincoln. The map is based on measurements of climatic, hydrologic and soil conditions as well as reported impacts and observations from more than 350 contributors around the country. Droughts are generally categorized into five (5) categories: D1) Abnormally Dry, D2) Moderate Drought; D3) Severe Drought; D4) Extreme Drought; and D5) Exceptional Drought. There are many considerations that are factored into the determining the drought status; these include consideration of status on the: Palmer Drought Severity Index; CPC Soil Moisture Model; USGS Weekly Streamflow; Standardized Precipitation Index; and Objective Drought Indicator Blends.

- **Location and Extent**

The entire City of Temecula is subject to drought conditions and water shortages.

Figure(s) 5.2 and 5.3 – Riverside County / Temecula Current Drought Conditions (2021)





- **History**

It was only recently that the State of California emerged from a proclaimed a State of Emergency due to extremely dry conditions. The longest duration of drought (D1-D4) in California lasted 376 weeks beginning on December 27, 2011 and ending on March 5, 2019. The most intense period of drought occurred 2014 and 2017, where at its peak over 50% of the land in California was under Exceptional Drought (D4) conditions. The City of Temecula has experienced several droughts, most recently during the statewide drought from 2011-2019. In March of 2022, the Governor of California re-issued a proclamation and orders from previous years placing communities back into water conservation efforts state-wide.

- **Probability**

In any given year, California and the City of Temecula can be subject to drought conditions and water shortages. This is especially true since much of the water is provided by outside resources, resources that are shared with others. It is also important to note that droughts do not happen overnight, they are a slow buildup of conditions. On average, seventy-five percent (75%) of the state's annual precipitation occurs in the "wet season"- *November thru March*. December, January, and February generally see the most precipitation but there have been many early and late season storms that bring in a substantial amount of precipitation. One of the best ways to predict drought conditions is to study the status of the El Niño Southern Oscillation (ENSO) patterns. In California. ENSO is a periodic shifting of ocean atmosphere conditions in the tropical Pacific that ranges from El Niño (warm phase) to neutral to La Niña (cold phase). La Niña conditions tend to favor a drier outlook for Southern California; while the El Niño conditions favor stronger, and wetter storms.

- **Climate Change Considerations**

Climate change has the potential to make drought events more common in the West, including California. Extreme heat creates conditions more conducive for evaporation of moisture from the ground, thereby increasing the possibility of drought. A warming planet could lead to earlier melting of winter snowpacks, leaving lower stream flows and drier conditions in the late spring and summer. Snowpacks are important in terms of providing water storage and ensuring adequate supply in the summer when water is most needed. Changing precipitation distribution and intensity have the potential to cause more of the precipitation that does fall to run-off rather than be stored. The result of these processes is an increased potential for more frequent and more severe periods of drought.

5.4.1.3 Earthquake

- **Ranking**: *Probability* – High; *Impact* - High
- **Description**

The City of Temecula is located near several known active and potentially active earthquake faults including the Elsinore Fault, San Jacinto Fault, San Andreas Fault, and the Rose Canyon Fault. The

major potential for earthquake damage to Temecula is from activity along the San Jacinto Fault. The San Jacinto fault line is located approximately 50 miles to the East of Temecula.

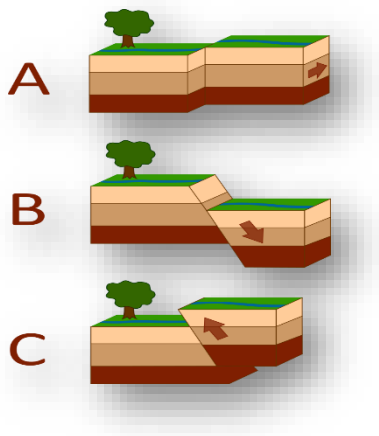
In the event of an earthquake, the location of the epicenter as well as the time of day could have a profound effect on the potential number of deaths and casualties. An earthquake occurring in or near this area could result in property damage, environmental damage, and disruption of normal government and community services and activities. The effects could be exacerbated by collateral damage such as fires, flooding, hazardous materials spills, utility disruptions, landslides, transportation failures and possible dam failures.

Significant damage to buildings and infrastructure could occur due to severe ground shaking. The community needs could quickly exceed the response capability of the City of Temecula's emergency management organization, requiring mutual aid from across the county and/or region. Response and disaster relief support could be required from the county, state, and federal government.

The primary consideration during an earthquake is the preservation of life. Emergency response will include providing shelter to displaced citizens and restoring basic needs and services. A major effort will be made to remove debris and clearing of roadways, demolition of unsafe structures, assisting in the reestablishment of public services and utilities while providing care for affected citizens. After any earthquake, there could be a loss of income. Individuals could lose wages due to business closure or damage to goods. Economic recovery is critical to our community.

A fault is a fracture in the earth's crust whereby two blocks of the crust have slipped with respect to each other. Faults are divided into three main groups, depending on how they move.

A: Strike-slip (lateral) Faults – These occur in response to either type of stress. The blocks move horizontally past one another.
B: Normal Faults – These occur in response to pulling or tension. The overlying block moves down the dip of the fault plane.
C: Thrust (reverse) Faults – These occur in response to squeezing or compression. The overlying block moves up the dip of the fault plane.



The effect of an earthquake on various locations throughout the felt area is called the intensity. The intensity scale consists of a series of certain key responses such as people awakening, movement of furniture, damage to chimneys, and total destruction of property. The scale currently used in the United States is the Modified Mercalli Intensity (MMI) Scale (**Table 5.1**). It was developed in 1931 by the American seismologists Harry Wood and Frank Neumann. This scale is composed of increasing levels of intensity designated by Roman numerals that range from imperceptible shaking (MMI I) to

catastrophic destruction (MMI X). It does not have a mathematical basis; instead, it is an empirical scale based on observed effects.

Table 5.1 – Modified Mercalli Intensity (MMI) Scale

Intensity	Shaking	Description
I	Not Felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by a few persons at rest, especially on upper floors of buildings
III	Weak	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated
IV	Light	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Moderate	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop
VI	Strong	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight
VII	Very Strong	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken
VIII	Severe	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned
IX	Violent	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations
X	Extreme	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent

However, most people are familiar with the Richter scale, a method of rating earthquakes based on the amplitude of seismic waves - an indirect measure of energy released (**Table 5.2**). The Richter scale is logarithmic. Each one-point increase corresponds to a 10-fold increase in the amplitude of the seismic shock waves and a 32-fold increase in energy released. For example, an earthquake registering magnitude 7.0 on the Richter scale releases over 1,000 times more energy than an earthquake registering magnitude 5.0. It should be noted that while an earthquake may have many intensity values across the impacted area, there is just one Richter magnitude associated with each event.

Table 5.2 – Richter Scale

Magnitude	Earthquake Effects
0-1.9	*Micro*- Not felt by people
2.0-2.9	*Minor*- Felt by few people
3.0-3.9	*Minor*- Felt by some people, inside objective can be seen shaking
4.0-4.9	*Light*- Felt by most people, inside object shake and fall
5.0-5.9	*Moderate*- Felt by everyone, damage and possible collapse of unreinforced buildings
6.0-6.9	*Strong*- Felt by everyone, widespread shaking/damage, some buildings collapse
7.0-7.9	*Major*- Felt by everyone, widespread shaking/damage, many buildings collapse
8.0 or greater	*Great*- Felt by everyone, widespread shaking/damage, most buildings collapse

Ground shaking and ground deformation (i.e., surface fault rupture, 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, 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, distance from the epicenter (where the earthquake originates), and local soil conditions. Soils and soft sedimentary rocks near the earth's surface can amplify earthquake ground shaking. Amplification increases the magnitude of the seismic waves generated by the earthquake. The amount of amplification is influenced by the thickness of geologic materials and their physical properties. Buildings and structures built on soft and unconsolidated soils can face greater risk. Amplification can also occur in areas with deep sediment filled basins and on ridge tops. Peak Ground Acceleration (PGA) is a measure of the strength of ground shaking. Larger PGAs result in greater damage to structures. PGA is used to depict the risk of damage from future earthquakes by showing earthquake ground motions that have a specified probability (10%, 5%, or 2%) of being exceeded in 50 years return period. These values are often used for reference in construction design, and in assessing relative hazards when making economic and safety decisions.

• *Surface Fault Rupture*- As previously mentioned, the sudden sliding of one part of the earth's crust past another releases the vast storage of elastic energy in the rocks as an earthquake. The resulting fracture is known as a fault, while the sliding movement of earth on either side of a fault is called fault rupture. Fault rupture generally begins below the ground surface at the earthquake hypocenter, typically between three and ten miles below the ground surface in California. If an earthquake is large enough, the fault rupture will reach the ground surface (referred to as "surface fault rupture"), wreaking havoc on structures built across its path. Structures built across the fault are a risk of significant damage from surface fault rupture. In California, the 1972 Alquist-Priola Earthquake Fault Zoning Act prohibits the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting. Recent large earthquakes in Turkey and Taiwan have shown that few structures built across the surface traces of faults can withstand the large displacements that may occur during an earthquake.

• *Landslides*- Earthquake-induced landslides are secondary earthquake hazards that occur from ground shaking. They can destroy the roads, buildings, utilities, and other critical facilities necessary to respond and recover from an earthquake. Many communities in Southern California have a high likelihood of encountering such risks, especially in areas with steep slopes. (NOTE: while mentioned here, landslides are covered under a separate hazard)

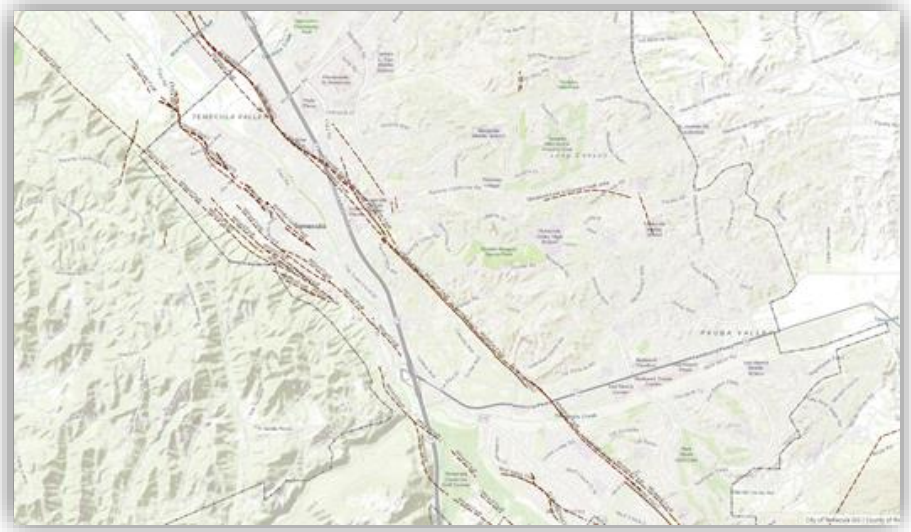
• *Liquefaction*- Liquefaction is the phenomenon that occurs when ground shaking causes loose, saturated soils to lose strength and act like viscous fluid. Liquefaction causes two types of ground failure: lateral spread and loss of bearing strength. Lateral spreads develop on gentle slopes and entail the sidelong movement of large masses of soil as an underlying layer liquefies. Loss of bearing strength occurs when the soil supporting structures liquefy, causing the structures to settle, resulting in damage and, in some cases, collapse.

- **Location and Extent**

There are several fault lines that pass through or are near the City of Temecula. The fault of most interest is the Elsinore Fault. The Elsinore Fault line passes through the western portion of the city and spans both sides of the I-15 Freeway. The fault is a right-lateral strike slip fault and is about 180km in length with a slip rate of roughly 4.0 mm/year. The Elsinore fault has the capability of producing a temblor of a 6.5 to 7.5 magnitude. The most recent rupture on record was recorded on the 15th of May of 1910 and was a magnitude 6.0.

The Elsinore fault zone is one of the largest in southern California, and in historical times, has been one of the quietest. The southeastern extension of the Elsinore fault zone, the Laguna Salada fault, ruptured in 1892 in a magnitude 7 quake, but the main trace of the Elsinore fault zone has only seen one historical event greater than magnitude 5.2 -- the earthquake of 1910, a magnitude 6 shock near Temescal Valley, which produced no known surface rupture and did little damage.

Figure 5.4 – Elsinore Fault Line – City of Temecula (2022)



The San Jacinto Fault extends 125 miles from near El Centro to near San Bernardino intersecting freeways 10, 215, and 60. This fault is a right-lateral strike-slip and minor right-reverse fault. The slip rate is typically between 7 and 17mm/year and capable of producing an earthquake between

6.5M and 7.5M. The last known quake on this fault line was on the 9th of April 1968 and registered a magnitude 6.5 on the Coyote Creek segment of the fault line.

Figure 5.5 – Temecula Fault Lines

The San Andreas Fault passes between 80-100 miles to the east of Temecula. There are only two large known historic earthquakes on the San Andreas Fault in Southern CA, the most recent in 1857, and before that one in 1812. With about 45 years between the historic earthquakes but about 160 years since the last one, it is clear that the fault does not behave like a clock with a regular beat. Historic information doesn't provide enough data to establish whether or not there is a pattern in the timing of earthquakes, but paleoseismology has provided an abundance of data.

Along the southernmost San Andreas, from Palm Springs to the Salton Sea, earthquakes happen infrequently, about every 200-300 years. The most recent earthquake occurred during the time of Spanish exploration, about 300 years ago, but there is no historic record of the event. Instead, radiocarbon dating provides the age of the most recent earthquake and six more that occurred since about 800 A.D. In total, the fault stretches from Northern California to the Mexican border and is over 600 miles long. The San Andreas Fault has the potential for producing an 8.3 magnitude earthquake.

- **History**

There are 45 states and territories in the United States at "moderate" to "very high" risk from earthquakes, and they are located in every region of the country. California experiences the most frequent damaging earthquakes; however, Alaska experiences the greatest number of large

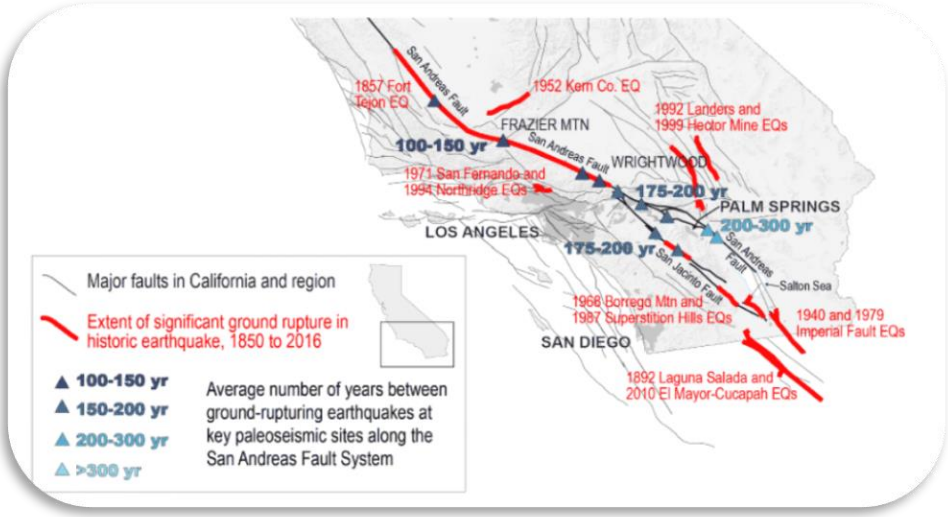
earthquakes—most located in uninhabited areas. The largest earthquakes felt in the United States were along the New Madrid Fault in Missouri, where a three-month long series of quakes from 1811 to 1812 included three quakes larger than a magnitude of 8 on the Richter scale. These earthquakes were felt over the entire Eastern United States, with Missouri, Tennessee, Kentucky, Indiana, Illinois, Ohio, Alabama, Arkansas, and Mississippi experiencing the strongest ground shaking.

Historical and geological records show that California has a long history of seismic events. In California, movement between the North American and the Pacific tectonic plates manifest primarily along a region known as the San Andreas Fault system. Experts believe the San Andreas Fault is capable of producing an earthquake of magnitude 8.0+ over the next few years. The San Andreas Fault is considered the "*Master Fault*" because it has frequent (geologically speaking), large earthquakes, and it controls the seismic hazard in southern California. Faults in the San Andreas Fault zone that passes through Los Angeles County are part of the very active southern segment. This segment includes historically active, active, potentially active, and inactive faults.

In June of 1992, the M7.3 Landers Earthquake ruptured 85 km (53 miles) along a series of faults in a roughly contiguous fault system, including the Johnson Valley, Landers, Homestead Valley, Emerson, and Camp Rock faults. The largest aftershock of the Landers earthquake was the M6.4 Big Bear Earthquake, which caused damage and landslides in the Big Bear area. Other significant earthquake events in the region included:

- *Newport-Inglewood Earthquake, 6.4m (1933)- 120 deaths, over $50 million in damage*
- *San Fernando (Sylmar) Earthquake, 6.5m (1971)- 65 deaths, over $500 million in damage*
- *Whittier Narrows Earthquake 5.9m (1987)- 8 deaths, over $358 million in damage*
- *Sierra Madre Earthquake 5.8m (1991)- 2 deaths, over $40 million in damage*
- *Chino Hills Earthquake 5.4m (2008)- no casualties and only minor damage*
- *City of Los Angeles Earthquake 4.7m (2009)- no casualties and minor to moderate damage*
- *El Mayor Cucapah Earthquake 7.2m (2010)- major damages to the area and Imperial County*
- *Calimesa 4.1m (2011)- no casualties and minor to moderate damage*
- *La Habra Earthquake 5.1m (2014)- no casualties and minor to moderate damage*
- *Fontana Earthquake 4.4m (2014)- no casualties and minor to moderate damage*
- *Running Springs 4.6m (2014)- no casualties and minor to moderate damage*
- *Fontana 4.2m (2015)- no casualties and minor to moderate damage*
- *Big Bear Lake 4.0m (2015)- no casualties and minor to moderate damage*
- *Muscoy 4.4m (2015)- no casualties and minor to moderate damage*
- *Banning 4.4m (2016)- no casualties and minor to moderate damage*
- *Cabazon 4.5m (2017)- no casualties and minor to moderate damage*
- *Big Bear 3.5m (2018)- no casualties and minor to moderate damage*
- *Trona (2019)- no casualties and minor to moderate damage*
- *Ridgecrest 7.1m (2019)- no casualties and minor to moderate damage*

Figure 5.6 – San Andreas Fault – Historical Timeline



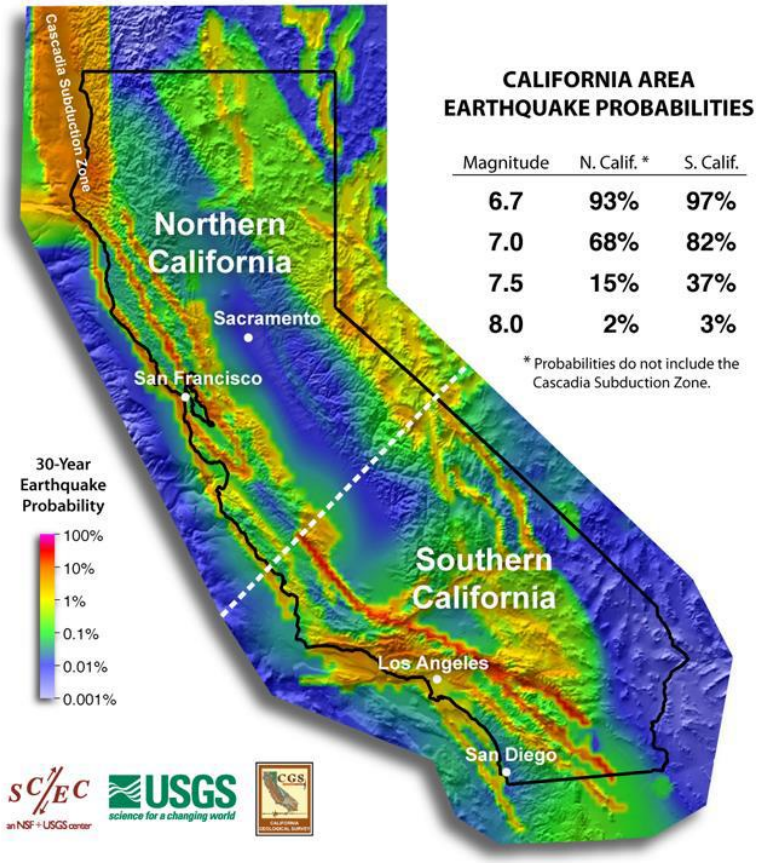
Southern California area has experienced several earthquakes, two very large earthquakes, the Fort Tejon in 1857 (M7.9) and the Owens Valley in 1872 (M7.6) are evidence of the tremendously damaging potential of earthquakes in Southern California. The Fort Tejon earthquake surface rupture broke the portions of the central and southern segments of the San Andreas Fault system (Cholame, Carrizo, and Mojave segments), resulting in displacements of as much as 27 feet (9 meters) along the rupture zone. These fault segments are thought to have an incident recurrence interval of between 104 and 296 years. The most recent significant earthquake event affecting the region was the Northridge Earthquake. At 4:31 A.M. on Monday, January 17, 1994, a very damaging earthquake with a magnitude of 6.7 struck the San Fernando Valley. In the following days and weeks, thousands of aftershocks occurred, causing additional damage to affected structures. Effects of the earthquake were felt north into Ventura County, south in Orange County, and east into Riverside and San Bernardino Counties.

- **Probability**

Earthquakes strike suddenly, without warning. Earthquakes can occur at any time of the year and at any time of the day or night. On a yearly basis, 70 to 75 damaging earthquakes occur throughout the world. Recent estimates of expected annualized earthquake loss for the U.S. totals $5.3 billion per year, with 66% ($3.5 billion) concentrated within the State of California, and $397 million in Riverside and San Bernardino Counties (FEMA, 2008).

The probability of a significant (M6.7 or greater) earthquake occurring in Southern California in the next 30 years has been estimated to be 97% by the 2007 California Working Group on Earthquake Probability, as shown in **Figure 5.7**. California Area 30-Year Earthquake Probabilities. (USGS Open-File Report 2007-1437).

Figure 5.7 – California 30-Year Earthquake Probabilities (2016)



- **Climate Change Considerations**

To date, no credible evidence has been provided that links climate to earthquakes. However, climate and weather does play a significant role in the response and recovery from earthquakes. Effects from climate change could create cascading complications and impacts.

5.4.1.4 Electrical Failure

- **Ranking**: *Probability* – Medium; *Impact* - High
- **Description**

For the purposes of this LHMP, Electrical Failure hazards are confined to rolling blackouts or brownouts and Public Safety Power Shutdown (PSPS) events. While some accidents can cause energy electrical failures, they are usually smaller, localized events and are not part of this assessment. Additionally, electrical failures hazards can be consequences from other events. These electrical outage consequences are discussed under the primary hazard event (high winds, wildfire, earthquake). A brownout is a partial, temporary reduction in total system capacity, while a blackout is a complete interruption in power. A brownout is caused by high electricity demand that is near or above a utility's production capacity. When this occurs, the utility may reduce the

flow of electricity to certain areas to prevent a blackout. The state of California has also implemented "Flex Alerts" to bring awareness to times in which supply and demand of power could become an issue. A blackout is a large-scale service interruption that can happen as a result of severe weather or equipment failure at power plants. There are several factors that can play into electrical failures: 1) increased demand within the city; and 2) increased demand elsewhere. Because Southern California Edison is part of the western power grid, increases in other parts in the west region could curtail the energy available to the City.

PSPS events are initiated by power utility companies and are implemented in response to severe weather events. The purpose is to mitigate the increased fire risk during "red flag" weather conditions. Red flag weather conditions include high winds, low humidity, and high temperatures. By shutting off power, the utility companies are ensuring that electrical equipment, which can arc and spark, during severe events, will not exacerbate or start a fire.

- **Location and Extent**

A Power Outage event can occur throughout the entire city at any time.

- **History**

Southern California has experienced a population growth over the years. This coupled with changes to daily lifestyles (heavier reliance on power) and changing weather patterns have contributed to a higher demand for power over recent years. Because of this, the City of Temecula, like other parts of California, have had power outage events related to the failure of the statewide or regional systems not being able to meet demand. Electrical failure events usually occur during the warmer summer months and have lasted for a few hours and in some cases days. Recently, the City has experienced several power outages and electrical events due to the power company's implementing PSPS events in response to Red Flag weather conditions. Similar to the power outage during the summer months, these PSPS power outages are relativity short in duration.

- **Probability**

There are no studies that predict the probability of electrical failure events; however, it is expected that there is a higher probability of events occurring during the warmer summer months and during Red Flag (high temperatures, low humidity, high wind) events.

- **Climate Change Considerations**

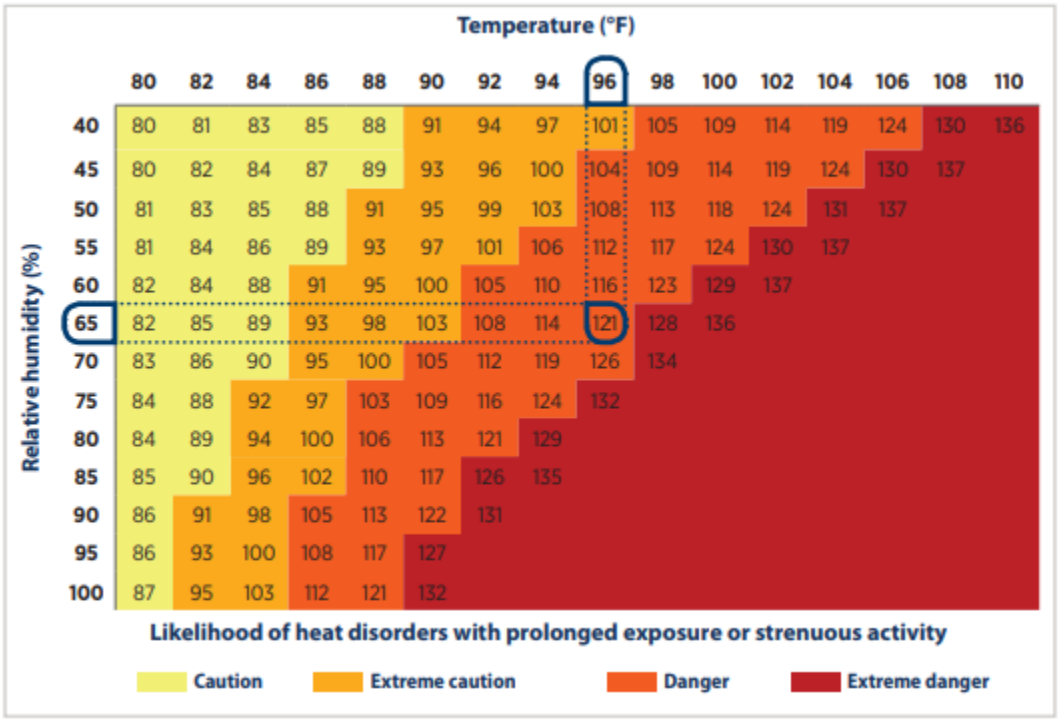
Climate can play a significant role in Electrical Failure and Outage events. As temperatures rise due to changing conditions, it will have significant impacts on energy supply and demand. Additionally, changing climate conditions can create more Red Flag events, causing the power companies to consider turning off power to lessen the potential fire threat.

5.4.1.5 Extreme Weather – Heat

- **Ranking**: *Probability* – Medium; *Impact* - High
- **Description**

Extreme Heat conditions, according to the EPA and CDC, is defined as weather that is much hotter and more humid than average for a particular time and place. The heat index is a measure of how hot it feels when relative humidity is factored in with the actual air temperature (**Figure 5.8**). Relative humidity is the percentage of moisture in the air compared with the maximum amount of moisture the air can hold. Humidity is an important factor in how hot it feels because when humidity is high, water does not evaporate as easily, so it is harder for your body to cool off by sweating.

Figure 5.8 – NOAA's National Weather Service Heat Index



Extreme heat is not just a nuisance; it kills hundreds of Americans every year and causes many more to become seriously ill. Measures to prevent illness are generally common sense, including staying cool indoors, keeping hydrated, limiting physical activity, and monitoring those at highest risk.

- **Location and Extent**

The entire city is subject to Extreme Weather (Heat) conditions. While this will affect humans, a significant impact would be felt on livestock and agriculture. The City of Temecula is home to the

Temecula Wine Country and has several wineries and growers that produce grapes and other crops.

- **History**

The City of Temecula experiences extreme temperatures on an annual basis. In most instances, the events are short in duration and do not create significant impacts on the community. Some of the minor events do require the City to act including dissemination of Public Service Announcements, checking in with vulnerable populations (elderly, homeless), and opening and/or coordinate with others to open cooling centers. Some of the more significant extreme weather events in the region include:

- In August of 2022, an extreme heat event occurred impacting the Southwestern Region of Riverside County which includes Temecula.
- In September of 2020, a severe early-September heat wave challenged record high temperatures across the region with local communities recording record high temperatures.

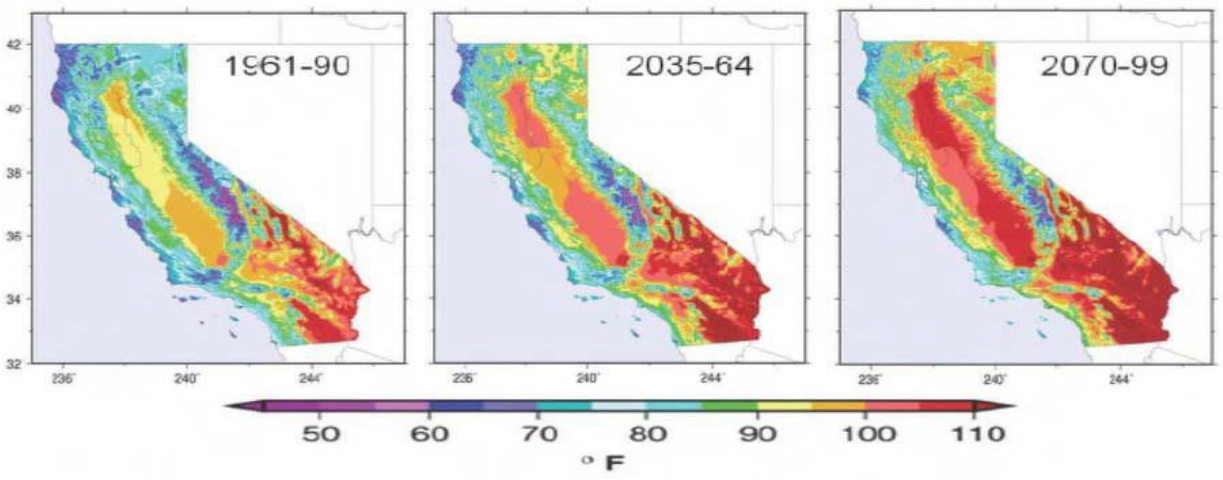
- **Probability**

In any given year Temecula could experience extreme heat events.

- **Climate Change Considerations**

Climate plays a significant role in Excessive Heat events. As temperatures rise and fall due to changing conditions, Californians will face greater possibility of Extreme Heat. By mid-century, extreme heat events in urban centers could cause two to three times more heat-related deaths than occur today. By 2100, The California Energy Commission is projecting hotter temperatures are expected throughout the state, with an increase of 3 to 5.5°F under the lower emissions scenario and 8 to 10.5°F under the higher emissions scenario (**Figure 5.9**).

Figure 5.9 – Comparison between Historic and Projected Temperatures (2009)



According to the EPA and CDC, the chances are increasing that an Extreme Heat event could happen where you live because, the average temperatures are rising, both in the United States and around the world:

- ✓ *Globally, the annual average temperature has been rising since the beginning of the 20th century, and temperatures are expected to continue to rise through the end of this century.*
- ✓ *Worldwide, 15 of the 16 warmest years on record have occurred since 2000, with the exception of 1998*

5.4.1.6 Fire (Wildfire)

- **Ranking**: *Probability* – High; *Impact* - High
- **Description**

Wildfires can be started by natural and mad-made causes. There are three (3) different classes of wild land or wildfires: 1) surface; 2) ground; and 3) crown. A "Surface fire" is the most common type and burns along the floor of a forest, moving slowly and killing or damaging trees. A "Ground fire"; usually started by lightning, are fed by subterranean roots, and smolder on or below the forest floor. A "Crown fire" spread rapidly by wind and move quickly by jumping along the tops of trees.

Wildfires can be classified as either a wildland fire or a wildland-urban interface (WUI) fire. Wildland fires involve situations where a fire occurs in an area that is relatively undeveloped except for the possible existence of basic infrastructure such as roads and power lines. A WUI fire includes situations in which a wildland fire enters an area that is developed with structures and other human developments. In WUI fires, the fire is fueled by both naturally occurring vegetation and the urban structural elements themselves. According to the National Fire Plan issued by the U.S. Departments of Agriculture and Interior, the wildland-urban interface is defined as "…the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels."

The WUI fire can be subdivided into three (3) categories (NWUIFPP, 1998): 1) classic wildland-urban interface; 2) the mixed wildland-urban interface; and 3) the occluded wildland-urban interface. 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. Generally, many of the areas at risk within the City of Temecula fall into the classic wildland-urban interface category.

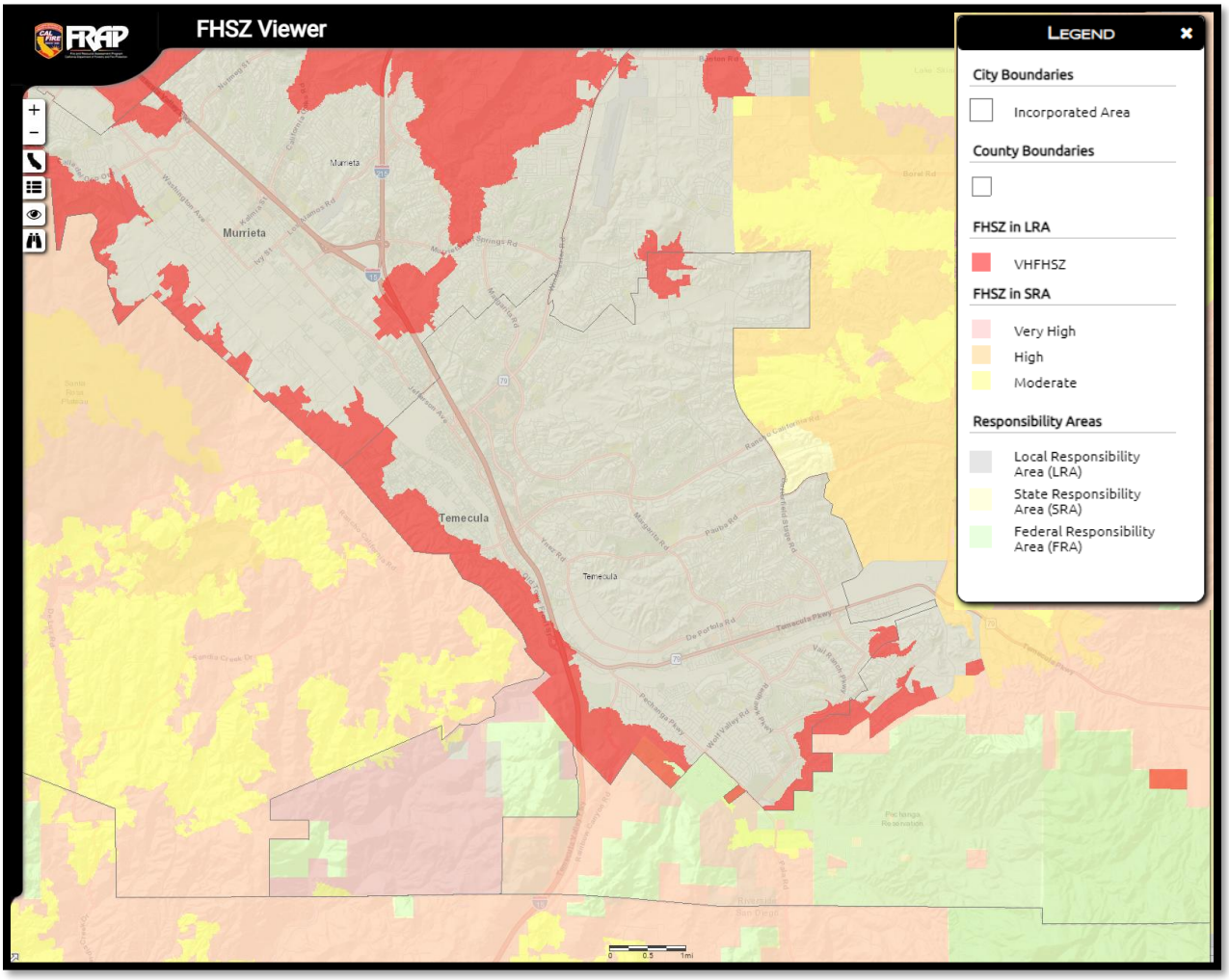
Certain conditions must be present for a wildfire hazard to occur; a large source of fuel must be present, the weather must be conducive (generally hot, dry, and windy), and fire suppression sources must not be able to easily suppress and control the fire. The cause of a majority of

wildfires is human-induced or lightning; however, once burning, wildfire behavior is based on three (3) primary factors: 1) fuel; 2) topography; and 3) weather. Fuel will affect the potential size and behavior of a wildfire depending on the amount present, its burning qualities (e.g., level of moisture), and its horizontal and vertical continuity. Topography affects the movement of air, and thus the fire, over the ground surface. The terrain can also change the speed at which the fire travels, and the ability of firefighters to reach and extinguish the fire. Weather as manifested in temperature, humidity, and wind (both short and long term) affect the probability, severity, and duration of wildfires. Other factors that create concern are drought conditions and development (the build environment). Drought conditions bring on contributing concerns in that it can lead to relatively drier conditions and leave reservoirs and water tables lower; thus, creating hotter fires and less water to fight the fires. The expansion of the built environment into previously unoccupied areas introduces more people to the hazard and in some cases make response actions more challenging.

- **Location and Extent**

The climate, topography, and vegetation in Temecula is conducive to annual wildfire events. California Department of Forestry and Fire Protection, Fire and Resource Assessment Program (CDF-FRAP) was established and mandated to map areas of significant fire hazards based on fuels (vegetation), terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZ), define the application of various mitigation strategies to reduce risk associated with wildland fires. CDF-FRAP developed data that displays the relative risk to areas of significant population density from wildfire. This data is created by intersecting residential housing unit density with proximate fire threat, to give a relative measure of potential loss of structures and threats to public safety from wildfire. The map below (shown on next page) depicts the “very high” Fire Hazard Severity Zone(s) located in Temecula for state and local responsibility areas **(Figure 5.10)**.

Figure 5.10 – Very High Fire Hazard Severity Zones in Local Response Area (LRA) (2022)



Due to a combination of topography, weather, and fuel, and exacerbated by potentially high winds and limited access, the western portion of the City of Temecula is highly susceptible to wildland fire hazards. The slopes of the Santa Margarita Ecological Reserve, the hills between Rancho California Road and Temecula Parkway are not only difficult for firefighters and their equipment to reach, but the hill's steepness and configuration can result in the rapid upslope spread of fire.

Limited rainfall, low humidity, and seasonal high temperatures continue to contribute to the desiccation of the grasses and chaparral which cover the foothills, providing prime fuel for intense burns. Although some of the canyons are shielded from the direct impact of the powerful, dry Santa Ana winds, their occurrence generally aggravates the fire hazard. In addition, the presence of human activities in or near a wildland area dramatically increases the risk of a major fire due to careless smokers, homeless encampments, illegal campfires, and other related risks.

- **History**

Historically, fires in the City of Temecula have started in either the creek beds and burn from a western to easterly direction, driven by prevailing winds and topography or above the city in the hills of the unincorporated area of DeLuz. **Table 5.3** shows the year and acres of reported wildfires in the City of Temecula since 2000.

Table 5.3 – Recent Fires Occurring in or around the City of Temecula (2000-2022) (2022)

Name	Acres	Year
Fairview *	28,307	2022
Meadows	5	2022
Creek	2	2022
Rainbow	.25	2020
Eagle Fire *	8,900	2004
Mountain *	9,898	2003
Pechanga *	11,734	2000

*Denotes fires occurring in the local vicinity with a direct impact on the community

- **Probability**

The majority of work done to estimate the probability of wildfire occurrence has been around identifying the potential areas for wildfire to occur. As previously mentioned, vegetation, weather, and topography were the significant elements in identifying areas of potential threat to wildfire occurrences. The area south and west of the City of Temecula is marked by mountains, foothills, and canyons that are covered in susceptible vegetation. A large amount of the native vegetation in the Temecula area is commonly called chaparral, it is a dense and scrubby bush that has evolved to persist in a fire-prone habitat. Chaparral plants will eventually age and die; however, they will not be replaced by new growth until a fire rejuvenates the area. Chamise, manzanita and ceanothus are all examples of chaparral which are quite common in the Temecula area. The City of Temecula's climate, with its warm and dry summers, contributes to low relative humidity and low fuel moistures. When combined with high fuel loading, the potential for a catastrophic wildfire event is significant. Three (3) weather conditions specific to Temecula that may cause the ignition and/or impact the behavior of wildfires are as follows:

- *Thunderstorms and the associated lightning are a significant source of fire starts, and usually occurs mid to late summer*
- *High winds can become steady up to 20 mph and gust up to 30-40 mph throughout the year but are most likely to exacerbate wildland fires during the months of August through October when dry vegetation conditions are generally present*
- *Hot, dry conditions most commonly occur in August and September*

This knowledge and understanding are a key driver in the methodology of the CDF-FRAP program. According to the CDF, the FRAP "very high" Fire Hazard Severity Zone maps are based on data and models of, potential fuels over a 30- to 50-year time horizon and their associated expected

fire behavior and expected burn probabilities to quantify the likelihood and nature of vegetation fore exposure to buildings. This indicates a very high likelihood of wildfire occurrence in the area. As such, Temecula is susceptible to annual wildfire risk. An aspect of wildfires that needs greater consideration within the City of Temecula is man-made caused wildfires. Over the past few years, the City has noticed an increase in the number of wildfires started by arsonists, illegal homeless encampments, and improper use of fireworks. All of these factors have increased the probability of wildfires in the City.

- **Climate Change Considerations**

Climate change plays a significant role in wildfire hazards. The changing conditions from wet to dry can create more fuel; the increased possibility of high winds increase risk and present a challenge, and drought conditions could hinder ability to contain fires. Large wildfires also have several indirect effects beyond those of a smaller, local fire. These may include air quality and health issues, road closures, business closures, and other forms of losses. Furthermore, large wildfires increase the threat of other disasters such as landslide and flooding.

5.4.1.7 Flooding

- **Ranking**: *Probability* – High; *Impact* - Medium
- **Description**

A flood is a temporary condition (short-duration or long-duration) of partial or complete inundation on land that is normally dry. This condition is generally caused by precipitation (i.e., rainfall). Several factors determine the severity of floods, including rainfall intensity and duration, antecedent moisture conditions, surface permeability, and geographic characteristics of the watershed such as shape and slope. Other causes of flooding can include a ruptured dam or levee, rapid ice or snow melting in the mountains, under-engineered infrastructure, or even a poorly placed beaver dam can overwhelm a river or channel and send water spreading over adjacent land or floodplains. According to FEMA, there are several different types of floods and under some there are subtypes. The flooding types and subtypes include:

- *Riverine Flooding*- River/Stream Overbank Flooding, Flash Floods, Dam and Levee Failure, Alluvia Fans, Ice Jam Flooding, Moveable Bed Streams
- *Urban Drainage*- Drainage system capacity deficiencies
- *Ground Failures*- Mud flood and Mud flows, Subsidence, Liquefaction
- *Fluctuating Lake Levels*- Increase volume caused by rain, snowmelt, and other runoffs
- *Coastal Flooding and Erosion*- Storm Surge

In California, some of the more common types of flooding fall under Riverine Flooding (i.e., flash flooding), Urban Flooding, and Coastal Flooding (i.e., storm surge). Floods can take several hours to days to develop. A flash flood is a flood occurring in a watershed where the time of travel of

the peak of flow from one end of the watershed to the other is less than six hours. Coastal flooding occurs when storms produce large ocean waves that sweep across coastlines making landfall. The following flood characterization designates the amount of time for response:

- *Flood Watch*- a flood is possible in the area. Advanced warning
- *Flood Warning*- flooding is already occurring or will occur soon in the area.
- *Flash Flood Watch*- a flash flood is possible in the area. Little-to-no advanced warning
- *Flash Flood Warning*- flooding is already occurring or will occur soon in the area. Little-to-no advanced warning

- **Location and Extent**

The geographical location, climate, and topography of the City of Temecula make the city prone to flooding. In Temecula, floods usually occur during the winter "*wet*" season, the time of year with the highest precipitation totals or heavy rainfalls. During significant rainfall years, the season is characterized by high intensity rainfalls and rapid runoffs or discharge. These storm events have inundated streams; flooded areas; created debris flows (i.e., sediment, rock, dead trees) that have plugged culverts and damaged bridges/overpasses; and/or, eroded or scared the landscape. The common types of flooding in the City of Temecula are:

- *Flash Flood*- A flash flood is a rapid flooding of low-lying areas, rivers and streams that is caused by the intense rainfall associated with a thunderstorm, or multiple thunderstorms. Flash floods also occur when a man-made structure, such as a dam, collapses. Flash flooding occurs when the ground under a storm becomes saturated with water so quickly that it cannot be absorbed. The runoff collects in low-lying areas and flows rapidly downhill. As a result, anything in its path is suddenly in rising water. A typical flash flood begins with a slow-moving thunderstorm. This usually takes longer to move out of the affected areas and causes the area to endure a greater amount of rainfall for a longer period of time. In addition, a thunderstorm may pass over an affected area repeatedly, dumping even more rainfall. A large amount of rainfall in a short time can result in flash flood conditions, as can a dam failure or other sudden spill. The National Weather Service's definition of a flash flood is a flood occurring in a watershed where the time of travel of the peak of flow from one end of the watershed to the other is less than six hours.

- *Urban Drainage*- The heavy rainfall associated with these storm systems contributes to urban flooding in a number of ways. Primarily, heavy rainfall will often overwhelm the capacity of the conventional drainage system made up of storm drains, catch basins, sewers, and additional natural mechanisms for storm-water management. These systems typically cannot handle more than one or two inches of rainfall per hour before they begin to backup and overflow. This amount is further diminished if the storm drains, and other components of the storm-

water management system, have not been adequately maintained, are clogged with debris such as trash or natural waste, or are old and in a state of disrepair. Heavy rainfall, combined with storm-water runoff, can cause local waterways to rise and overflow their banks.

- **History**

The City of Temecula has had a long history with heavy rains. The possibility of flood for the city stems from its location between two major drainage channels: the Murrieta Creek to the north and west of the city and the Temecula Creek on the south end. Both channels come together to form the Santa Margarita River in the southwest corner of the city. The last major flood experienced from these two creeks was in 1993. The city has taken steps to control flooding through vegetation reduction, creek maintenance, and bridge upkeep.

While not always a significant event, floods inundate portions of the City of Temecula almost every year. These smaller flood events create issues for local residents and business with everything from traffic congestion to localized water damage. Most of the smaller flood events do not rise to the level of significance (i.e., requiring local, county, state, or federal declarations) and do not require activation of the Emergency Operations Center (EOC). The City has not experienced a significant flood event since 2019. The significant flood events have been known to create considerable impacts. During some significant flood events the flood waters from the Temecula/Murrieta Creek were responsible for extensive damage to Old Town Temecula, ranging from severe ponding to high flood waters, to extensive, permanent damages from uncontrollable runoff. The following information provides a summary of the available historic significant flooding events in the City of Temecula:

- FEMA 4431-DR-CA: (February 2019) The City of Temecula sustained more than $130,000 in damages and costs associated with emergency repair and debris removal. The amounts included salaries, benefits, overtime and other professional and contractual services for repairs and maintenance supplies.

The southern portion of the city along highway 79 south (Temecula Parkway) is subject to a 100-year flood, meaning that a flood of that intensity might occur once in one hundred years (1% chance of occurring in any given year). Considering these features and other factors, FEMA has developed Flood Hazard Maps. The most common flood hazard map is the Federal Emergency Management Agency (FEMA) 100-year flood zone map (**Figure 5.11**). The 100-year flood zone map (utilizing FEMA flood hazard zones) depicts areas within the City of Temecula that may be prone to flooding. Definitions of FEMA's flood zone designations are provided in **Table 5.4**.

Figure 5.11 – Temecula 100 Year Flood Map (2022)

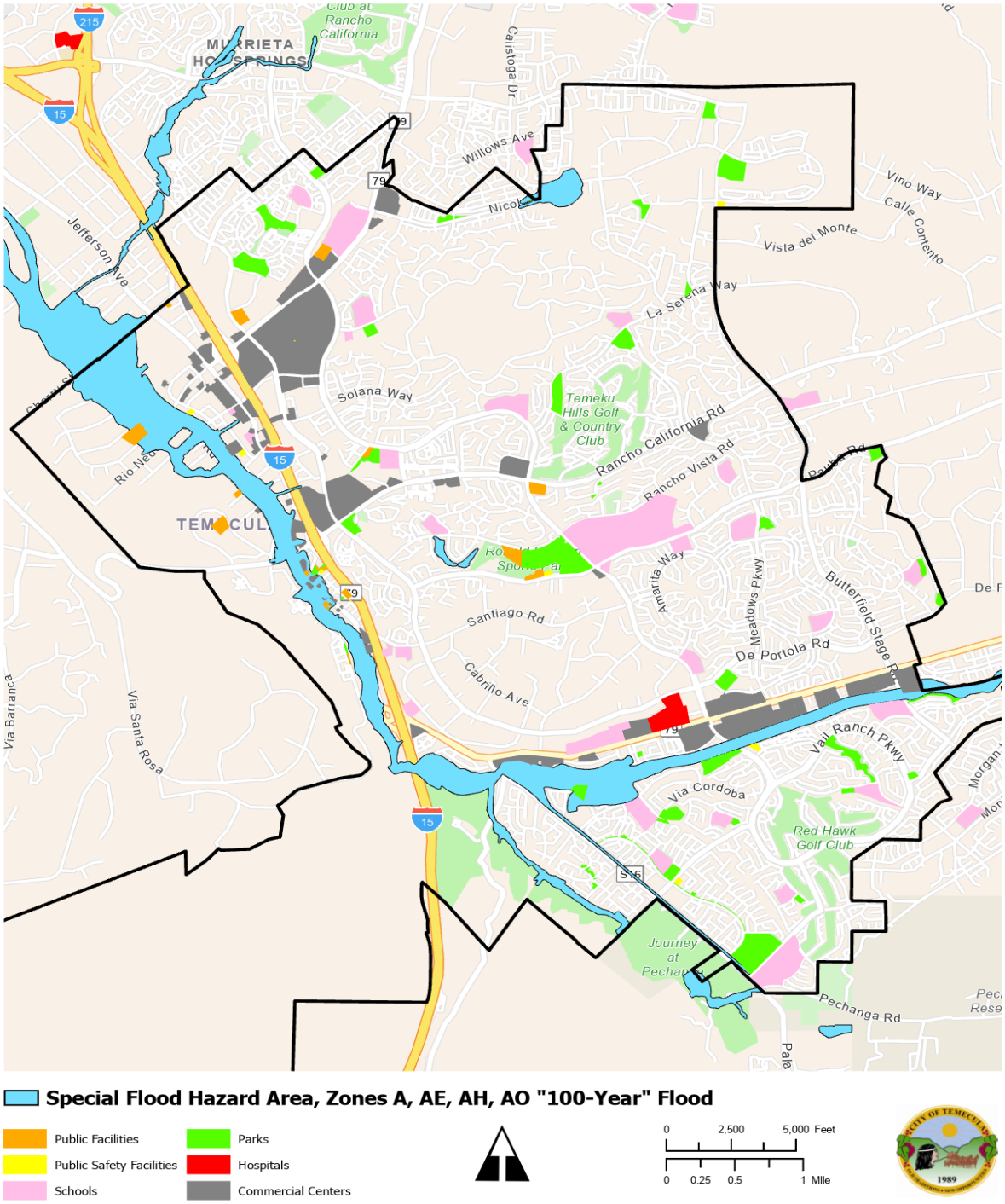


Table 5.4 – FEMA Flood Zone Designations

Risk Level	Flood Zone	Description
High	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.
	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.
Moderate to Low	X (Shaded)	Area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods.
	X (Unshaded)	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100-year flood.
Undetermined	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.

- **Probability**

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

The 100-year Flood map of the City of Temecula is shown in **Figure 5.11** above. As defined by FEMA, Zone A, AE, AE Floodway, AH, and AO (lighter shades of blue) indicate a 1% annual chance of flooding, while Zone Shaded X (dark blue) indicates a 0.2% of annual chance of flooding.

- **Climate Change Considerations**

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

5.4.1.8 Hazardous Materials Incident

- **Ranking**: *Probability* – Medium; *Impact* - High
- **Description**

Hazardous materials are any substance or combination of substances that may pose a risk to human health and safety or the environment. Hazardous materials include toxic, corrosive, infectious, flammable, explosive and radioactive substances. Federal, state, and local governments have enacted a variety of laws and established programs to deal with the transport, use, storage, and disposal of hazardous materials to reduce the risks to the public health and environment.

Hazardous materials incidents can happen anywhere and at any time, however, there are certain areas within the city that are at a higher risk than others. Roadways and railways that are used to transport hazardous materials have increasing potential as well as industrial facilities that use, store, and dispose of such materials. Releases of explosive, caustic, and flammable materials can cause many injuries and deaths as well as large-scale evacuations to sheltering-in-place.

Hazardous materials are used and/or created in manufacturing, agriculture, service industries (e.g., gas stations, dry cleaners), and health care facilities. Several household products such as cleaning supplies and paint are also considered hazardous materials. These chemicals and hazardous materials may be corrosive or otherwise damaging over time. The US Department of Transportation (US DOT) classifies hazard chemicals/materials into the following classification system:

- ✓ *Class 1*- Explosives
- ✓ *Class 2*- Flammable, non-flammable, and poisonous gases
- ✓ *Class 3*- Flammable liquids
- ✓ *Class 4*- Flammable, spontaneously combustible, and dangerous when wet solids
- ✓ *Class 5*- Oxidizers and organic peroxides
- ✓ *Class 6*- Toxic (poisonous) substances
- ✓ *Class 7*- Radioactive materials
- ✓ *Class 8*- Corrosive substances
- ✓ *Class 9*- Miscellaneous dangerous goods/hazardous materials and articles

The release of these chemicals and/or materials into a community can have devastating effects. A hazardous materials release could also result in public health risks, fires, and/or explosions. Contamination may be carried out of the immediate area of the incident by people, vehicles, wind, and water. Weather conditions can increase the size and intensity of the Hazardous Materials Release. Typography, such as hills and canyons, can increase the size of the release or make it more difficult to contain. There are several types of hazardous materials releases:

- ✓ *Fixed-Site Releases*- releases involving the production and manufacturing, handling, and storage of a hazardous product at a single facility as well as any releases that may occur at a designated hazardous waste disposal site.
- ✓ *Transportation-Related Releases*- Includes releases that occur while the hazardous material is in transit from one facility to another or en route to be disposed of at a designated hazardous waste disposal site (e.g., on highways, railways, airports, or in pipelines).
- ✓ *Intentional Releases*- includes criminal acts and acts of terrorism in which a hazardous material is used to intentionally cause injuries and/or fatalities, damage the environment and/or property, or advance a political or social agenda.

- **Location and Extent**

As outlined above, hazardous materials can be found throughout the community. The location and identity of facilities that store hazardous materials must be reported to local and federal governments as required by the Emergency Planning and Community Right-to-Know Act (EPCRA). Many facilities have their own hazardous materials guides and response plans, including transportation companies who transport hazardous materials. The release of hazardous materials into the environment can cause a multitude of problems. Although these incidents can happen almost anywhere, certain areas of Redlands are at higher risk, such as near roadways that are frequently used to transport hazardous materials and locations with industrial facilities that use, store, and/or dispose of such materials. Areas crossed by railways, waterways, airways, and pipelines also have increased potential for mishaps.

- **History**

Within the City of Temecula, the CALFire / Riverside County Fire Department has the responsibility for responding to hazardous materials incidents. The City of Temecula Fire Division has responded to a series of hazardous material incidents over the years. While most are routine in nature and do not require significant resources, there have been a handful of incidents that have required greater response and recovery coordination/effort.

- **Probability**

The release of chemicals and hazardous materials can occur anywhere in the city but are more likely on or near major transportation corridors. Incidences can occur during production, storage, transportation, and/or during use or disposal of materials. Communities can be at risk if a

chemical is used unsafely or released in harmful amounts into the environment. Hazardous materials can cause death, serious injury, long lasting health effects, and damage to buildings, the environment, homes, and other property.

- **Climate Change Considerations**

While there is little evidence to link climate change increase occurrences of chemical and hazardous material releases, weather plays a significant factor in certain aspects of chemical and hazardous material releases. Changing conditions can create more mishaps and accidents with production, storage, transportation, use, and disposal of chemicals and hazardous materials. Additionally, changing conditions could impact the response and recovery efforts after releases.

5.4.1.9 Pandemic

- **Ranking**: *Probability* – Medium; *Impact* - High
- **Description**

Infectious Disease is a broad term used to describe illness caused by a specific type of bacterium, parasite, virus, or fungus organisms. Below is a brief overview of the main infectious disease types:

- *Bacterial Infections*- Responsible for a variety of diseases from strep throat to meningitis and tuberculosis.
- *Fungal Infections*- There are roughly 300 types of fungi known to cause infectious disease. Common types include ringworm, blastomycosis, histoplasmosis, and pneumocystis pneumonia.
- *Parasitic Infections*- Responsible for a variety of diseases including malaria, Chagas disease, and toxocariasis.
- *Viral Infections*- Responsible for a variety of diseases including the common cold, influenza, mononucleosis, smallpox, and HIV/AIDS.

These organisms can be transmitted:

- *Person-to-person (e.g., measles, mumps, meningococcal disease, tuberculosis)*
- *By consuming contaminated food or water, also known as foodborne (e.g.: salmonella, E.coli, botulinum toxin)*
- *Through animal bites (i.e., mosquito, ticks, fleas) also known as vector-borne (e.g.: West Nile virus, dengue, Zika, malaria).*

Newly emerging infectious diseases include Ebola, Zika, Severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS), avian influenza. The current pandemic (COVID-19) is linked to the SARS virus. The SARS coronavirus (SARS-CoV) is a virus identified in 2003. SARS-CoV is thought to be an animal virus from an as-yet-uncertain animal reservoir, perhaps bats, that spread to other animals (civet cats) and first infected humans in the Guangdong province of southern China in 2002. In 2019, in Wuhan China a new coronavirus was discovered. The coronavirus is closely related to the SARS coronavirus. The new virus goes by both COVID-19, standing for coronavirus disease 2019, and SARS CoV-2. Additional detail about the impacts of the COVID 19 can be found under the History section.

Also, of concern are the threats of potential biological terrorism (bioterrorism), the intentional release or spread of disease (or toxins). Bioterrorism, also known as biological warfare, is not new and has been used for centuries. As early as 600 BC, military leaders have implemented practices to poison water supplies and infect citizens/soldiers to gain strategic advantages in their efforts to conquer territories. Today there have been occurrences are both at the large scale (by military) and small scale (by terrorist organizations or individuals). No matter the purpose, the release of organisms could have devastating effects on an international, national, state, or local level if it is a highly infectious disease.

- **Location and Extent**

An emergent disease can occur throughout the entire city at any given time during the year.

- **History**

Infectious diseases have been of concern for many years. It is only recently, because of COVID-19 that the potential risk has been heightened. As cited by the Centers for Disease Control and Prevention (CDC), the 20th century saw three (3) pandemics, the most notable of which was the 1918 Spanish influenza pandemic that was responsible for 20 million deaths throughout the world. The pandemics are now known to represent three (3) different antigenic subtypes of influenza A virus: H1N1 (in 1918), H2N2 (Asian Influenza in 1957), and H3N2 (Hong Kong Influenza in 1968). Not classified as true pandemics are three (3) notable epidemics: a pseudo pandemic in 1947 with low death rates, an epidemic in 1977 that was a pandemic in children, and an abortive epidemic of swine influenza in 1976 that was feared to have pandemic potential. Major influenza epidemics show no predictable periodicity or pattern, and all differ from one another. Evidence suggests that true pandemics with changes in hemagglutinin subtypes arise from genetic reassortment with animal influenza A viruses.

The world is still dealing with the rolling effects of COVID-19 and identified sub-types. According to the CDC, COVID-19 was first identified in Wuhan, China, in December 2019. Although most people who have COVID-19 have mild symptoms, COVID-19 can also cause severe illness and even death. Some groups, including older adults and people who have certain underlying medical conditions, are at increased risk of severe illness. Because it is a new virus, scientists are learning more and more about it each day. New cases of and death rates from COVID-19 are rising globally daily but not at the rate it was during 2020 and 2021.

Locally, the City of Temecula was impacted by COVID-19 both from an economic and community-based standpoint. Other infectious disease events that have impacted the city and operational area include the 2009 H1N1, 2003 Avian Flu, 2015-17 Zika, 2014-16 West African Ebola, 2015 West Nile, 2013 large scale Tuberculosis, 2004 botulism Type A, 2003 West Nile, and the 2020 Hepatitis A outbreak.

- **Probability**

There is an annual risk of experiencing an infectious disease outbreak in the City of Temecula. While there is a continued threat from a novel influenza virus, the potential threat of outbreaks and epidemics have been increased due expanding global trade and accessible national and international travel. Infectious disease outbreaks and epidemics occur on an ongoing basis.

Aside from the City of Temecula currently recovering from the effects from COVID-19, annual outbreaks of the seasonal flu usually occur during the late fall through early spring. Most people have natural immunity, and a seasonal flu vaccine is generally available. According to the CDC, in a typical year, approximately 5 to 20 percent of the population gets the seasonal flu and flu-related deaths range from 3,300 to 48,600 (average 23,600).
Bird flu (H5N1) is an influenza A virus subtype that is highly contagious among birds; although rare, some human infections with the Bird flu virus have occurred. Most confirmed cases have occurred in Asia, Africa, the Pacific, Europe, and the Near East. According to the CDC, there are currently no confirmed human cases of Bird flu infections, but it remains a serious concern with the potential to cause a deadly pandemic.

Swine flu (H1N1) was first detected in the United States in April 2009. This virus was a unique combination of influenza virus genes never previously identified in either animals or people. The Swine flu virus caused more illness in young people and pregnant women than is usual for prior flu seasons and was declared a Worldwide Pandemic by the World Health Organization.

- **Climate Change Considerations**

While many vector-borne diseases, such as malaria, yellow fever, dengue, and murine typhus, are rarely seen in the United States, the United States is susceptible to these vector-borne diseases. Many vector-borne diseases are climate sensitive and ecological shifts associated with climate change are expected to impact the distribution and incidences of these diseases. Changes in temperature and precipitation directly affect vector born disease transmission through pathogen-host interaction, and indirectly through ecosystem changes and species composition. As temperatures increases vectors can spread into new areas that were previously too cold. For example, two (2) mosquito vectors that carry malaria are now found at the U.S.-Mexico border.

5.4.1.10 Transportation Failure

- **Ranking:** *Probability* – Medium; *Impact* - High
- **Description**

Transportation systems in or near Temecula include airways and roadways. These systems provide services on a regional and local level. A major accident is possible with these two methods of transportation through the city. Large accidents are investigated by the National Transportation Safety Board (NTSB), which is an independent Federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in the other modes of transportation – railroad, highway, marine and pipeline – and

issuing safety recommendations aimed at preventing future accidents. The Safety Board determines the probable cause of:

- All U.S. civil aviation accidents and certain public-use aircraft accidents
- Selected highway accidents
- Railroad accidents involving passenger trains or any train accident that results in at least one fatality or major property damage
- Major marine accidents and any marine accident involving a public and nonpublic vessel
- Pipeline accidents involving a fatality or substantial property damage
- Releases of hazardous materials in all forms of transportation
- Selected transportation accidents that involve problems of a recurring nature

Since its inception in 1967, the NTSB has investigated more than 132,000 aviation accidents and thousands of surface transportation accidents.

The trucking industry has consistently increased in size over the last century. Today, there are more trucks on the road than 20 years ago. “In 2000, one out of every eight fatal car accidents involved a large truck. This can be attributed not only to the size and weight of these trucks but also to significant blind spots in the field of view of truck drivers (Trucking Accident Info Center, 2003).” According to the U.S. Department of Transportation National Highway Traffic Safety Administration (NHTSA), on average in the country and as of 2020, large trucks made up 9 percent of all vehicles involved in fatal crashes. The NHTSA says that large trucks were much more likely to be involved in a fatal multiple-vehicle crash.

In 2020, The NHTSA reported that there were 4,965 people killed in crashes involving large trucks. This was a 1 percent decrease from 5,032 in 2019. 71 percent of all people killed in large truck crashes in 2020 were occupants of other vehicles. 17 percent were occupants of large trucks and 13 percent were non-occupants (pedestrians, cyclists, or other non-occupants). Since 2002, 13,966 fatalities were attributed to large trucks.

Over a 10-year period, there was an unfortunate increase in the total number of people killed in large truck crashes, from 3,781 fatalities in 2011 to 4,965 fatalities in 2020. Of the fatalities in 2020:

- 71 percent (3,512) were occupants of other vehicles
- 17 percent (831) were occupants of large trucks
- 13 percent (622) were non-occupants (pedestrians, pedal cyclists, etc.)

From 2019 to 2020, there was a 7-percent decrease in the number of occupants of other vehicles killed in crashes involving large trucks. This is the first decrease in large-truck occupants killed, and occupants of other vehicles killed since 2013 to 2014. From 2019 to 2020 there was a 9-percent increase in the number of non-occupants killed. The 622 killed is large truck crashes in 2020 is the highest number of non-occupants killed in the most recent 10-year period.

The chart below **(Figure 5.12)** shows 2020 Data collected by NHTSA's National Center for Statistics and Analysis.

Figure 5.12 – People Killed & Injured in Crashes Involving Large Trucks / Crash Type (2020)

People Killed and Injured in Crashes Involving Large Trucks, by Person Type and Crash Type, 2011–2020

	Truck Occupants by Crash Type						Other People						
	Single Vehicle		Multiple Vehicle		Total		Occupants of Other Vehicles		Nonoccupants		Total		
Year	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Total
Killed													
2011	408	11%	232	6%	640	17%	2,713	72%	428	11%	3,141	83%	3,781
2012	423	11%	274	7%	697	18%	2,857	72%	390	10%	3,247	82%	3,944
2013	431	11%	264	7%	695	17%	2,845	71%	441	11%	3,286	83%	3,981
2014	405	10%	251	6%	656	17%	2,859	73%	393	10%	3,252	83%	3,908
2015	395	10%	270	7%	665	16%	3,017	74%	413	10%	3,430	84%	4,095
2016	520	11%	295	6%	815	17%	3,351	72%	512	11%	3,863	83%	4,678
2017	525	11%	353	7%	878	18%	3,535	72%	493	10%	4,028	82%	4,906
2018	538	11%	352	7%	890	18%	3,563	71%	553	11%	4,116	82%	5,006
2019	494	10%	399	8%	893	18%	3,569	71%	570	11%	4,139	82%	5,032
2020	508	10%	323	7%	831	17%	3,512	71%	622	13%	4,134	83%	4,965
Injured													
2011	7,425	8%	15,511	17%	22,936	26%	64,412	72%	1,674	2%	66,085	74%	89,021
2012	8,893	9%	16,478	16%	25,372	24%	76,342	73%	2,740	3%	79,082	76%	104,454
2013	8,949	9%	15,673	16%	24,621	26%	69,221	72%	2,254	2%	71,476	74%	96,097
2014	10,280	9%	16,865	15%	27,146	24%	82,282	74%	2,389	2%	84,671	76%	111,817
2015	10,175	9%	19,927	17%	30,102	26%	85,172	72%	2,561	2%	87,733	74%	117,835
2016†	12,941	10%	23,241	17%	36,183	27%	94,958	70%	3,587	3%	98,545	73%	134,727
2017†	14,550	10%	25,442	17%	39,992	27%	105,509	71%	2,808	2%	108,317	73%	148,309
2018†	13,480	9%	25,719	17%	39,200	26%	108,490	72%	3,480	2%	111,970	74%	151,170
2019†	15,199	10%	30,490	19%	45,688	29%	109,515	69%	4,156	3%	113,670	71%	159,359
2020†	15,816	11%	29,118	20%	44,934	31%	99,501	68%	2,496	2%	101,997	69%	146,930

Sources: FARS 2011–2019 Final File, 2020 Annual Report File (ARF); NASS GES 2011–2015; CRSS 2016–2020
†CRSS estimates and NASS GES estimates are not comparable due to different sample designs. Refer to end of document for more information about CRSS.
Note: Injury totals may not equal sum of components due to independent rounding.

The concern with an airplane crash in the City of Temecula is the potential for human casualties. A disabled aircraft striking the ground could result in explosions and fire. Temecula would need to address the medical needs as well as the mental health needs of victims and their families.

- **Location and Extent**

The City of Temecula is located within Riverside County and is served by one major freeway from the south, Interstate 15, and splits at the north end of the city into Interstate 15 and Interstate 215. All freeways run north and south through Temecula and serves as a major corridor from San Diego County to Los Angeles and Las Vegas. The closest airfield to Temecula is operated by the French Valley Airport Economic Development Agency. The French Valley Airport is located in Southwest Riverside County adjacent to the communities of Temecula, Murrieta, and Winchester. The airport is located on Highway 79 and is only minutes away from Interstates 15 and 215 which is Northeast of Temecula. The flight operations present a potential risk for air crashes. The greatest risk is immediately under the takeoff and landing zone located at the south end of the airfield which is adjacent to the Somers Bend development.

- **History**

In June of 2018, a major crash involving a large truck, resulted in a 10-hour closure creating chaos on the freeway with traffic backing up for miles. The driver attempted to bring his truck to a stop when vehicles in front of him collided, but he could not and clipped the car causing his truck to veer across all lanes of traffic and drove through a guardrail and partially plunged down an embankment at the Temecula Creek. Fortunately, there were no deaths as a result of the crash. (Temecula Patch, 2022)

In November of 2021, a small privately owned aircraft enroute to the French Valley Airport crashed in a field just yards from a major housing development resulting in the death of the pilot. There was no damage to property beside the plan itself (Press Enterprise, 2022).

- **Probability**

The possibility of an aircraft accident/incident occurring or major transportation accident/incident on the freeway in the City of Temecula will continue to exist due to the location (and existing use) of the French Valley Airport and the I-15 Freeway. Based on historic events and known increases in safety standards, it is anticipated that future accidents/incidents will be minimal. The risk to the City of Temecula associated with these types of accidents/incidents is similar to other general aviation airports in Southern California as well as freeways across the nation. The issue is the fact that the current state of frontage roads and other routes of transportation from San Diego County into Riverside County increase the probability and dangers.

- **Climate Change Considerations**

While there are many devices that monitor and/or track weather conditions, it is expected that changing conditions are going to impact air travel but not affect ground transportation as heavily. From the simplest of impacts from temperatures altering takeoffs and landing, to increase in rains and winds altering flight patterns, changes in our environment could increase the likelihood of an aircraft accidents/incidents.

5.4.2 Other Hazards of Significance

For the purposes of this LHMP, the following hazards are detailed as they are significant to the City of Temecula and pertinent to the local area.

5.4.2.1 Tornado (Windstorm)

- **Ranking**: *Probability* – Low; *Impact* - High
- **Description**

Winds are often referred to according to their strength, and the direction from which they are blowing. Wind is caused by the difference in pressure from one point on the earth's surface to another. Wind is created by air moving from the area of "*higher*" pressure to the area of "*lower*" pressure; the difference in pressure over a certain distance, determines the strength of the wind. Air does not move directly from the point of highest pressure to the point of lowest pressure. The earth's rotation affects the air flow by deflecting it to the right. This effect is called the Coriolis Effect. In the Northern Hemisphere, this causes air to flow clockwise around high-pressure areas and counterclockwise around low-pressure areas.

Winds are categorized by types and each type is associated with wind speeds: breeze (<0-31 mph), gale (32-65 mph), storm (66-72 mph), and hurricane (73-139> mph). Within each category are sub classifications with differential names depending on geographic location (i.e., tropical depression, tropical storm/cyclone) and/or categories (i.e., category 3 hurricane). Damage from winds account for half of all severe reports in the lower 48 states and is more common than damage from tornadoes. Winds are also measured using the Beaufort Scale. The Beaufort Scale categories winds by wind speed, using Force categories between 0-12 to measure speed and summarize descriptions (**Table 5.5**).

Table 5.5 – Beaufort Scale

Category (Force)	Speed (MPH)	Description	Wind Effects
0	< 1	Calm	Smoke rises vertically and the sea is flat.
1	1 - 3	Light Air	The direction of the wind is shown by drifting smoke but not wind vanes.
2	4 - 7	Light Breeze	Wind is felt on the face, leaves rustle and wind vanes move. Small wavelets appear on the ocean but do not break.
3	8 - 12	Gentle Breeze	Leaves and small twigs are in motion and light flags extend. Large wavelets appear on the ocean and crests begin to break.
4	13 - 18	Moderate Breeze	Dust and loose paper become airborne and small branches move. Small waves appear on the ocean.
5	19 - 24	Fresh Breeze	Small trees begin to sway and moderate waves appear.

Category (Force)	Speed (MPH)	Description	Wind Effects
6	25 - 31	Strong Breeze	Large branches are in motion and holding an umbrella becomes difficult. Large waves begin to form.
7	32 - 38	Near Gale	Whole trees are in motion and walking against the wind can be hard. Foam from breaking waves is blown in streaks.
8	39 - 46	Gale	Walking is difficult and twigs break off trees.
9	47 - 54	Severe Gale	There is slight structural damage, and the crests of waves begin to topple.
10	55 - 63	Storm	Trees are uprooted and there is considerable damage to structures. Very high waves form in long, overhanging crests.
11	63 - 72	Violent Storm	There is widespread structural damage, exceptionally high waves form, and the ocean is completely covered in foam.
12	> 73	Hurricane	There is devastating structural damage. On the ocean the air is filled with foam and spray.

For the purposes of the LHMP, windstorms include both 1) cyclonic winds and 2) significant straight-line, with little-to-no precipitation.

Cyclonic winds are the wind which swirl counterclockwise in the northern hemisphere or clockwise in the southern hemisphere. The biggest differences between hurricanes and tornadoes are how big they are and how long they last. Hurricanes are typically hundreds of miles in diameter, with high winds and heavy rains over the entire region. Hurricanes can last for days or even weeks. Tornadoes usually last no more than a few minutes.

- *Hurricane*- A rotating low-pressure weather system (storm) that has organized thunderstorms but no fronts (a boundary separating two air masses of different densities. Hurricanes originate in the Atlantic basin, which includes the Atlantic Ocean, Caribbean Sea, and Gulf of Mexico, the eastern North Pacific Ocean, and, less frequently, the central North Pacific Ocean. Hurricanes develop in stages, working their way up to hurricane status:

  - ✓ *Tropical Wave*- A low-pressure trough moving generally westward with the trade winds.
  - ✓ *Tropical Disturbance*- An organized area of thunderstorms that usually forms in the tropics. Typically, they maintain their identity for 24 hours and are accompanied by heavy rains and gusty winds.
  - ✓ *Tropical Cyclone*- A generic term for any organized low pressure that develops over tropical and sometimes sub-tropical waters. Tropical depressions, tropical storms, and hurricanes are all example of tropical cyclones.

- ✓ *Tropical Depression*- An organized area of low pressure in which sustained winds are 38 mph or less.
- ✓ *Tropical Storm*- A tropical cyclone with maximum sustained wind speeds that range from 39 to 73 mph.
- ✓ *Hurricane*- A tropical cyclone with sustained winds of at least 74 mph.

After the storm reaches Hurricane status, the Saffir-Simpson Hurricane Wind Scale is used to categorizes hurricanes by sustained wind speeds (**Table 5.6**).

Table 5.6 - Saffir-Simpson Hurricane Wind Scale

Category	Winds (MPH)	Damage	Description
1	74 - 95	**Minimal**	Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap, and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.
2	96 - 110	**Moderate**	Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outage that could last from several days to weeks.
3	111 - 129	**Extensive**	Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.
4	130 - 156	**Extreme**	Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted, and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.
5	> 156	**Catastrophic**	A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

- ✓ *Tornado*- A tornado is a rapidly (violent) rotating column of air that is in contact with both the surface of the Earth and a cumulonimbus cloud or, in rare cases, the base of a cumulus cloud. Tornadoes come in many shapes and sizes and are often visible in the form of a condensation funnel originating from the base of a cumulonimbus cloud, with a cloud of rotating debris and dust beneath it. Most tornadoes have wind speeds less than 110 miles per hour, are about 250 feet across, and travel a few miles before dissipating. The most violent tornadoes are capable of tremendous destruction with wind speeds of up to 300 mph. They can destroy large buildings, uproot trees, and throw vehicles hundreds of yards. They can also drive straw into trees. Damage paths can be in excess of one mile wide to 50 miles long.

  Most tornadoes form from thunderstorms. They need warm, moist air from the Gulf of Mexico and cool, dry air from Canada. When these two air masses meet, they create instability in the atmosphere. A change in wind direction and an increase in wind speed with increasing height creates an invisible, horizontal spinning effect in the lower atmosphere. Rising air within the updraft tilts the rotating air from horizontal to vertical. An area of rotation, 2-6 miles wide, now extends through much of the storm. Most strong and violent tornadoes form within this area of strong rotation. Tornadoes are measured by the Fujita Tornado Scale (**Table 5.7**) which classifies tornadoes by intensity categories, based on the maximum winds occurring within the funnel.

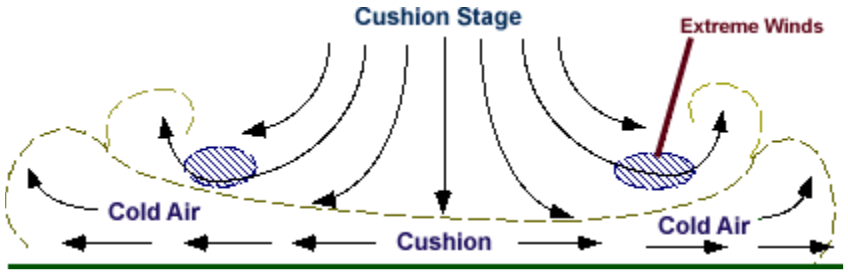
Table 5.7 - Fujita Tornado Scale

Category	Wind Speed	Description
F0	40-72 miles per hour	Gale Tornado. Light Damage: Some damage to chimneys; breaks twigs and branches off trees; pushes over shallow-rooted trees; damages signboards; some windows broken; hurricane wind speed begins at 73 miles per hour.
F1	73-112 miles per hour	Moderate Tornado. Moderate Damage: Peels surfaces off roofs; mobile homes pushed off foundations or overturned; outbuildings demolished; moving autos pushed off the roads; trees snapped or broken.
F2	113-157 miles per hour	Significant Tornado. Considerable Damage: Roofs torn off frame houses; mobile homes demolished; frame houses with weak foundations lifted and moved; boxcars pushed over; large trees snapped or uprooted; light-object missiles generated.
F3	158-206 miles per hour	Severe Tornado. Severe Damage: Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forests uprooted; heavy cars lifted off the ground and thrown; weak pavement blown off roads.
F4	207-260 miles per hour	Devastating Tornado. Devastating Damage: Well-constructed homes leveled; structures with weak foundations blown off some distance; cars thrown and disintegrated; large missiles generated; trees in forest uprooted and carried some distance away.
F5	261-318 miles per hour	Incredible Tornado. Incredible Damage: Strong frame houses lifted off foundations and carried considerable distance to disintegrate; automobile-sized missiles fly through the air in excess of 300 feet (100 meters); trees debarked; incredible phenomena will occur.
F6-12	>319 miles per hour	The maximum wind speeds of tornadoes are not expected to reach the F6 wind speeds.

Straight-line winds are common with the gust front of a thunderstorm or originate with a downburst from a thunderstorm. The winds can gust to 130 mph and winds of 58 mph or more and can last for more than twenty minutes. Straight-line wind events are most common during the spring when instability is highest and weather fronts routinely cross the country. These storms have wind speeds capable of reaching up to 100 mph, capable of producing a path of damage extending for hundreds of miles. Terms and characteristics of damaging straight-line wind events include:

- ✓ *Derecho*- Derechos, Spanish for "straight", are a widespread, long-lived, straight-line windstorm event that is associated with a land-based, fast-moving group of severe thunderstorms. Derechos can cause hurricane-force winds, tornadoes, heavy rains, and flash floods. A warm-weather phenomenon, derechos occur mostly in summer, especially during June, July, and August.

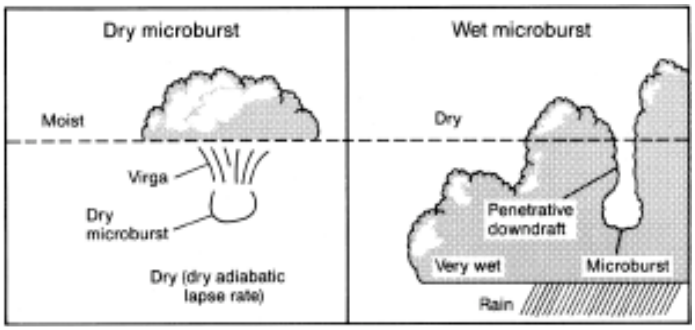
- ✓ *Updrafts/Downdraft*- Localized regions of warm or cool air will exhibit vertical movement (updrafts/downdrafts). Updrafts are small-scale current of rising air, often within a cloud. A mass of warm air will typically be less dense than the surrounding region, and so will rise until it reaches air that is either warmer or less dense than itself. The converse will occur for a mass of cool air and is known as subsidence. This movement of large volumes of air, especially when regions of hot, wet air rise, can create large clouds, and is the central source of thunderstorms. Drafts can also be conceived by low or high-pressure regions. A low-pressure region will attract air from the surrounding area, which will move towards the center and then rise, creating an updraft. A high-pressure region will then attract air from the surrounding area, which will move towards the center and sink, spawning a downdraft.
- ✓ *Downburst*- Strong, downdraft winds flowing out of a thunderstorm cell. A downburst is a straight- direction surface wind in excess of 39 miles per hour caused by a small-scale, strong downdraft from the base of convective thundershowers and thunderstorms. Downbursts of all sizes descend from the upper regions of severe thunderstorms when the air accelerates downward through either exceptionally strong evaporative cooling or by very heavy rain, which drags dry air down with it. When the rapidly descending air strikes the ground, it spreads outward in all directions, like a fast-running faucet stream hitting the bottom of the sink.



There are two (2) sub-categories of downbursts: the larger macrobursts and small microbursts.

Macroburst - Macrobursts are downbursts with winds up to 117 miles per hour which spread across a path greater than 2.5 miles wide at the surface and which last from 5 to 30 minutes.

Microburst- Microbursts are strong, damaging winds which strike the ground and often give the impression a tornado has struck. They frequently occur during intense thunderstorms. The origin of a microburst is downward moving air from a thunderstorm's core. But unlike a tornado, they affect only a rather small area, less than 2.5 miles in diameter from the initial point of downdraft impact. An intense microburst can result in damaging winds near 170 miles per hour and often lasts for less than five minutes. There are two (2) types of microburst windstorms: dry and wet.



- ✓ <u>*Gust Front*</u>- A gust front is the leading edge of rain-cooled air that clashes with warmer thunderstorm inflow. Gust fronts are characterized by a wind shift, temperature drop, and gusty winds out ahead of a thunderstorm. Sometimes the winds push up air above them, forming a shelf cloud or detached roll cloud.
- ✓ <u>*Haboob*</u>- Haboobs, Arabic for blasting/drifting, is a type of intense dust storm carried on an atmospheric gravity current (i.e., thunderstorm), also known as a weather front. When a thunderstorm collapses, and begins to release precipitation, wind directions reverse, gusting outward from the storm and generally gusting the strongest in the direction of the storm's travel. Haboobs occur regularly in arid regions throughout the world.

In Southern California, Santa Ana winds are considered a windstorm event. Santa Ana winds are katabatic winds- Greek for *"flowing downhill"*. These winds occur below the passes and canyons of the coastal ranges of Southern California and in the Los Angeles basin. Santa Ana winds often blow with exceptional speed in the Santa Ana Canyon (the canyon from which it derives its name). Santa Ana winds are strong, extremely dry (low humidity) down-slope winds that originate from cool, dry high pressure air masses in the Great Basin region (the high plateau east of the Sierra Mountains and west of the Rocky Mountains, including most of Nevada and Utah) and affect Southern California. These winds come up, over, and are pulled southward down the eastern side of the Sierra Nevada's and into the Southern California region. The air warms as it descends toward the California coast at the rate of 5 degrees Fahrenheit per 1000 feet due to compressional heating. Thus, compressional heating provides the primary source of warming. The air is dry since it originated in the desert, and it dries out even more as it is heated.

Forecasters at the National Weather Service offices in Oxnard and San Diego usually place speed minimums on these winds and reserve the use of "*Santa Ana*" for winds greater than 25 knots. These winds accelerate to speeds of 35 knots as they move through canyons and passes, with gusts to 50 or even 60 knots. Santa Ana winds can happen anytime during the year but are most prevalent in the autumn and winter months. The most significant hazard associated with Santa Ana winds is an increased wildfire danger, but Santa Ana winds can also cause downed trees and power lines, and property damage, as well as causing potentially hazardous conditions for RV's, semi-trailers, aircraft, and boaters.

- **Location and Extent**

Although tornadoes and hurricanes are rare, the entire City of Temecula is susceptible to various types of windstorms

- **History**

As mentioned, tornadoes and hurricanes are rare in the area, but the City of Temecula has experienced significant straight-line winds events as well as one tornado. In February of 2005, an F1 tornado brought between 70 and 100 mile per hour winds to the area along with pouring rain and some hail according to residents and news coverage. The event lasted approximately five (5) minutes with the majority of the damage isolated to a single square mile area.

Over the past five (5) years, the City has noticed an increase in local straight-line wind events. Many of the straight-line wind events do not rise to the level of significance or require the activation of the City's EOC but they do leave behind a trail of damage. The straight-line wind events range in strength of wind and duration but they all have similar impacts, downed trees and powerlines, injuries, and minor structural damage. These straight-line wind events create issues for local resident and business, including property damage and traffic congestion.

- **Probability**

The City of Temecula is at risk of windstorms at any given time during the calendar year. However, as previously mentioned, they are more prevalent in the autumn and winter months. Santa Ana winds, which commonly occur between October and February, and can reach speeds of more than 100 miles per hour. Tornadoes and/or Hurricanes occur infrequently in California, which has a statewide average of just 5 tornadoes/hurricanes a year. This is significantly less than states located in the US' "*tornado alley*", which can experience as many as 50–100 tornadoes per year or along the southern Atlantic US/Gulf of Mexico region which can experience twelve (12) named storms, six (6) hurricanes, and three (3) major hurricanes each year**.** In addition, most California tornadoes and hurricanes are considered "weak"; the historical average occurrence rate of Strong – Violent events in California is zero.

- **Climate Change Considerations**

Climate change will play a significant role with windstorm events. The changing conditions are expected to cause a significant amplification to many existing conditions. Because of this, climate change might impact the frequency and intensity of windstorms. Climate change, although still being studied, could have an effect on high- and low-pressure zones. High- and low-pressure zones are created by many factors, but many are related to uneven heating of the earth's surface by the sun. Many of the factors that go into the heating of the earth's surface, but many may be impacted by Climate change (i.e., type of vegetation in areas impact ability to absorb heat, amount of snow cover which reflects heat). In addition to altering and possibly increasing frequency of significant winds in the area. This indicates that the City of Temecula could experience a greater number of windstorm events in the future.

5.4.2.2 Dam Failure

- **Ranking**: *Probability* – Low; *Impact* - High
- **Description**

Dam failure is the collapse or failure that causes significant downstream flooding. Dam failure may be caused by a severe storm, earthquakes, erosion or piping or foundation, loss of structural integrity, or landslides flowing into the dam. The main consequences of dam failure are injury, loss of life, and significant downstream property damage. Evacuations and extensive rescue efforts would be necessary to save the lives of those in or around the downstream areas. A major dam failure would require mutual aid from other local, state, and federal governments and agencies.

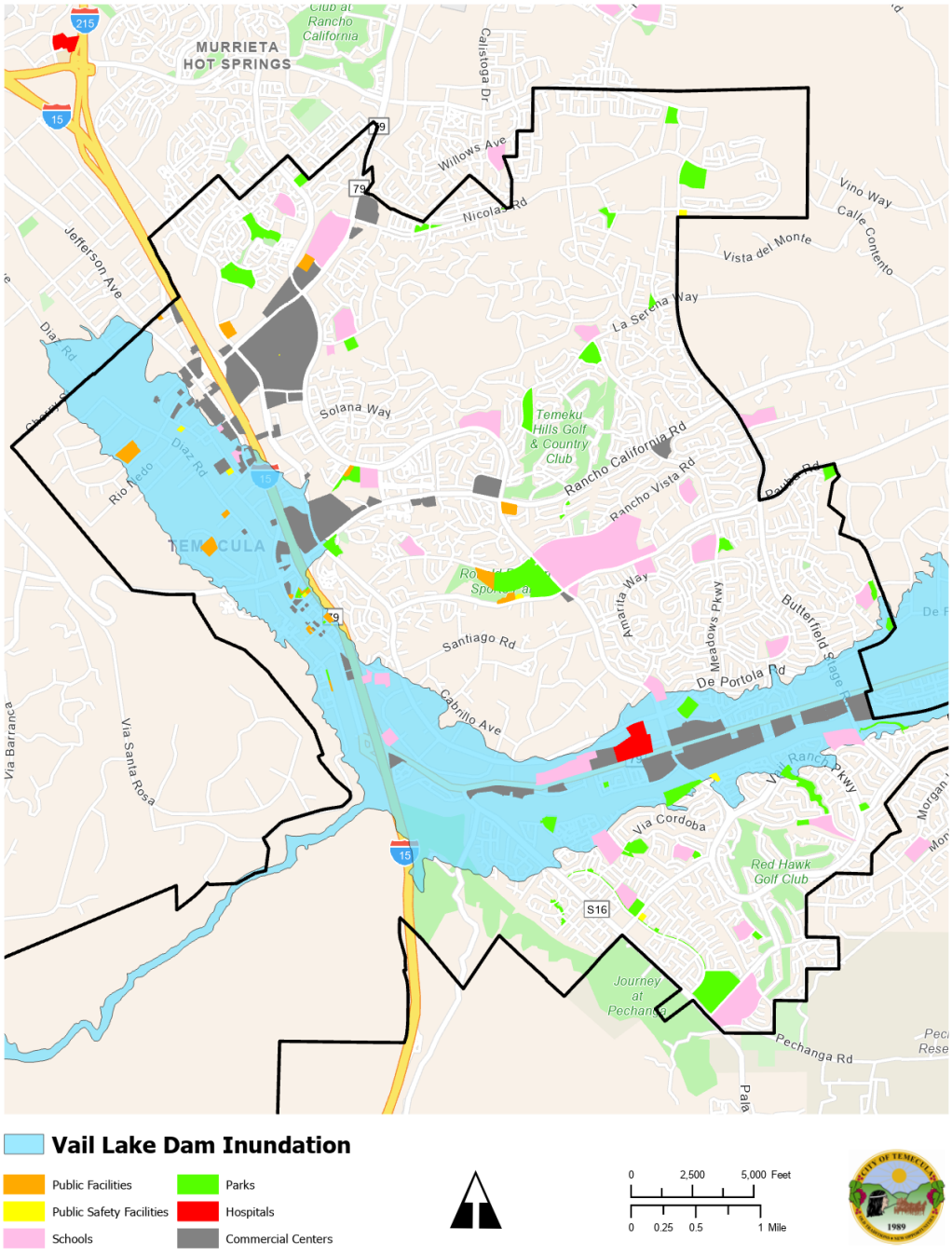
- **Location and Extent**

Dam inundation is a potential flood hazard in several portions of the Temecula Valley. There are four specific locations of concern in Temecula, and they are:

- *Vail Lake Dam* – Failure at this dam could result in extensive and catastrophic flooding along the downstream watercourse. Dam failure is limited to times during and immediately following major storms, however, seismic activity on any of the local fault lines have the potential to cause the dam to fail. The Vail Lake Dam, built in 1949, is a water storage reservoir that is located east of Temecula on the Temecula Creek. The reservoir has a storage capacity of approximately 45,000 acre-feet (AF); however, due to the long-term drought effects, there is approximately 15,000 AF currently stored at the lake. The reservoir itself covers and estimated 1,078 acres and if in failure, the water contained within will cover a drainage area of approximately 306 square miles. Its crest elevation is 1,482.60 feet with a crest length of 788 feet and width of 4 feet.
- In 2013, the dam was found to be seismically insufficient and vulnerable to failure. The Vail Dam Seismic and Hydrologic Remediation Project will construct a new straight-axis concrete dam located downstream of the existing arch dam. The current

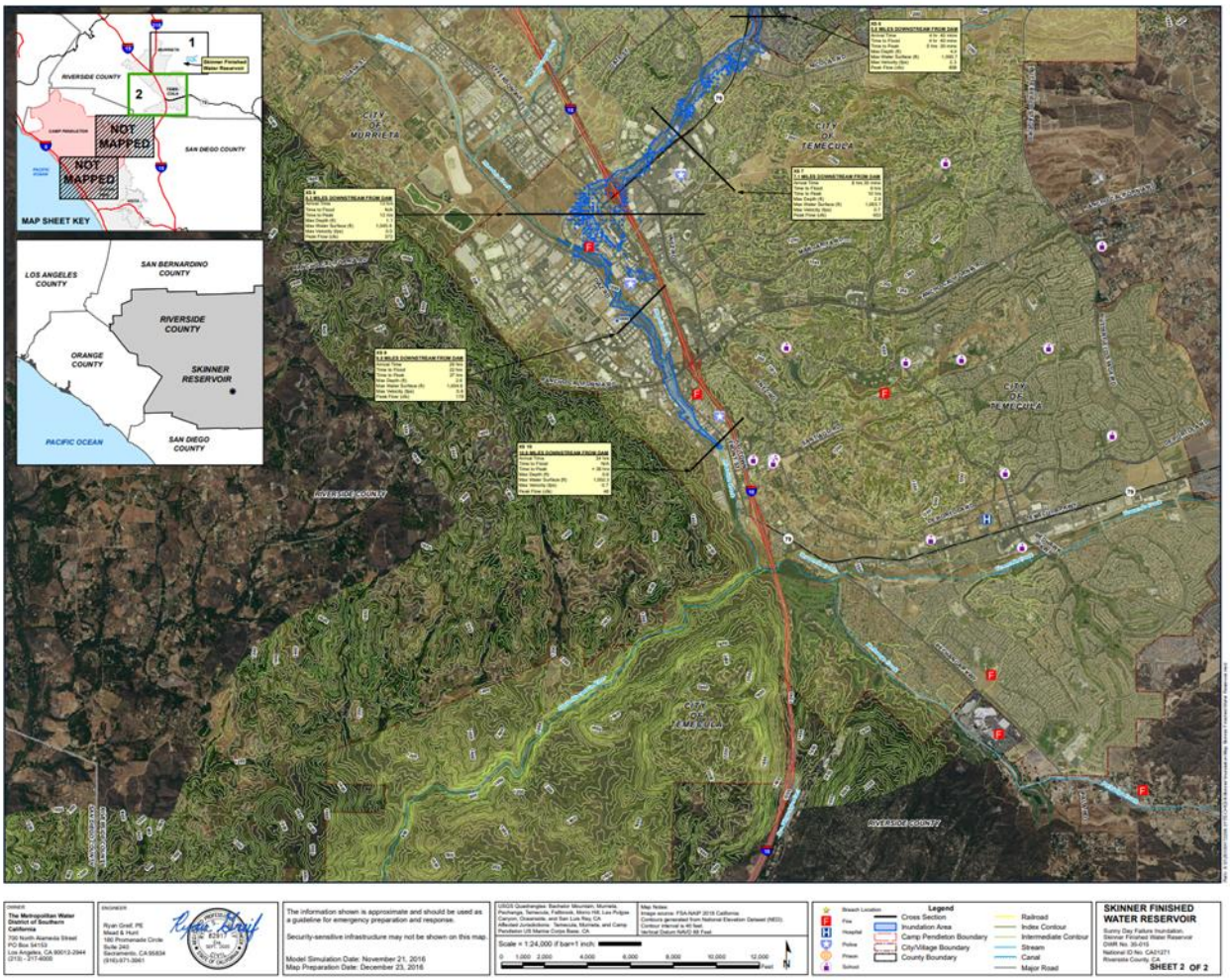
spillway is insufficient to pass the probable maximum flood without overtopping the dam, and the existing concrete arch dam would not resist the stresses induced by the maximum credible earthquake. The project purpose is to replace aging infrastructure, provide flood control from a major earthquake, and provide a locally water supply.

Figure 5.13 - Vail Dam Flood Inundation Map (2022)



- *Skinner Lake Dam* – The Skinner Reservoir, also known as Lake Skinner, is a reservoir that is situated approximately 10 miles northeast of Temecula. Originally constructed in 1973 and expanded in 1991, the lake has a current capacity of 43,800 acre-feet of water (14,274,420,000 gallons). The reservoir surface area is 860 acres with a drainage capability of 51 square miles. The crest elevation is 1,493 feet with a width of 30 feet. The dam's height sits at 109 feet.
- A large seismic event occurring on one of the two fault lines located in southwest Riverside County is capable of causing the dam infrastructure to fail thus creating catastrophic flooding downstream from the dam. While flooding from a failure of this dam in comparison to the Vail dam is minimal, there will still be a significant enough of an impact to place the community at risk down the Highway 79 corridor leading to the Temecula/Murrieta Creek as it descends into Old Town and out to the Pacific Ocean.

Figure 5.14 - Skinner Dam Inundation Map (2016)



- Diamond Valley Lake - The Diamond Valley Lake is a man-made off-stream reservoir that is located near Hemet, California. Diamond Valley Lake (DVL) is one of the largest reservoirs in Southern California with a capacity of 800,000-acre feet of water. With this capacity, the lake nearly doubled the area's surface water storage capacity and provides additional water supplies for drought, peak summer, and emergency needs. DVL features three earth fill dams, two located on either side of the valley and one along the north rim.
- While this lake and its dams are 24 miles away from Temecula, the hazard it poses to the Temecula Valley during a catastrophic seismic event is worth noting. The design and construction of the dams took into consideration the threat of earthquakes with the San Jacinto Fault Zone, located approximately 4 miles from the reservoir, and the San Andreas Fault located about 19 miles from the reservoir.
- Diamond Valley Lake (Saddle Dam) - The saddle dam rises 130 feet above the lowest point in the Domenigoni Mountains ridgeline of the north rim and is around ½ mile long. The dam was built to increase the storage capacity of the lake, which would have been limited dur to the low ridge in this area.

- Diamond Valley Lake (West Dam) - The west dam rises to 285 feet above the valley floor. It spans 1.5 miles in length and its foundation was extended 90 feet below the original ground surface to remove liquefaction soils that would have made the dam unstable in an earthquake.

As depicted in the map to the right, the Inundation from the Saddle and West side dams will result in heavy flooding across the region. Flooding from a catastrophic failure will impact the City of Temecula primarily along the 79N (Winchester Road) through French Valley and the Warm Springs Creek before ending at the Murrieta Creek and dumping into the Uptown District of Temecula, Old Town, and across the I-15 freeway impacting the Promenade Mall and businesses along Ynez Road. The sunny day failure scenario places Temecula at approximately 3 hours from failure to the receipt of water in our area.

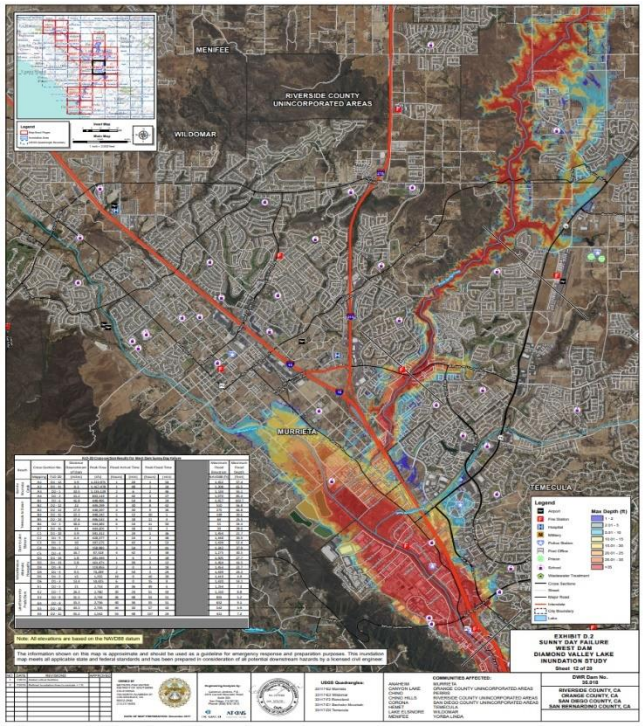
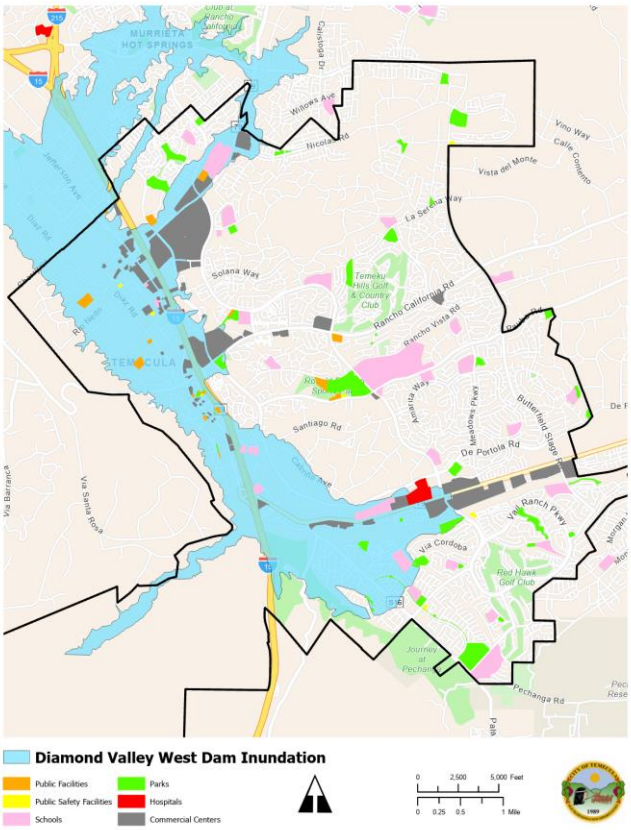
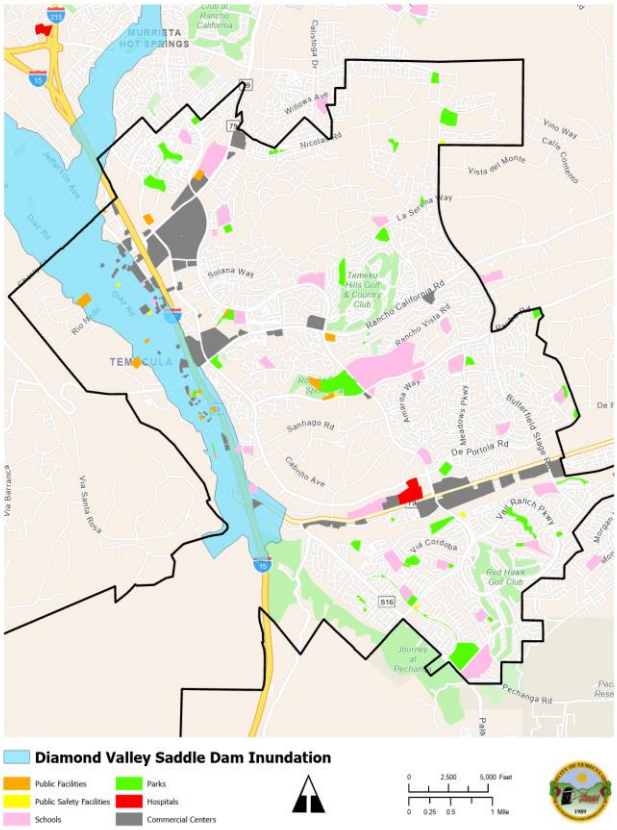


Figure 5.15 - Diamond Valley Lake Dam Inundation Map(s) (2022)





- **History**

No significant historical incidents to report to date.

- **Probability**

There are no studies that predict the probability of dam structural failure. However, there has been a study done that correlates earthquake activity to potential.

- **Climate Change Considerations**

While there is no direct linkage between climate change and dam rupture, there could be indirect linkages. As climate change impacts are either felt or perceived to be felt it could directly impact the dam and its ability to hold back large quantities of water from winter storms and runoff.

5.4.2.3 Terrorism

- **Ranking**: *Probability* – Low; *Impact* - High
- **Description**

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

The public does not perceive that terrorism is thriving in the United States because few incidents have been spectacular, a high violence rate makes terrorist actions routine, and terrorist actions are typically against property (bombings) rather than people. U.S. terrorist incidents have included the joint effort of the Black Liberation Army and the Weather Underground to rob an armored car in Nyack, N.Y., on October 20, 1981; the 1983 bombing in the Capitol building; and bombings of abortion centers.

A likely target category of future terrorist attacks is the nuclear power plant, given the number of demonstrations against them. Transnational terrorists funded by foreign governments could easily enter the United States and mount attacks. There are 6,000 miles of border that can be easily crossed and many ethnic populations which enable foreign terrorists to move about without suspicion.

In 2018, most ideologically motivated murders in the United States were linked to right-wing extremism. As of 2020, right-wing terrorism accounted for the majority of terrorist attacks and plots in the U.S. and has killed more people in the continental U.S. since the September 11 attacks than Islamic terrorism (Antidefamation League, 2022). The Department of Homeland Security reported in October of 2020 that white supremacists posed the top domestic terrorism threat (Washington Post, 2021).

- **Location and Extent**

Terrorism can occur throughout the entire city but due to terrorisms' intended purpose to cause the greatest amount of destruction it would most likely happen in more populous areas (high value, visually recognized targets) where more devastation, fear, and chaos will ensue.

- **History**

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

- **Probability**

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

- **Climate Change Considerations**

While there is little evidence to link climate change increasing occurrences of terrorism. However, depending on the type of attack, it could intensify the incident (i.e., Improvised Explosive Device-*IED* during high wind event), and hinder the response and recovery efforts (i.e., evacuation during flooding).

5.4.2.4 Insect Infestation

- **Ranking**: *Probability* – Medium; *Impact* - Low
- **Description**

Agricultural pests and disease infestation occur when an undesirable organism inhabits an area in a manner that causes serious harm to agriculture crops, livestock or poultry, and wild land vegetation or animals. Countless insects and diseases live on, in, and around plants and animals in all environments. Most are harmless, while some can cause significant damage and loss. Under some conditions, insects and diseases that have been relatively harmless can become hazardous. For example, severe drought conditions can weaken trees and make them more susceptible to destruction from insect attacks than they would be under normal conditions.

- **Location and Extent**

The City of Temecula has several agriculture crops (grapes) that are on the edges of the eastern end of the city and limited commercial livestock, predominantly horses. However, the City of Temecula, much like most cities have areas and vegetation susceptible to infestations. Impacts to local plants happen throughout the entire city. Impacts on wildland vegetation or animals generally happen in interface areas along edges of the community.

- **History**

As mentioned, the city is vulnerable to insect infestation. Infestations of the Mediterranean Fruit Fly, Oriental Fruit Fly, Gypsy Moth, Glassy-winged Sharpshooter, Asian Citrus Psyllid, and Light-Brown Apple Moth have all occurred in the last 30 years; however, there are no detailed records to list each event. Diseases such as Chrysanthemum White Rust and Pierce's Disease of Grapes have caused significant losses to local plants and impacts on wildland vegetation or animals.

Emergencies related to insect infestation have impacted Riverside County and its local jurisdictions in the last decade, including an increased fire risk due to Bark Beetle infestation of trees in 2003, and mosquito-borne West Nile Virus in 2007. Since 2002, the Bark Beetle infestation has required removal of thousands of acres of affected trees in the Angeles National Forest, as well as on private lands. However, both the Bark Beetle and West Nile Virus infestations are under control and did not seriously impact the City of Temecula. Additionally, while future infestation issues are possible, the impact on the City of Temecula is generally expected to be limited and no major impact to the community.

- **Probability**

Due to its interaction with the global economy, its mild Mediterranean and temperate climate, its diversified agricultural and native landscape, the City of Temecula can experience impacts from agricultural pests and diseases annually.

- **Climate Change Considerations**

Continued climate change is likely to alter the abundance and types of pests, lengthen pests' breeding season, and increase pathogen growth rates. For example, the pink bollworm, a common pest of cotton crops, is currently a problem only in southern desert valleys because it cannot survive winter frosts elsewhere in the state. However, if winter temperatures rise 3 to 4.5°F, the pink bollworm's range would likely expand northward, which could lead to substantial economic and ecological consequences for the state.

Temperature is not the only climatic influence on pests. For example, some insects are unable to cope in extreme drought, while others cannot survive in extremely wet conditions. Furthermore, while warming speeds up the lifecycles of many insects, suggesting that pest problems could increase, some insects may grow more slowly as elevated carbon dioxide levels decrease the protein content of the leaves on which they feed (California Climate Change Center 2006).

5.4.2.5 Landslide

- **Ranking:** *Probability* – Medium; *Impact* - Low
- Description

Landslides can be defined as the movement of a mass of rock, debris, or earth down an incline. According to the USGS, the term "*landslide*" encompasses five (5) modes of slope movement: falls, topples, slides, spreads, and flows.

- ✓ *Falls are masses of soil or rock that dislodge from steep slopes and free-fall, bounce, or roll downslope.*
- ✓ *Topples move by the forward pivoting of a mass around an axis below the displaced mass.*
- ✓ *Spreads (lateral) commonly induced by liquefaction of material in an earthquake, move by horizontal extension and shear or tensile fractures.*
- ✓ *Slides displace masses of material along one or more discrete planes.*

  – In "rotational" sliding, the slide plane is curved, and the mass rotates backwards around an axis parallel to the slope.
  – In "translational" sliding, the failure surface is more or less planar and the mass moves parallel to the ground surface.

- ✓ Flows mobilize as a deforming, viscous mass without a discrete failure plane.

Landslides can be caused by natural processes or by man-made activities. Landslides occurs when down-slope forces (gravity) exceed the resistance (strength) of the earth materials. Landslides can be initiated by rainfall, snowmelt, changes in water level, stream erosion, changes in ground water, earthquakes, volcanic activity, disturbance by human activities, or any combination of these factors. Two (2) of the more common types of landslides include:

- ✓ *Mudflows*- defined as flows or rivers of liquid mud down a hillside on the surface of normally dry land. They occur when water saturates the ground, usually following long and heavy rain falls, or rapid snow melt. Mud forms and flows down slope if there is no ground cover such as brush or trees to hold the soil in place.
- ✓ *Debris Flow*- defined when water begins to wash material from a slope or when water sheets off of a newly burned stretch of land. Chaparral land is especially susceptible to debris flows after a fire. The flow will pick up speed and debris as it descends the slope. As the system gradually picks up speed it takes on the characteristics of a basic river system, carrying everything in its path along with it.

Fast-moving (or rapidly moving) landslides present the greatest risk to human life, and people living in or traveling through areas prone to rapidly moving landslides are at increased risk of serious injury. Debris- flows can travel down a hillside with speeds up to 200 miles per hour (though more commonly, 30-50 miles per hour), depending on the slope angle and type of earth and debris in the flow.

Slow-moving landslides can occur on relatively gentle slopes and can cause significant property damage but are less likely to result in serious human injuries. Slow-moving slides include rotational slides, where sliding material moves along a curved surface, and translational slides, where movement occurs along a flat surface. These slides are generally slow-moving and can be deep. Slumps are small rotational slides that are generally shallow.

The size of a landslide usually depends on the geology and the initial cause of the landslide. Landslides vary greatly in their volume of rock and soil; the length, width, and depth of the area

affected; frequency of occurrence; and speed of movement. Some characteristics that determine the type of landslide are slope of the hillside, moisture content, and the nature of the underlying materials. Landslides are given different names, depending on the type of failure and their composition and characteristics.

Many landslides are difficult to mitigate, particularly in areas of large historic movement with weak underlying geologic materials. As communities continue to modify the terrain and influence natural processes, it is important to be aware of the physical properties of the underlying soils as they, along with climate, create landslide hazards. Proper planning cannot completely eliminate the threat of landslides to the safety of people, property, and infrastructure; however, without proper planning, landslide hazards will be even more common and more destructive.

- **Location and Extent**

The California Geological Survey is in the process of recording and mapping historical and potential landslides in the state. The location and extent of landslides are extremely difficult to predict and are usually based on historical event and/or soil type and topography. Landslides have the potential to occur in areas with one or more of the following conditions:

- ✓ *On or close to steep hills*
- ✓ *Steep road-cuts or excavations*
- ✓ *Existing landslides or places of known historic landslides (such sites often have tilted power lines, trees tilted in various directions, cracks in the ground, and irregular-surfaced ground)*
- ✓ *Steep areas where surface runoff is channeled, such as below culverts, V -shaped valleys, canyon bottoms, and steep stream channels*
- ✓ *Fan-shaped areas of sediment and boulder accumulation at the outlets of canyons*
- ✓ *Canyon areas below hillside and mountains that have recently (within 1-6 years) been subjected to a wildland fire.*

- **History**

There have been no known previous occurrences of landslides documented in the City of Temecula.

- **Probability**

Landslides are a common hazard in California. Weathering and the decomposition of geologic materials produce conditions conducive to landslides, and human activity further exacerbates many landslide problems. It is difficult to estimate the probability of occurrence for landslide as no landslide susceptibility maps have been prepared for Temecula. However, recently there has been increased probability for mud flows and debris flows due to wildfire events in the area.

- **Climate Change Considerations**

Climate change can increase the probability, frequency, and/or intensity of landslides. Changes in precipitation, specifically the increased frequency of intense precipitation, can result in significant water run-off, which may cause landslides. Additionally, increase in wildfire hazards will result in loss of hillside vegetation. The loss of hillside vegetation will increase the likelihood of debris and mudflows. This could result in landslides occurring in areas not previously identified.

5.4.2.6 Nuclear Event

- **Ranking**: *Probability* – Medium; *Impact* - Low
- **Description**

Radioactive materials are routinely transported in California, whether the materials are for medical or industrial use. Nuclear incidents can occur wherever radioactive materials are used, stored, or transported. In addition to nuclear plants, hospitals, universities, research laboratories, industry, highway transportation, railroads, and shipping yards could be the site of a nuclear transportation incident. Nuclear incidents might involve a nuclear power generating plant, a nuclear weapon, nuclear waste, or a 'dirty bomb'.

Nuclear Power Plants – In California, there are two nuclear power plants: Diablo Canyon, which is located in San Luis Obispo County and San Onofre, which is located in the northwestern corner of San Diego County along Interstate 5. For purposes of this plan, San Onofre will be discussed.

The San Onofre Nuclear Generating Station (SONGS) is a three-unit site, 10 miles south of San Clemente. Unit 1, which operated for 25 years, was shut down in 1992. Units 2 and 3 were pressured water reactor designs that were capable of producing enough power to serve the needs of the 2.75 million households. Unit 2 was started in 1983 and Unit 3 was started in 1984. Upgrades had been made that would increase their life of use to 20 years and was completed in 2010. However, both reactors were shut down in January of 2012 after premature wear was identified on more than 3 thousand tubes in replacement steam generators that were installed in 2010-2011 (Wikipedia, 2022).

In 2013, Southern California Edison (SCE) announced the permanent retirement of San Onofre Units 2 and 3. Today, SONGS is in the process of decommissioning which will take up to 20 years to complete. All spent radioactive fuel would be held on-site indefinitely in dry casks while low-level radiation would be transported and disposed of in Texas and Utah. The threat of sabotage or terrorism is real and multiple scenarios have been discussed. However, while the potential and reality exist, the probability of an attack at this location are low (The Orange County Register, 2010). In an article written in May of 2020, also in the Orange County register, Southern California

Edison (SCE) held a community engagement panel to consider a handful of doomsday scenarios that included terrorism, cracks, and sabotage. Only scenarios were discussed and there were no specific threats against the location identified. Upon completion, the panel did mention a continuation of the discussion but there has been no additional information confirming any other meetings.

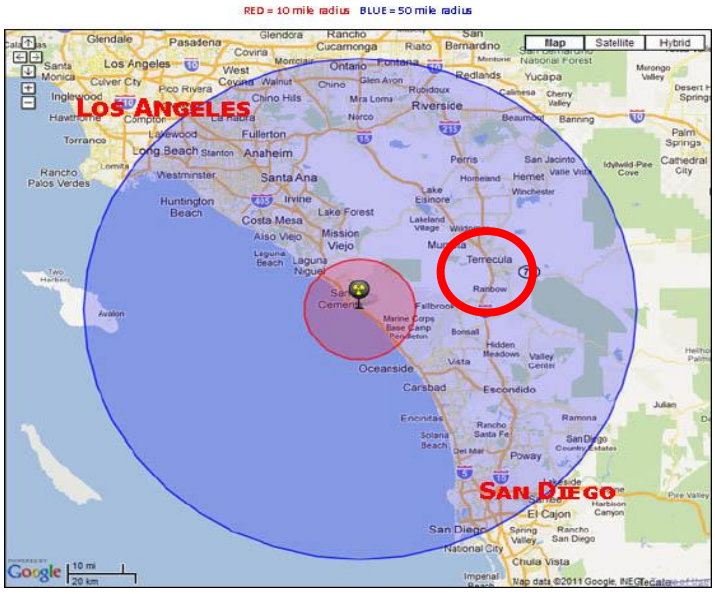
Because of the potential health hazard associated with this type of fuel, power plants are built with multiple physical barriers to prevent the escape of radioactive material. Still, the possibility exists for an accidental release of radiation into the atmosphere. People could breathe contaminated air and radioactive particles could be deposited on the ground, in water, on property and on agricultural crops. Food and dairy animals could graze on contaminated pasture, passing on the contamination to consumers through milk and meat.

- **Location and Extent**

The City of Temecula is located within the 50-mile Ingestion Pathway Zone **(Figure 5.16)** for the San Onofre Nuclear Generating System (SONGS).

Following an incident at San Onofre Nuclear Generating System (SONGS), the public will be notified of precautions to take with food and water. Home grown or commercial fruits and vegetables should be washed, scrubbed, and peeled to avoid contamination. For drinking water, bottled water or juices should be consumed. Avoid drinking water from the surface of lakes, streams, and water wells. As of September 2022, there are no known commercial dairy farms located in Temecula. There are other livestock ranches within our sphere of influence located within the Temecula Valley Wine Country. In order to avoid contamination, livestock owners will be notified to take precautions. Lactating cows should be removed from pastures and fed substituted, uncontaminated feed.

Figure 5.16 – San Onofre Nuclear Zone Map (2011)



- **History**

There is no record of any nuclear incident that has impacted the City of Temecula. The proximity of SONGS to the city presents an increased potential for exposure due to prevailing winds.

- **Probability**

The release of nuclear materials can occur anywhere, however, in Temecula it is unlikely as this facility resides in another county yet its impacts to the community from a release are certain. Communities can be at risk if nuclear material is not handled safely or released in harmful amounts into the environment. Exposure to nuclear material can cause death, serious injury, and long-lasting health effects.

- **Climate Change Considerations**

There is no evidence to link climate change occurrences with the release of hazardous nuclear material. Changing conditions can create more mishaps and accidents with the erosion of the beaches that the plant sits on and from degradation of materials.

5.4.2.7 Civil Disorder

- **Ranking**: *Probability* – Low; *Impact* - Low
- **Description**

Civil Disturbance is a term generally used to describe disorderly conduct or a breakdown of orderly society by a large group of people. Civil Disturbance can range from a form of protest against major socio-political problems to riots.

- **Location and Extent**

Civil Disturbance can occur in any part of the City of Temecula. However, it is generally located within larger, more concentrated, commercial areas along Ynez Road as well as City Hall.

- **History**

In 2020, there were threats against the City of Temecula to inflict damage to city infrastructure in response to events surrounding the death of George Floyd. However, there are no significant historical incidents that have occurred. However, there have been a few small incidents that have occurred due to recent social and political movements.

- **Probability**

There are no studies that predict the probability of civil disturbance occurrences.

- **Climate Change Considerations**

While there is no direct linkage between climate change and civil disturbances, there could be indirect linkages. As climate change impacts are either felt or perceived to be felt it could ignite passions within people to demonstrate against possible causes or enablers.

6. RISK ASSESSMENT

6.1 Overview

As defined by FEMA, risk is a combination of hazard, vulnerability, and exposure. "It is the impact that a hazard would have on people, services, facilities, and structures in a community and refers to the likelihood of a hazard event resulting in an adverse condition that causes injury or damage." The risk assessment process identifies and profiles relevant hazards and assesses the exposure of lives, property, and infrastructure to these hazards. The process allows for a better understanding of a jurisdiction's potential risk to hazards and provides a framework for developing and prioritizing mitigation actions to reduce risk from future hazard events.

6.2 City Disaster Proclamation History

One method to identify hazards based upon past occurrences is to look at what events triggered federal and/or state disaster declarations within the City (though disaster declarations are declared on a county basis). Disaster declarations are granted when the severity and magnitude of the event's impact surpass the ability of the local government to respond and recover. Disaster assistance is supplemental and sequential.

When the local government's capacity has been surpassed, a state disaster declaration may be issued, following the local agency's declaration, allowing for the provision of state assistance. Should the disaster be so severe that both the local and state government's capacity is exceeded, a federal disaster declaration may be issued allowing for the provision of federal disaster assistance. The federal government may issue a disaster declaration through FEMA, the U.S. Department of Agriculture (USDA), and/or the Small Business Administration (SBA). FEMA also issues emergency declarations, which are more limited in scope and without the long-term federal recovery programs of major disaster declarations. The quantity and types of damage are the determining factors. This section focuses on state and federal disasters and emergency declarations.

Table 6.1 - Emergency or Disaster Declarations, City of Temecula (2022)

Year	Resolution Number	Emergency/Disaster Type
2021	2021-16	COVID-19 (Reissuance)
2021	2021-06	COVID-19 (Reissuance)
2020	2020-83	COVID-19 (Reissuance)
2020	2020-65	COVID-19 (Reissuance)
2020	2020-55	COVID-19 (Reissuance)
2020	2020-35	COVID-19 (Reissuance)
2020	2020-20	COVID-19 (Reissuance)
2020	2020-17	COVID-19 Pandemic

Year	Resolution Number	Emergency/Disaster Type
2007	07-105	Flooding
2007	07-91	High Winds
1993	93-34	Flooding (Reissuance)
1993	93-25	Flooding (Reissuance)
1993	93-19	Flooding (Reissuance)
1993	93-08	Flooding (Reissuance)
1993	93-03	Extreme Flooding

6.3 Disaster Proclamation Process

When there is a condition of extreme peril or potential peril to the safety of persons and property, and the condition is beyond the capability of the local jurisdiction to control effectively, the local governing body (i.e., city council, board of supervisors or a person authorized by ordinance) may proclaim that a local emergency exists. The local government may request the California Office of Emergency Services (Cal OES) Director to concur in their proclamation of a local emergency and to provide assistance under the California Disaster Assistance Act (CDAA).

The City of Temecula has proclaimed four (4) local emergencies since its incorporation in 1989. Most recently, on March 17, 2020, the City Manager in his capacity as Director of Emergency Services signed Proclamation No. 20-17 to address the COVID-19 pandemic. The City Council ratified the City Manager's Proclamation by adopting Resolution No. 20-17 on March 24, 2020.

A copy of the resolution must be provided to the Riverside County Operational Area as soon as possible for transmission of the resolution to Cal OES. When a county proclaims a local emergency pursuant to Section 8630 of the Government Code, based upon conditions which include both incorporated and unincorporated territory of the county, it is not necessary for the cities to also proclaim the existence of a local emergency independently.

If sufficient conditions occur, the State may proclaim a state of emergency to fully commit state and mutual aid assistance and provide resources to assist local government. Following the proclamation of a state of emergency, the California OES Director may recommend that the Governor request a Presidential declaration of a major disaster under the authority of Public Law 93-288. The Governor's request to the president is submitted through the Federal Emergency Management Agency (FEMA).

Since 1965, Riverside County has had over 45 Federal Disaster Declarations. The most recent Federally Declared Disaster was in September of 2022 as a result of the Fairview Fire which directly impacted the City of Temecula due to the establishment of two mass care and shelter sites to service the 22,000 homes that were evacuated into the City.

6.4 Vulnerability Assessment

With Temecula's hazards identified and profiled, the HMPC conducted a vulnerability assessment to describe the impact that each priority hazard would have on the City. The vulnerability assessment quantifies, to the extent feasible using best available data, assets at risk to natural hazards and estimates potential losses.

This vulnerability assessment followed the methodology described in the FEMA publication Understanding Your Risks—Identifying Hazards and Estimating Losses. The vulnerability assessment first describes the total vulnerability of the City and values at risk and then discusses vulnerability by hazard.

6.5 Hazard Risk Rating

A risk assessment involves evaluating vulnerable assets, describing potential impacts, and estimating losses for each hazard. The intention of a risk assessment is to help the community understand the greatest risks facing the City of Temecula. The risk assessment defines and quantifies vulnerable populations, building, critical facilities, and other assets at risk from hazards and is based on the best available data and the significance of the hazard. The risk assessment further examines the impact of the identified hazards on the City, determines which areas of the City are most vulnerable to each hazard and estimates potential losses to City facilities for each hazard.

For the 2022 LHMP the risk for each hazard was rated using the Calculated Priority Risk Index (CPRI). The CPRI examines four (4) criteria for each hazard (probability, magnitude/severity, warning time, and duration) as show below in **Table 6.2**. For each hazard, an index value is assigned for each CPRI category from 0 to 4 with "0" being the least hazardous and "4" being the most hazardous situation. This value is then assigned a weighting factor and the result is a hazard ranking score as shows in **Table 6.3**. **Table 6.4** is an overall summary of the hazard evaluations for the City.

Table 6.2 – Calculated Priority Risk Index (CPRI)

CPRI Category	Degree of Risk Chart			Assigned Weight
	Level ID	Description	Index Value	
Probability	Unlikely	Extremely rare with no documented history of occurrences or events. Annual probability of less than 0.001.	**1**	**45%**
	Possible	Rare occurrences with at least one documented or anecdotal historic event. Annual probability of between 0.01 and 0.001.	**2**	

CPRI Category	Degree of Risk Chart			Assigned Weight
	Level ID	Description	Index Value	
	Likely	Occasional occurrence with at least two (2) or more documented historic events. Annual probability of between 0.1 and 0.01.	**3**	
	Highly Likely	Frequent events with a well-documented history of occurrence. Annual probability of greater than 0.1.	**4**	
Magnitude / Severity	Negligible	Negligible property damages (less than five percent (5%) of critical and non-critical facilities and infrastructure). Injuries or illnesses are treatable with first aid and there are no deaths. Negligible quality of life lost. Shut down of critical facilities for less than twenty-four (24) hours.	**1**	**30%**
	Limited	Slight property damages (greater than five percent (5%) and less than twenty-five (25%) of critical and non-critical facilities and infrastructure). Injuries and illnesses do not result in permanent disability and there are no deaths. Moderate quality of life lost. Shut down of critical facilities for more than one (1) day and less than one (1) week.	**2**	
	Critical	Moderate property damages (greater than 25% and less than fifty (50%) of critical and non-critical facilities and infrastructures). Injuries or illnesses result in permanent disability and at least one death. Shut down of critical facilities for more than one (1) week and less than one (1) month.	**3**	
	Catastrophic	Severe property damages (greater than fifty (50%) of critical and non-critical facilities and infrastructure). Injuries or illnesses result in permanent disability and multiple deaths. Shut down of critical facilities for more than one (1) month.	**4**	
Warning Time	< than 6 hours	Population receives less than six (6) hours of warning.	**4**	**15%**
	6 to 12 hours	Population receives between six (6) to twelve (12) hours of warning.	**3**	
	12 to 24 hours	Population receives between twelve (12) to twenty-four (24) hours of warning.	**2**	
	> than 24 hours	Population receives greater than twenty (24) hours of warning.	**1**	

CPRI Category	Degree of Risk Chart			Assigned Weight
	Level ID	Description	Index Value	
Duration	< than 6 hours	Disaster event will last less than six (6) hours.	**1**	**10%**
	6 to 24 hours	Disaster event will last between six (6) to twenty-four (24) hours.	**2**	
	24 hours to 1 week	Disaster event will last between twenty-four (24) hours and one (1) week.	**3**	
	> than 1 week	Disaster event will last more than one (1) week.	**4**	

Table 6.3 - CPRI Hazard Scores and Risk Rating

Risk Level	Severe	High	Moderate	Low
Rank Score	4	3-3.99	2-2.99	1-1.99

Table 6.4 - CPRI Hazard Rating Summary (2022)

Hazard	Probability (45%)	Magnitude / Severity (30%)	Warning Time (15%)	Duration (10%)	Weighted Score	Risk Level
Earthquake	4	4	4	3	3.75	High
Wildfire	4	3	4	3	3.5	High
Transportation	4	3	4	2	3.25	High
Flood	3	3	3	2	2.75	Moderate
Drought	4	3	1	4	3	High
Comm Failure	4	3	4	2	3.25	High
Extreme Heat	3	4	1	3	2.75	Moderate
Electrical Failure	3	4	4	2	3.5	High
Pandemic	3	4	1	4	3	High
HAZMAT	3	4	4	1	3	High

The requirements for hazard profiles are stipulated in DMA 2000 and its implementing regulations. The hazards that the HMPT selected for this update of the LHMP have been profiled using federal, state, regional, and local resources that have been mapped, documented, or reported on hazards. Both natural and man-made hazards are included.

The hazards that exist in the City of Temecula are profiled in Section 5 Hazard Assessment. Each hazard includes a description of the type, location and extent, and previous history. Maps and graphs are used throughout this plan to display hazard identification data.

6.6 City of Temecula's Vulnerability and Risk Assessment

This section of the LHMP meets requirements for hazard profiles and a risk assessment as provided in the Code of Federal Regulations, Section 44, 201.6(c)(2)(i).

6.6.1 Identification of Critical Facilities and Assets

The location and operations of high-risk facilities such as critical infrastructure and key assets in or near Temecula are a significant concern with respect to a disaster. The HMPT used FEMA's "Public Assistance Guide" (FEMA 322) that defines critical facilities such as shelters, hospitals, EOCs, data centers, utility plants or highly hazardous materials facilities. They also used the FEMA Hazard Mitigation Handbook which describes three categories of facilities for analysis to revise and update the list. ***Section 3.8*** of this plan discusses Temecula's key assets and critical facilities. These locations are identified in **Appendix 5**.

The City's Fire Marshall maintains and extensive list of childcare facilities, churches, elder care facilities and facilities containing hazardous materials.

6.6.2 Cultural and Natural Resources Inventory

Historical Resources are those improvements, buildings, structures, signs, features, Historic Districts, landmarks, trees, or other objects of cultural, architectural, or historical significance to the City that are at least fifty (50) years old, and which have been determined to be eligible for historic designation and deemed appropriate by the Temecula History Museum. The Temecula Museum maintains a current list. There are many current local designated Historic Points of Interest in Old Town Temecula.

These and other designated points of interest as well as future locally designated historic places shall be protected and not permitted to be modified, demolished (unless declared a public hazard by the Development Department i.e., Code Enforcement, Building or Fire), altered, renovated, remodeled, improved, or expanded unless approved by review. The review of the modification shall utilize the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings.

6.6.3 Risk Assessment and Potential Loss

A risk assessment determines the vulnerability of assets within the City by evaluating the inventory of City-owned existing property and the population exposed to a hazard. A quantitative vulnerability assessment is limited to the exposure of people, buildings, and infrastructure to the identified hazards. This risk assessment includes only those hazards that have the ability to cause damage to buildings and infrastructure. More detailed assessments of risk that would include deaths and injuries, and economic losses, are beyond the scope of this plan.

Table 6.5 - Analysis of City's Critical Infrastructure (2022)

Critical Facilities	Impacting Hazards										Value		
	Earthquake 25%	*Wildfire 15%*	*Transportation 10%*	*Flood 50%*	*Drought 5%*	*Communication Failure 20%*	*Extreme Heat 5%*	*Electrical Failure (PSPS) **	*Pandemic **	*HAZMAT 5%*	Facility	Contents (estimates)	Total Value
Fire Station 12	X	X	X	X	X	X		X	X	X	$2,260,700.00	$904,280	$3,164,980.00
Fire Station 73	X	X		X	X	X		X	X	X	$3,161,275.00	$1,264,510	$4,425,785.00
Fire Station 84	X	X	X		X	X		X	X	X	$2,934,750.00	$1,173,900	$4,108,650.00
Fire Station 92	X	X	X		X	X		X	X	X	$1,950,000.00	$780,000	$2,730,000.00
Fire Station 95	X	X	X		X	X		X	X	X	$2,260,700.00	$90,680	$2,351,380.00
Old Town Store Front (RSO)	X		X	X	X	X		X	X		(Part of Civic Center)		
HELP Center	X	X		X	X	X	X	X	X		$585,000.00	$234,000	$819,000.00
S.A.F.E	X	X		X	X	X		X	X		$1,202,500.00	$481,000	$1,683,500.00
Civic Center	X		X	X	X	X		X	X	X	$32,500,000.00	$13,000,000	$45,500,000.00
Temecula Wedding Chapel	X		X	X	X	X		X	X		$515,775.00	$206,310	$722,085.00
Temecula Valley Museum	X		X	X	X	X		X	X		$2,340,000.00	$936,000	$3,276,000.00
Old Town Theatre	X			X	X	X		X	X		$7,257,250.00	$2,902,900	$10,160,150.00
Mary Phillips Senior Center	X		X	X	X	X	X	X	X	X	$3,021,200.00	$1,208,480	$4,229,680.00
Field Operations Center	X			X	X	X		X	X	X	$5,767,775.00	$2,307,110	$8,074,885.00
Field Operations Center (West Wing)	X			X	X	X		X	X		$2,880,150.00	$1,152,060	$4,032,210.00
TVE2	X			X	X	X		X	X		$9,810,775.00	$3,924,310	$13,735,085.00
Temecula Public Library	X	X	X		X	X		X	X		$11,050,975.00	$4,420,390	$15,471,365.00
Jefferson Recreation Center	X		X	X	X	X		X	X	X	$6,500,000.00	$2,600,000	$9,100,000.00
Temecula Community Center	X	X		X	X	X		X	X		$1,923,350.00	$769,340	$2,692,690.00

Critical Facilities	Impacting Hazards										Value		
	Earthquake 25%	*Wildfire 15%*	*Transportation 10%*	*Flood 50%*	*Drought 5%*	*Communication Failure 20%*	*Extreme Heat 5%*	*Electrical Failure (PSPS) **	*Pandemic **	*HAZMAT 5%*	Facility	Contents (estimates)	Total Value
Community Recreation Center	X	X		X	X	X		X	X		$8,606,000.00	$3,442,400	$12,048,400.00
Santa Margarita Ecological Reserve Solar Farm	X	X		X	X	X		X	X				

* Pandemic and Electrical Failure (PSPS) hazards do not have associated values for potential losses as they generally do not result in physical damage to infrastructure and facilities. Both can result in substantial costs for emergency protective measures and other response activities.

6.6.4 Vulnerable Populations

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

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

- Infants and small children under age three (3)
- Women who are pregnant
- Elderly people (age 65 and older)
- Homeless
- Obese and bedridden
- Mentally ill

- Those with cognitive disabilities
- Those with medical conditions (e.g., heart disease, diabetes high blood pressure)
- Those requiring life-saving medications (e.g., high blood pressure, depression, dementia)
- Individuals with drug or alcohol addiction
- Mobility constraints
- Those who are non-ambulatory
- The poor
- Non-English speakers who may not have access to information

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

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

- **Income levels**: Lower-income households are less likely to have the financial resources to implement mitigation activities on their residences. They may also struggle with having the necessary time to find and access educational resources discussing hazard mitigation strategies. Furthermore, lower-income households are less likely to be able to afford to move to areas that are safer or less at risk of being impacted by a hazard. The national poverty limit standard for the U.S. for a four-person family is approximately an income of $27,750 or less. For Riverside County, the FY 2022 Extremely Low-Income Limits for a four-person family, according to the Riverside County Housing Authority is $27,750 (30% of median). The FY 2022 Very Low-Income Limits for a four-person family is $44.000 (50% of median).

- **Seniors (individuals at least 65 years of age)**: Seniors are more likely to have reduced mobility, physical and/or mental disabilities, and lower-income levels, all of which may decrease their ability to prepare for and mitigate a hazard event.

The social threat analysis also shows the threat other populations may encounter, such as persons experiencing homelessness or persons without access to lifelines (vehicles or communication networks). Since data for these groups are not readily available, there is no definitive way to determine the amount of these persons in areas of elevated risk, so this assessment will discuss how these other threatened groups may also be affected on a general level.

Table 6.6 shows the amounts of people in Temecula who meet at least one of the criteria for threatened and/or vulnerable populations. For more detailed demographic information, please refer to **Chapter 3.**

Table 6.6 – City of Temecula Threatened-Population Metrics (2023)

Threatened Population Metric	Community-Wide Data
Population	110,846
Households	34,266
Median Household Income	$103,546
Renter Households	32.4%
Percentage of households with at least one person living with a disability	7.1%
Percentage of households living under the poverty limit	7.7%
Percentage of households with one-member aged 65+	10.8%
Percentage of households with a language other than English is spoken at home (ages 5 years +)	25.1%
***Population estimates rely on US Census ACS data. Any differences from other population estimates in this document may be related to how the data is analyzed.	

6.6.5 Analysis of Potential Losses

FEMA requires that an estimation of loss be conducted for the identified hazards to include the number of potential structures impacted by the hazards and the total potential costs. The analysis of potential losses calculated in **Table 6.7** used the best data currently available to produce the estimations of loss. These estimates may be used to understand relative risk from hazards and potential losses. There are uncertainties in any loss estimation method, resulting from lack of scientific study and the exact result of hazard effects on the built environment, and from the use of approximations that are necessary for a comprehensive analysis.

In addition, this assessment does not include analysis of non-City owned facilities, even though they are deemed critical. The City does not have replacement or content values or insured values for critical infrastructure, private businesses, schools, and churches. A mitigation action was developed to acquire that information so a complete analysis of critical facilities can be completed to show total potential loss in the City.

A quantitative assessment has been prepared for the critical facilities affected by each hazard assessed and multiplied by a value of percent damage. The percent damage was determined by the geographic area at stake, previous history of damage from the type of hazard, and potential for severity from the hazard profiles.

Table 6.7 - Analysis of Potential Losses (2022)

Hazard Type	# of Critical Facilities	Percent Damage	Replacement Value	Content Value	Estimated Replacement Loss	Estimated Contents Loss	Total Estimated Loss
Earthquake	11	25	$85,354,750.00	$34,141,900.00	$21,336,686.25	$8,535,474.5	$30,691,160.75
Wildfire	7	15	$47,421,725.00	$18,968,690.00	$7,113,258.00	$2,845,003.00	$9,958,261.00
Transportation	5	10	$36,009,675.00	$14,403,870.00	$8,791,964.00	$1,440,387.00	$10,232,351.00
Flood	12	50	$61,933,950.00	$23,959,980.00	$30,971,973.00	$11,979,990.00	$42,951,963.00
Drought	15	5	$96,221,450.00	$37,674,980.00	$4,811,068.00	$1,883,747.00	$6,694,815.00
Comm Failure	15	20	$96,221,450.00	$37,674,980.00	$19,246,290.00	$7,534,996.00	$26,781,286.00
Extreme Heat	5	2	$30,341,025.00	$11,322,810.00	$606,810.00	$226,454.00	$833,264.00
Electrical Failure	15	*	$96,221,450.00	$37,674,980.00			
Pandemic	15	*	$96,221,450.00	$37,674,980.00			
HAZMAT	5	5	$30,341,025.00	$11,322,810.00	$1,517,050.00	$566,140.00	$2,083,190.00

* Because Pandemic and Power Failure/PSPS are not likely to result in physical damage to facilities, no values are assigned. However, both hazards can result in substantial costs for emergency protective measure, emergency response, lost revenue and human loss of life and injury.

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7. MITIGATION STRATEGY

7.1 Overview

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

7.2 Mitigation Goals and Objectives

To better assist with the identification of mitigation measures, mitigation goals and objectives were developed. The mitigation goals and objectives support the City's mitigation mission to create a disaster ready, disaster resilient and sustainable community while remaining aligned with the Operational Area. As a result, some of the goals and objectives were removed and/or reworded. Well defined goals and objectives were used by the Planning Team as a starting point prior to identifying mitigation measures. The goals and objectives include:

- **Goal 1: Minimize Loss of Life and Injuries**
    - Objective 1.1: Provide timely notification and direction to the public in preparation for imminent and potential hazards.
    - Objective 1.2: Protect public health and safety through mitigation, preparing for, responding to, and recovering from the effect of natural, technological, or man-made disasters.
    - Objective 1.3: Reduce hazard impacts and protect life, property, and the environment from damages.
    - Objective 1.4: Improve understanding of the type, location, and effects of hazards and vulnerabilities, as well as measures needed to protect life.
    - Objective 1.5: Improve community transportation corridors to allow for better evacuation routes for public and better access for emergency responders.
    - Objective 1.6: Develop policies and procedures to better serve disadvantaged and vulnerable populations.

- **Goal 2: Improve Community and Agency Awareness**
    - Objective 2.1: Increase public awareness about the natura and extent of hazards they are exposed to, where they occur, what is vulnerable, and recommended response to identified hazards.
    - Objective 2.2: Improve mitigation and hazard related outreach to businesses, city departments, and stakeholders to increase their understanding of the threats within the city.
    - Objective 2.3: Establish and maintain partnerships between all levels of local government, the private sector, the business community, community groups, and institutions of higher learning that exchange information on hazards and the benefits of mitigation measures.
- **Goal 3: Improve the Community's Capability to Mitigate Hazards and Reduce Exposure to Hazard Related Losses**
    - Objective 3.1: Reduce hazard related property losses by enforcing strong building codes.
    - Objective 3.2: Reduce repetitive losses for fire, flood, and earthquakes by encouraging community protective measures and by anticipating future events.
    - Objective 3.3: Reduce hazard impacts to critical facilities, utilities, and services through the implementation of low-cost mitigation strategies.
    - Objective 3.4: Continue to strengthen land use regulations in high hazard areas.
- **Goal 4: Reduce Hazard Related Property Losses**
    - Objective 4.1: Reduce hazard impacts to critical facilities, utilities, and services through the implementation of low-cost mitigation strategies.
    - Objective 4.2: Continue to strengthen land use regulations in high hazard areas.
- **Goal 5: Maintain Coordination for Disaster Planning and Integrated Public Policy**
    - Objective 5.1: Incorporate changes with CalOES and FEMA that may affect public policy and planning.
    - Objective 5.2: Incorporate mitigation related activities into other disaster planning mechanisms, such as the General Plan and Capital Improvement Plan.
- **Goal 6: Improve Emergency Management Capability**
    - Objective 6.1: Identify the need for, and acquire, any special emergency management equipment to enhance response capabilities for specific hazards.
    - Objective 6.2: Develop and maintain emergency plans (Response, Recovery, Preparedness, Prevention, Mitigation).
    - Objective 6.3: Establish and maintain emergency management systems and facilities.
    - Objective 6.4: Develop and maintain Public-Private Partnerships.
    - Objective 6.5: Develop and maintain Memorandums of Understanding/Mutual Aid Agreements.

- Objective 6.6: Develop, maintain, and share essential data (demographics, hazards, buildings, resources, personnel).
- Objective 6.7: Develop, maintain, and implement emergency management training curriculum.
- Objective 6.8: Design and implement disaster response exercises (tabletop, functional, full-scale).

7.3 Progress Implementing Mitigation Measures

As part of the LHMP update process, the Planning Team reviewed the mitigation actions included in the previous plan. The review included identifying the status of the prior mitigation actions (completed, not started, in progress, or no longer needed) from the previous plan. Those mitigation actions that were determined to be "on-going" were placed under the Mitigation Governance section of Capabilities Assessment chapter. In other words, the Planning Team deemed that since the measure did not have a stop or start date, it should not be placed under these sections and should be captured in the Mitigation Governance with the other ongoing mitigation programs. If deemed "as needed", the mitigation measure was carried over to the new list of mitigation measures. Additionally, descriptions of the carried over, needed mitigation actions were reviewed, and in some cases, the name was changed, the scope was expanded, and/or the mitigation measure was merged with another (public outreach for all-hazards, not just flooding or fires). **Table 7.1** indicates the status of each of the mitigation measures from the previous plan (2017). These actions will be carried over to the 2022 plan for potential funding over the next five (5) years or for continuation of their ongoing project(s).

Table 7.1 - Status of Previous 2017 Mitigation Measures

Mitigation Measure	Hazard	Status
Murrieta Creek Project	Flood	Ongoing Program
Flood Control Channel Reconstruction and Repair (Temecula Creek/Pala Community Park)	Flood	In Progress
Flood Control Channel Reconstruction and Repair (Empire Creek/Margarita Community Park)	Flood	Not Started (Carry over to 2022 List)
Flood Control Channel Reconstruction and Repair (Long Canyon Creek/Long Canyon Creek Park)	Flood	Not Started (Carry over to 2022 List)
Wildfire – Weed abatement, Public Education, Fire Department Apparatus, Fire Inspections	Wildfire	Ongoing Program
Earthquake – Public Education, Emergency Alert Systems	Earthquake	Ongoing Program

7.4 Mitigation Measure Prioritization

The HMPT used the STAPLEE Criteria (Social, Technical, Administrative, Political, Legal, Economic, and Environmental) to evaluate the feasibility of each of the mitigation measures being considered for inclusion in the LHMP update. The STAPLEE process helped the HMPT understand

possible challenges that could hinder the ability to implement the mitigation measure. The STAPLEE Criteria includes the following considerations:

- **Social**
  - *Is the proposed action socially acceptable to the community?*
  - *Are there equity issues involved that would mean that one segment of the community is treated unfairly?*
  - *Will the action cause social disruption?*
- **Technical**
  - *Will the proposed action work?*
  - *Will it create more problems that it will solve?*
  - *Does it involve a problem or only a symptom?*
  - *Is it the most useful action in light of other community goals?*
- **Administrative**
  - *Can the community implement the action?*
  - *Is there someone to coordinate and lead the effort?*
  - *Is there sufficient funding, staff, and technical support available?*
  - *Are there ongoing administrative requirements that need to be met?*
- **Political**
  - *Is the action politically acceptable?*
  - *Is there public support both to implement and to maintain the project?*
- **Legal**
  - *Is the community authorized to implement the proposed action? Is there a clear legal basis or precedent for this activity?*
  - *Are there legal side effects? Could the activity be construed as a taking?*
  - *Is the proposed action allowed by the general plan, or must the general plan be amended to allow the proposed action?*
  - *Will the community be liable for action or lack of action?*
  - *Will the activity be challenged?*
- **Economic**
  - *What are the costs and benefits of this action?*
  - *Do the benefits exceed the costs?*
  - *Are initial, maintenance, and administrative costs considered?*
  - *Has funding been secured for the proposed action? If not, what are the potential sources (public, non-profit, and private)?*
  - *How will this action affect the fiscal capability of the community?*
  - *What burden will this action place on the tax base or local economy?*
  - *What are the budget and revenue effects of this activity?*
  - *Does the action contribute to other community goals, such as capital improvements or economic development?*
  - *What benefits will the action provide?*

- **Environmental**
  - *How will the action affect the environment?*
  - *Will the action need environmental regulatory approvals?*
  - *Will it meet local and state regulatory requirements?*
  - *Are endangered or threatened species likely to be affected?*

Each proposed mitigation measure was assessed and given a score between 1-5 where 5 is favorable/beneficial (or no major issues/opposition) and 1 is unfavorable/not beneficial (or major issues/opposition) for each of the STAPLEE criteria. The scores were then totaled, and a final score was established for each mitigation measure. A relative comparison of mitigation measures helps understand which mitigation measure may have the greatest potential for implementation. However, the HMPT recognized that this ranking does not (and should not) preclude the City from funding mitigation actions lower on the list first, especially if funding is available.

7.5 Mitigation Measures & Projects

The focus of the mitigation measures was on the "high" priority (Tier I) hazards (Transportation Failure, Energy Shortage/Power Outage, Flood, Wildfire, and Earthquake); however, some mitigation measures do address other hazards or cut across all hazards. Mitigation measures were identified by assessing the effectiveness of current capabilities (existing plans, policies, and programs) against the expected impacts (vulnerabilities). **Table 7.2** represents the proposed mitigation measures identified by the Planning Team.

Table 7.2 - Mitigation Actions (Hazard / Goal Alignment) (2022)

	Mitigation Action	Hazard	Goal
1	Create and maintain a Key Asset Database	Multi	1, 3, 4, 5, 6
2	Develop and maintain Emergency Circulation (Traffic) Plan(s); acquire necessary equipment to support implementation (Mass Evacuation Plan)	Transportation Failure	1, 2, 3, 5, 6
3	Develop and maintain Memorandums of Understanding (MOUs) and Public-Private Partnerships in support of emergency management and business continuity	Multi	3, 5, 6
4	Develop and maintain an Emergency Public Communications Plan; acquire necessary equipment and maintain systems to support implementation	Multi	3, 5, 6
5	Develop and/or incorporate Emergency Management Training and Exercise Program into existing training and exercise programs	Multi	1, 2, 3, 4, 5, 6
6	Participate and continue support of the OA Stakeholder Group	Multi	5, 6
7	Maintain the Hazard Mitigation Planning Team	Multi	5, 6
8	Increase coordination with Lifeline Stakeholders to better understand their improvement, mitigation, and resiliency efforts	Multi	2, 3, 5, 6
9	Coordinate with Southern California Edison Emergency Management	Multi	1, 2, 3, 4, 5, 6
10	Coordinate with School District Emergency Management	Multi	1, 2, 3, 4, 5, 6
11	Formalize and expand the role of the Floodplain Manager/NFIP Coordinator	Flood	3, 4, 5
12	Continue support of the County Floodplain Management Plan	Flood	1, 3, 4, 5

	Mitigation Action	Hazard	Goal
13	Develop, maintain, and disseminate an Infectious Disease Response Plan; acquire equipment, supplies, and other material as needed to support role	Pandemic	1, 2, 3, 5, 6
14	Ensure Fire Resistant Materials are incorporated into existing building modifications and/or future development	Wildfire	1, 2, 3, 4, 5
15	Incorporate Defensive Space Standards in existing and future building designs	Wildfire	1, 2, 3, 4, 5
16	Coordinate with the County, surrounding local cities, and the regional Fusion Center	Civil	2, 5, 6
17	Coordinate with State and local Governments; acquire equipment, supplies, and other material as needed to support role	Drought	2, 5, 6
18	Develop and maintain a Water Conservation Plan; implement recommendations	Drought	2, 3, 4, 5
19	Develop and maintain a Drought Emergency Plan; acquire equipment, supplies, and other material as needed to support role	Drought	2, 3, 4, 5
20	Coordinate with State of California local Governments; acquire equipment, supplies, and other material as needed to support role	Extreme Temperature	1, 2, 3, 5, 6
21	Develop and maintain an Extreme Temperature Emergency Plan; acquire equipment, supplies, and other material as needed to support implementation	Extreme Temperature	1, 2, 3, 5, 6
22	Continue to develop and maintain Mass Care and Shelter Program/Plan; acquire equipment, supplies, and other material as needed to support implementation	Multi	1, 2, 3, 5, 6
23	Acquire and develop a process for obtaining food and water for disaster victims during emergencies	Multi	1, 2, 3, 5, 6
24	Formalize, maintain, and promote the implementation of NIMS Credentialing and Qualifications; acquire necessary equipment, material, and supplies needed to support implementation	Multi	5, 6
25	Resource Management System - Formalize, maintain, and promote the Resource Ordering Program; acquire necessary equipment, material, and supplies needed to support implementation	Multi	5, 6
26	Coordinate with the County, surrounding local cities, and the regional Fusion Center; acquire equipment, supplies, and other material as needed to support role	Terrorism	1, 3, 4, 5, 6
27	Coordinate with NTSB, Regional Association of governments, and County Transportation Department; acquire equipment, supplies, and other material as needed to support role	Aviation	1, 3, 4, 5, 6
28	Develop and maintain Business Continuity Plan(s), emphasize loss of technology (Tech Down) situation	Technology	1, 2, 3, 4, 5, 6

The HMPT made assessments to determine if plans, policies, and/or programs needed to be expanded and/or improved; and whether those changes would support reducing the hazard. Any recommended changes to plans, policies, and programs are reflective in **Table 7.2.** It is also worth to note, that consideration was also given to needed plans, policies, and programs. They too are also included in **Table 7.2**.

In addition to the proposed mitigation actions above, the HMPT decided to focus on three (3) mitigation projects that will support lessening the impact and reduction of hazards from floods

and wildfires. These Mitigation projects were identified by assessing the top hazards affecting the City of Temecula and validating their existence against current capabilities (existing plans, policies, and programs) against the expected impacts (vulnerabilities). **Table 7.3** represents the proposed mitigation projects identified by the Hazard Mitigation Planning Team.

Table 7.3 - Mitigation Projects (2022)

Project	Hazard	Funding	Project Status	Notes
Temecula / Murrieta Creek Widening (continuation)	Flood	U.S. Army Corps of Engineers	Ongoing Program	New Project
City-Wide Mass Evacuation Plan	Flood / Wildfire / Transportation Failure	General Fund / HMA	Not Started	New Project
Loudspeaker Notification System along Dam Inundation and Flood Routes	Flood / Mass Evacuation	HMA	Not Started	New Project
Wildland Vegetation Management – Temecula Creek	Wildfire	HMA	In Progress	New Project
Flood Control Channel Reconstruction and Repair (Temecula Creek/Pala Community Park)	Flood	City General Fund	In Progress	Carry Over from 2017 Annex
Flood Control Channel Reconstruction and Repair (Empire Creek/Margarita Community Park)	Flood	City General Fund	Not Started	Carry Over from 2017 Annex
Flood Control Channel Reconstruction and Repair (Long Canyon Creek/Long Canyon Creek Park)	Flood	City General Fund	Not Started	Carry Over from 2017 Annex
Wildfire – Weed abatement, Public Education, Fire Department Apparatus, Fire Inspections	Wildfire	City General Fund / Emergency Management / Fire Department	Ongoing Program	Carry Over from 2017 Annex
Earthquake – Public Education, Emergency Alert Systems	Earthquake	Emergency Management / HMA	Ongoing Program	Carry Over from 2017 Annex

7.6 Mitigation Measure Implementation Plan

Table 7.4 reflects the implementation plan for each mitigation measure. The implementation plan identifies the lead department responsible for the action, the estimated cost, potential funding source to support the action, and the proposed timeframe for completion. It is important to note that while a lead department is identified that some other City departments (i.e., Information Technology, Police, Fire, or Facilities) may actually take the lead depending on the project (i.e., Memorandums of Understanding- MOUs and Business Continuity Plan- BCPs). Emergency Management may coordinate the effort, but the other City departments may actually

take the lead to complete the particular MOU or BCP. Additionally, the City intends to actively search for other possible funding source to help implement the mitigation measures, but those resources are not known at this time to be listed. It is also worth to note that Temecula has listed Hazard Mitigation Assistance (HMA) grants under several of the mitigation measures. The City recognizes that HMA grants include the Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC), and Flood Mitigation Assistance (FMA) funding. It was deemed better by the Planning Team to list it collectively, instead of only selecting 1 or 2 of the grant programs as to not limit consideration under the other grant programs.

Table 7.4 - Mitigation Actions – Implementation Plan (2022)

	Mitigation Action	Lead	Cost	Timeframe	Funding
1	Create and maintain a Key Asset Database	Emergency Management	<$100,000	< 1 year	General Fund
3	Develop and maintain Memorandums of Understanding (MOUs) and Public-Private Partnerships in support of emergency management and business continuity	Emergency Management	<$100,000	1-3 years	General Fund
4	Develop and maintain an Emergency Public Communications Plan; acquire necessary equipment and maintain systems to support implementation	Emergency Management	<$100,000	1-3 years	General Fund
5	Develop and/or incorporate Emergency Management Training and Exercise Program into existing training and exercise programs	Emergency Management / Management Team	<$100,000	< 1 year	General Fund
6	Participate and continue support of the OA Stakeholder Group	Emergency Management	<$100,000	< 1 year	General Fund
7	Maintain the Hazard Mitigation Planning Team	Emergency Management	<$100,000	< 1 year	General Fund
8	Increase coordination with Lifeline Stakeholders to better understand their improvement, mitigation, and resiliency efforts	Emergency Management	<$100,000	1-3 years	General Fund
9	Coordinate with Southern California Edison Emergency Management	Emergency Management & Public Works	<$100,000	< 1 year	General Fund
10	Coordinate with School District Emergency Management	Emergency Management	<$100,000	< 1 year	General Fund
11	Formalize and expand the role of the Floodplain Manager/NFIP Coordinator	Public Works	<$100,000	< 2 years	General Fund
12	Continue support of the County Floodplain Management Plan	Public Works	<$100,000	< 1 year	General Fund/ HMA
13	Develop, maintain, and disseminate an Infectious Disease Response Plan; acquire equipment, supplies, and other material as needed to support role	Emergency Management & Emergency Management Committee	<$100,000	1-3 years	General Fund/ HMA

	Mitigation Action	Lead	Cost	Timeframe	Funding
14	Ensure Fire Resistant Materials are incorporated into existing building modifications and/or future development	Fire	$100,000-$300,000	1-3 years	General Fund/ HMA
15	Incorporate Defensive Space Standards in existing and future building designs	Fire/Community Development	$100,000-$300,000	1-3 years	General Fund/ HMA
16	Coordinate with the County, surrounding local cities, and the regional Fusion Center	Police	$300,000-$500,000	1-3 Years	General Fund / EMPG
26	Coordinate with the County, surrounding local cities, and the regional Fusion Center; acquire equipment, supplies, and other material as needed to support role	Police	<$100,000	< 1 Year	General Fund / HMA
18	Develop and maintain a Water Conservation Plan; implement recommendations	Emergency Management / Public Works / Community Development	$100,000-$300,000	3-5 years	General Fund / HMA
17	Coordinate with State and local Governments; acquire equipment, supplies, and other material as needed to support role	Emergency Management	$100,000-$300,000	<1 year	General Fund
19	Develop and maintain a Drought Emergency Plan; acquire equipment, supplies, and other material as needed to support role	Emergency Management / Public Works / Community Development	$100,000-$300,000	3-5 years	General Fund
20	Coordinate with State of California local Governments; acquire equipment, supplies, and other material as needed to support role	Emergency Management	$100,000-$300,000	3-5 years	General Fund / HMA
21	Develop and maintain an Extreme Temperature Emergency Plan; acquire equipment, supplies, and other material as needed to support implementation	Emergency Management	$100,000-$300,000	2-4 years	General Fund / HMA
22	Continue to develop and maintain Mass Care and Shelter Program/Plan; acquire equipment, supplies, and other material as needed to support implementation	Emergency Management / Community Services	<$100,000	1-2 years	General Fund
23	Acquire and develop a process for obtaining food and water for disaster victims during emergencies	Emergency Management / Community Services	<$100,000	1-2 years	General Fund
24	Formalize, maintain, and promote the implementation of NIMS Credentialing and Qualifications; acquire necessary equipment, material, and supplies needed to support implementation	Emergency Management	<$100,000	2-4 years	General Fund
25	Resource Management System - Formalize, maintain, and promote the Resource Ordering Program; acquire necessary equipment, material, and supplies needed to support implementation	Emergency Management / Facilities / Public Works	<$100,000	< 1 Year	General Fund

	Mitigation Action	Lead	Cost	Timeframe	Funding
27	Coordinate with NTSB, Regional Association of governments, and County Transportation Department; acquire equipment, supplies, and other material as needed to support role	Emergency Management / Public Works	<$100,000	<1 year	General Fund
28	Develop and maintain Business Continuity Plan(s), emphasize loss of technology (Tech Down) situation	Emergency Management	$100,000-$300,000	1-3 years	General Fund/HMA

8. PLAN ADMINISTRATION

8.1 Monitoring, Evaluating and Updating the Plan

The City of Temecula Office of Emergency Management (OEM) will lead the effort and will be responsible for ensuring that this plan is being monitored and evaluated over the next five (5) years. While there is not a confirmed meeting schedule, OEM will ensure that at a minimum, there is an annual meeting of the Hazard Mitigation Planning Team (HMPT) and possibly other interested stakeholders to discuss the LHMP and any possible changes to hazards or vulnerabilities. The first annual meeting will occur at the beginning of the year following the date of FEMA approval. The annual review with the HMPT will include but not be limited to:

- Status on progress towards implementing mitigation measures
- The need for additional and/or removal of mitigation measures
- Adjustments to the mitigation measure and/or implementation plan
- Addition to the goals and/or objectives
- Revisions to the hazard profiles, primarily focused on description, history, and location

In addition to the annual meetings, OEM may also leverage existing meetings to review, evaluate, and discuss progress on the mitigation actions set forth in this plan. OEM will ensure that the LHMP is an agenda item or incorporated into the discussion notes in those meetings where appropriate.

The HMPT will also visit the LHMP after significant hazard events; ensuring Lessons Learned and other vital information is captured for incorporation into future LHMP revisions. This will provide the HMPT with an opportunity to evaluate the value of any implemented mitigation actions, validate the needs of the remaining mitigation actions, and possibly identify additional mitigation actions.

Information obtained from all of these meetings will be captured by OEM and made available for the next LHMP update.

8.1.1 Coordinating Body

OEM will also lead the effort to update the LHMP. The City of Temecula specific Hazard Mitigation Planning Team will continue to be responsible for Plan maintenance. The Temecula Team is made up of representatives from the following departments:

- City Manager's Office / Economic Development
- City Clerk's Office
- Finance Department
- Community Services
- Community Development / Building & Safety

- Office of Emergency Management
- Public Works
- Information Technology
- Riverside County Sheriff's Department
- Temecula Fire Department (CALFire / Riverside County Fire Department)

Understanding the need not to have the LHMP expire, OEM will begin the process of updating the LHMP two (2) years prior to the plan expiration date. OEM may or may not seek a Hazard Mitigation Assistance (HMA) grant or the assistance of a consultant to support this effort. If this is true, OEM will incorporate appropriate time to account for this need.

8.2 Incorporating into other Planning Efforts

The City of Temecula is aware of the hazards that face its community, as historic incidents prove that disasters continue to evolve as a common occurrence in this area. The City will continue to strive toward protecting the life, property, and economy of the City of Temecula. Temecula also supports an all-hazard approach, encouraging information sharing between City Departments to incorporate into other planning efforts. As other plans are developed, the LHMP information will be leveraged and incorporated when other plans could benefit from a better understanding of hazards and the potential mitigation measures that can be taken. Over the past five (5) years, personnel challenges have limited the City's ability to fully incorporate the LHMP into other plans. While previous planning team members have championed and shared LHMP information during other planning efforts, there has not been a formalized process to truly integrate the LHMP information into other plans. The City, through the hiring of its first professional emergency manager, is committed to keep pushing for better integration of LHMP information. After a comprehensive review of the prior LHMP Annex, there was no identifiable integration of the identified projects or mitigation actions into any of the City's key plans or planning efforts. As a result, the City of Temecula's Office of Emergency Management will be incorporating and/or leveraging the information from the LHMP into the:

- Emergency Operations Plan
- General Plan
- Climate Action Plan
- Storm Water Collection Plan
- Continuity of Government/Operations Plan
- Wildland Vegetation Management Plan
- Wildland Urban Interface Fire Area Plan(s)

The City of Temecula will be incorporating the LHMP into the City's update to the General Plan Safety Element. As opportunities present themselves, the City will make every effort to incorporate the new LHMP information into other plans where appropriate. In the meantime, the LHMP will be utilized to assess future developments in accordance with the General Plan. In

addition to reviewing future development against relevant land use and zoning regulations, building codes and fire codes, and environmental and engineering standards, it will also be reviewed against the LHMP. Proposed development projects will be assessed to determine exposure (or risk) to community hazards. The LHMP will also serve as a reference for suggested mitigation measure to reduce and/or eliminate risk from those hazards.

8.3 Continued Stakeholder and Public Involvement

As mentioned under Section 2.4 and 2.5, the City of Temecula will organize and/or participate in a variety of meetings/events to share and exchange information about mitigation with stakeholders and the public. The City will use its social media platforms and when appropriate, leverage stakeholder and community social media platforms to announce the meetings/events. This City will also continue to provide public forums which gives the public and local emergency managers the opportunity to collaborate and coordinate prior to an emergency occurring.

8.4 Point of Contact

Comments or suggestions regarding this plan may be submitted to:

City of Temecula; Office of Emergency Management
Mikel Alford, Emergency Manager
41000 Main Street
Temecula, Ca 92590
(951) 693-3971 / mikel.alford@temeculaca.gov

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Appendix 1 – Adoption Resolution

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Appendix 2 – Planning Team Members

Agency	Department	Staff	Position
City of Temecula	City Manager's Office	Betsy Lowrey	Assistant to the City Manager
City of Temecula	City Clerk's Office	Lanny Krage	Records Manager
City of Temecula	Human Resources	Mikel Alford	Emergency Manager
City of Temecula	Human Resources	Courtney Fletcher	Management Assistant
City of Temecula	Finance	Tina Rivera	Purchasing Administrator
City of Temecula	Information Technology	Oscar Lopez	Network Administrator
City of Temecula	Information Technology (GIS)	Aaron Matthews	GIS Specialist
City of Temecula	Community Services	Jeff Lawrence	Community Services Manager
City of Temecula	Fire Department	Wendy Miller	Management Analyst
City of Temecula	Community Development	Matt Peters	Principal Planner
City of Temecula	Riverside County Sheriff	Deputy J. Kenitzer	Deputy – City Hall
City of Temecula	Building & Safety	Brian Clements	Building Official
City of Temecula	Community Development	Brandon Rabidou	Principal Management Analyst
City of Temecula	Public Works	Ron Moreno	Principal Civil Engineer
City of Temecula	Public Works	Stuart Kuhn	Associate Civil Engineer
City of Temecula	Economic Development	Christine Damko	Economic Development Manager
American Red Cross	Riverside County	Gerald Winkel	Disaster Program Manager
American Red Cross	Riverside County	Alex Newman	Disaster Program Manager
CALFire	Temecula Fire Department	Chief John Crater	Division Chief
CALFire	Temecula Fire Department	Capt. Matthew Hayes	Paramedic / Admin Capt.
CalOES	RIVCO EMD	Jose Ortega	Emergency Services Coordinator
California Highway Patrol	Temecula Division	Mike Lassig	PIO
California Highway Patrol	Temecula Division	Capt. Jason Penner	Commander
City of Murrieta	Fire Department	Rachel Hollinger	Disaster Preparedness Coordinator
City of Menifee	Human Resources	Vanessa Barrera	Emergency Management Analyst
City of Lake Elsinore	RIVCO EMD	Ralph Mesa	Emergency Services Coordinator
Chamber of Commerce	President/CEO	Brooke Nunn	President / CEO
Temecula Valley Hospital	Administration	Darlene Wetton	CEO
Temecula Valley Hospital	Plant Operations	Ben Cossette	Environment of Care / EM
Temecula Valley Unified School District	Superintendent Office	Jason Vickery	Director of Safety and Security
National Weather Service		Alex Tardy	Senior Meteorologist
Riverside County EMD	Operations	Camille Collins	Emergency Services Coordinator
Riverside County EMD	Operations	Eric Cadden	EM Program Supervisor
Visit Temecula Valley	CEO	Scott Wilson	President
SoCal Gas		Adam Eventov	Public Affairs Manager
SoCal Edison		Jeremy Goldman	
Rancho Water		Tom Marcoux	
MSJC	Regulatory Compliance	Nicole Pina	Director
Abbott Vascular		Amanda Molina	
Promenade Mall	Operations	Jeff Kurtz	General Manager
Pechanga Emergency Management	Fire Department	Edward Chacon	Tribal Emergency Manager
Riverside County District 3	County Supervisor Office	Chuck Washington	D3email@rivco.org
CALTRANS District 8	CALTRANS	Carolina Rojas	PIO
MCB Camp Pendleton	Mission Assurance	Jerry Vanlancker	Emergency Manager
Habitat for Humanity	Administration	Tammy Marine	Executive Director
First Light Home Care	Administration	Evangi Bello	Office Manager

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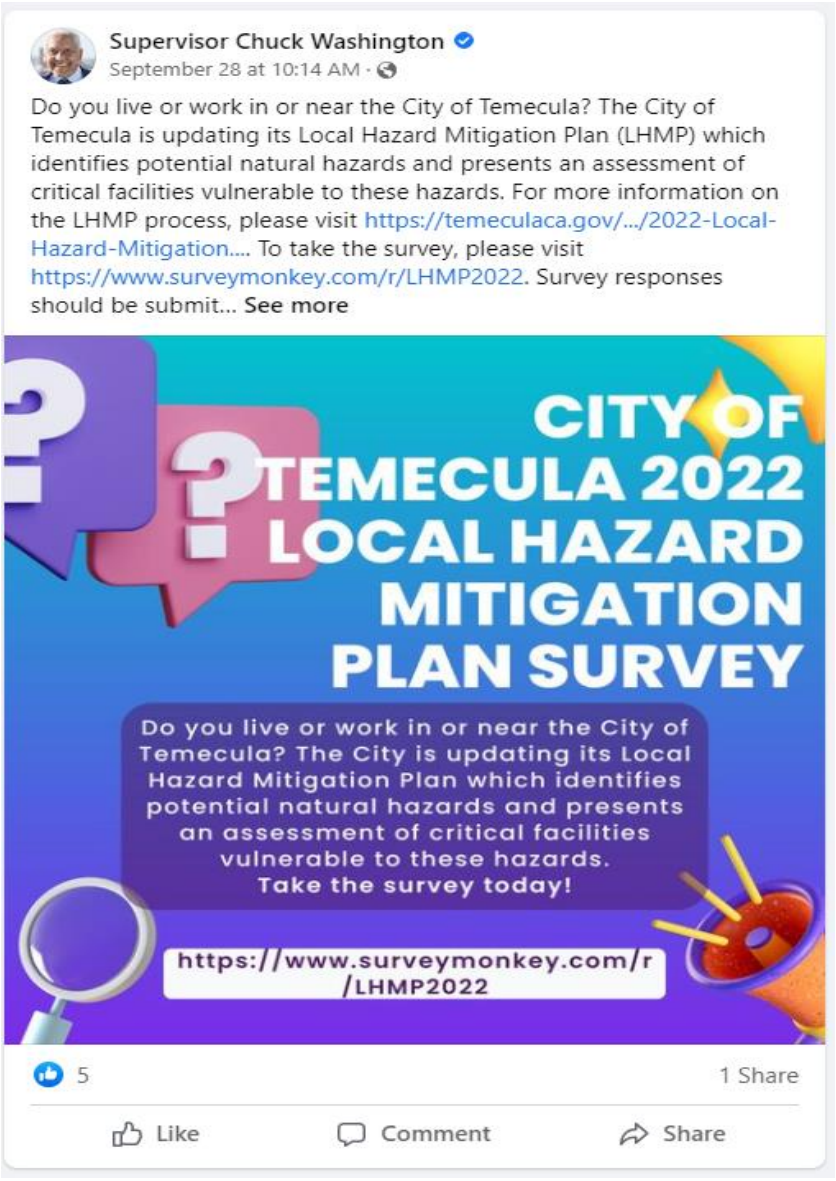
Appendix 3 – Planning Team Member Meeting Attendance Matrix

City of Temecula
Local Hazard Mitigation Plan
Hazard Mitigation Planning Team (HMPT)

Department / Agency	9/14/2022	10/12/2022	11/02/22	11/17/22	12/15/22	1/18/23
City Manager's Office	X	X		X	X	
City Clerk's Office	X	X	X	X	X	
Human Resources	X	X	X	X	X	
Finance		X		X	X	
Information Technology		X	X	X	X	
Information Technology (GIS)	X		X	X	X	
Community Services	X	X	X	X	X	
Fire Department		X	X	X		
Community Development	X	X	X	X	X	
Riverside County Sheriff	X		X	X		
Building & Safety	X	X	X	X	X	
Office of Emergency Management	X	X	X	X	X	
Public Works	X			X	X	
Economic Development	X			X	X	
American Red Cross	X				X	
CAL Fire			X	X		
CalOES						
California Highway Patrol	X	X		X	X	
City of Murrieta		X			X	
City of Wildomar						
City of Menifee	X					
City of Lake Elsinore						
Chamber of Commerce	X	X		X	X	
DHS CISA		X		X		
Temecula Valley Hospital	X	X		X		
DCH Auto Group						
Temecula Unified School District	X	X		X	X	
Amazon						
National Weather Service	X					
Riverside County EMD						

Department / Agency	9/14/2022	10/12/2022	11/02/22	11/17/22	12/15/22	1/18/23
Visit Temecula Valley						
SoCal Gas	X	X	X	X		
SoCal Edison	X			X		
Rancho Water	X	X		X		
MSJC		X	X		X	
Promenade Mall	X	X		X	X	
Pechanga Emergency Management		X				
Walmart						
COSTCO						
Infineon Technologies America's Corp						
Riverside County District 3	X			X	X	
CALTRANS District 8		X		X		
MCB Camp Pendleton	X					
Habitat for Humanity						
First Light Home Care						

Appendix 4 – Public Outreach



Instagram

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supervisorchuckwashington • F

supervisorchuckwashington Do you live or work in or near the City of Temecula? The City of Temecula is updating its Local Hazard Mitigation Plan (LHMP) which identifies potential natural hazards and presents an assessment of critical facilities vulnerable to these hazards. For more information on the LHMP process, please visit https://temeculaca.gov/1524/2022-Local-Hazard-Mitigation-Plan-UPDATE. To take the survey, please visit https://www.surveymonkey.com/r/LHMP2022. Survey responses should be submitted by November 2022.

1w

4 likes

7 DAYS AGO

Log in to like or comment.

facebook Sign Up Email or phone

Temecula Valley Chamber of Commerce

1d ·

Temecula needs your help!

The City of Temecula - City Government is updating their Local Hazard Mitigation Plan, and they need your input. This plan will help assess hazard vulnerabilities to reduce the risk of injuries, property damage, and community disruption that occurs during catastrophic events.

Please take their short survey at: https://www.surveymonkey.com/r/LHMP2022 to ensure that you and the rest of the community can get the help that they need during unforeseen events.

Learn more about the 2022 Local Hazard Mitigation Plan by clicking here: https://temeculaca.gov/.../2022-Local-Hazard-Mitigation-Plan-...

#temecula #Hazard #emergencypreparedness #chamberofcommerce Temecula Citizen Corps

Temecula Public Safety

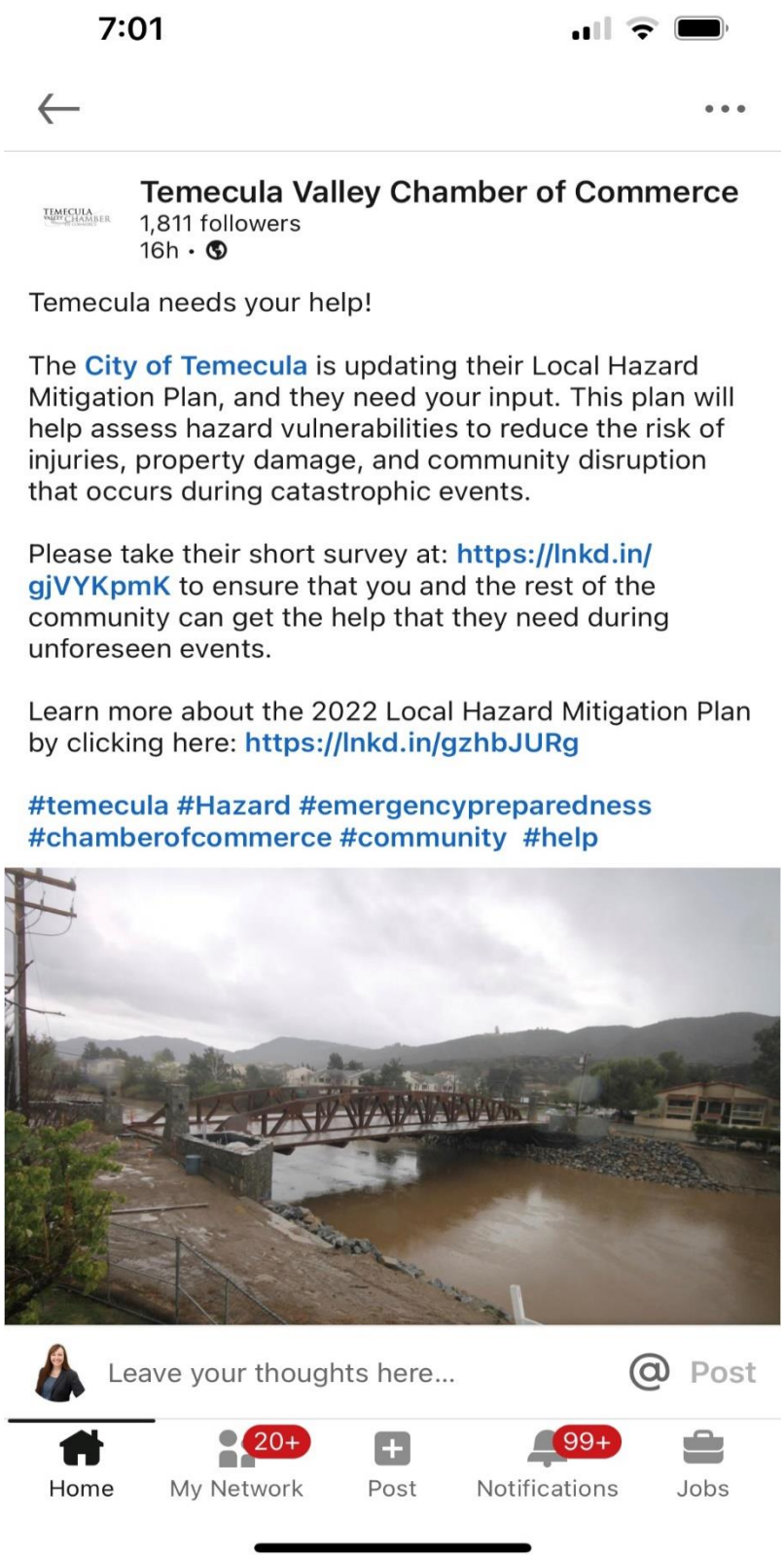
TEMECULACA.GOV

2022 Local Hazard Mitigation Plan UPDATE | Temecula CA

This page is dedicated to the development and public sharing of the process of updating the LHMP

3

Share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Temecula Valley Chamber of Commerce
1,811 followers
16h •
Temecula needs your help!
The City of Temecula is updating their Local Hazard Mitigation Plan, and they need your input. This plan will help assess hazard vulnerabilities to reduce the risk of injuries, property damage, and community disruption that occurs during catastrophic events.
Please take their short survey at: https://lnkd.in/gjVYKpmK to ensure that you and the rest of the community can get the help that they need during unforeseen events.
Learn more about the 2022 Local Hazard Mitigation Plan by clicking here: https://lnkd.in/gzhbJURg
#temecula #Hazard #emergencypreparedness #chamberofcommerce #community #help
Leave your thoughts here...
Post
Home
20+
My Network
Post
99+
Notifications
Jobs

TEMECULA VALLEY CHAMBER OF COMMERCE

September 20, 2022

HEADLINE NEWS

- U.S. Chamber of Commerce Joins California Small Businesses to Protect Workers, Consumers, and Local Restaurant Owners from AB 257 Flaws - Read More
- California Consumer Privacy Act Will Apply To Employers in 2023 - Read More
- CalChamber Calls for Changes to Non-Emergency COVID Draft Rule - Read More
- I-15 Freeway Closure POSTPONED: Winchester Rd to Murrieta Hot Springs Rd - Read More

CHAMBER NEWS

SEPTEMBER IS NATIONAL DISASTER PREPARDNESS MONTH

Last week, the TVCC attended the City of Temecula and Office of Emergency Management's kick-off meeting for Local Hazard Mitigation Plan (LHMP). The newly updated City of Temecula LHMP will identify the hazards facing the city, summarize the many assets of the city at risk to those threats and hazards, and vulnerabilities within the community, and ways that we can reduce the impacts of those threats and hazards to those assets through long-term, hazard mitigation.

In order for the City to develop a plan that is tailored to our community, we would love your input. Please take this short survey.

LHMP WEBSITE

Jen Ekizian
De Portola / East Benton • 2 hr ago

Good Afternoon Neighbors,

The City of Temecula Office of Emergency Management is currently undertaking the rewrite of our city's Local Hazard Mitigation Plan. This plan is unique because the city of Temecula is not operating its own Emergency Management Depart and Emergency Operations Center independent of Riverside County EMD.

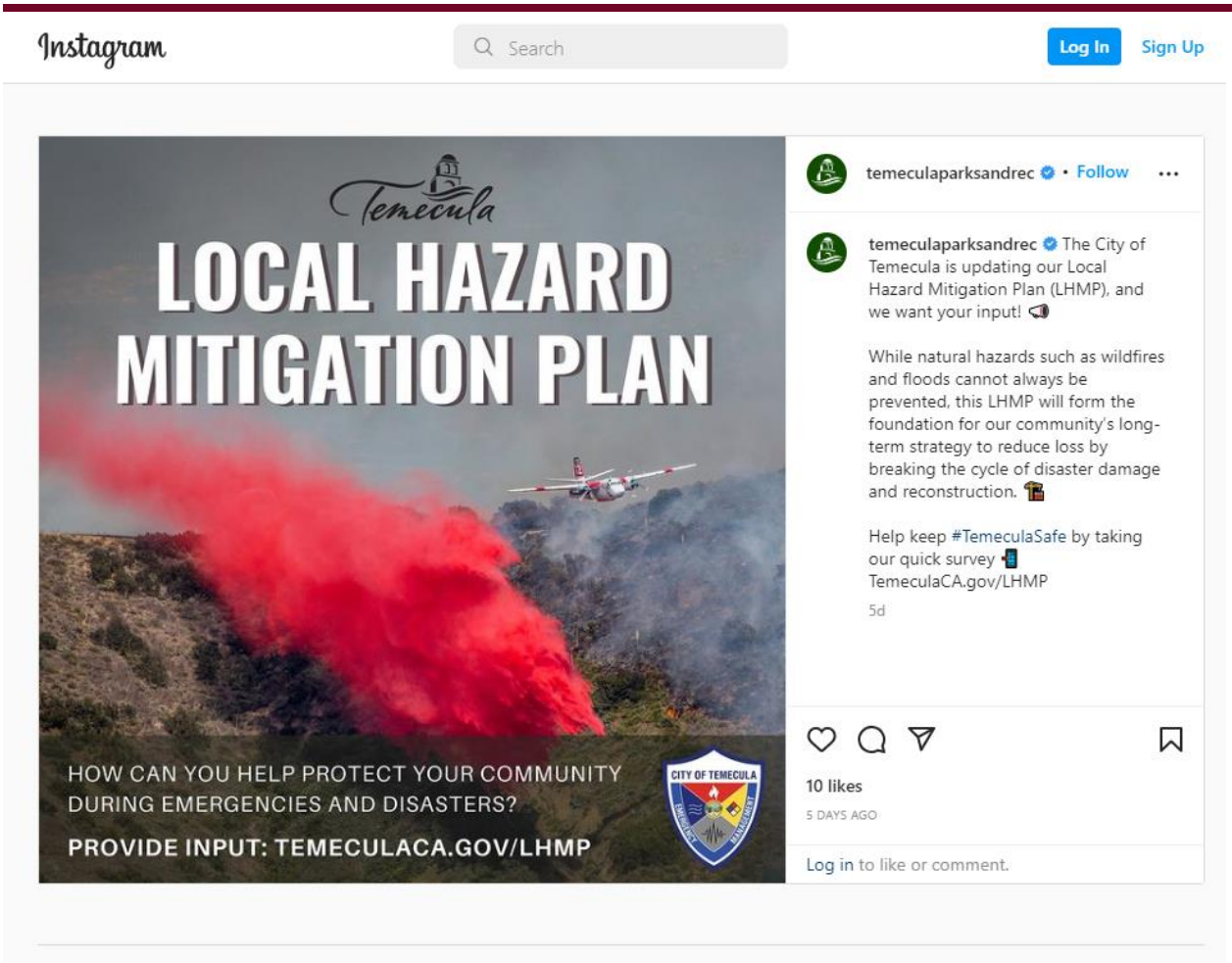
As part of the project, the city is asking residents to take a couple of minutes and complete the following anonymous survey. Please help us out!

Your time and participation are valuable and appreciated. If you have any questions feel free to contact me.

Public Survey: https://www.surveymonkey.com/r/LHMP2022

Thanks & Cheers,
Jennifer Ekizian
City of Temecula OEM
Intern

1 Like Share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Temecula
LOCAL HAZARD MITIGATION PLAN
HOW CAN YOU HELP PROTECT YOUR COMMUNITY DURING EMERGENCIES AND DISASTERS?
PROVIDE INPUT: TEMECULACA.GOV/LHMP
CITY OF TEMECULA
temeculaparksandrec • Follow
temeculaparksandrec The City of Temecula is updating our Local Hazard Mitigation Plan (LHMP), and we want your input!
While natural hazards such as wildfires and floods cannot always be prevented, this LHMP will form the foundation for our community's long-term strategy to reduce loss by breaking the cycle of disaster damage and reconstruction.
Help keep #TemeculaSafe by taking our quick survey
TemeculaCA.gov/LHMP
5d
10 likes
5 DAYS AGO
Log in to like or comment.


facebook
Temecula
LOCAL HAZARD MITIGATION PLAN
HOW CAN YOU HELP PROTECT YOUR COMMUNITY DURING EMERGENCIES AND DISASTERS?
PROVIDE INPUT: TEMECULACA.GOV/LHMP
CITY OF TEMECULA
City of Temecula Community Services Department
October 18 at 3:00 PM
The City of Temecula is updating our Local Hazard Mitigation Plan (LHMP), and we want your input!
While natural hazards such as wildfires and floods cannot always be prevented, this LHMP will form the foundation for our community's long-term strategy to reduce loss by breaking the cycle of disaster damage and reconstruction.
Help keep #TemeculaSafe by taking our quick survey TemeculaCA.gov/LHMP
1
1 Share
Like
Comment
Share
Write a comment...

LHMP Survey

The City of Temecula is updating our **Local Hazard Mitigation Plan** (LHMP), and we want your input!

While natural hazards such as wildfires and floods cannot always be prevented, this **LHMP** will form the foundation for our community's long-term strategy to reduce loss by breaking the cycle of disaster damage and reconstruction.

Help keep ***Temecula Safe*** by taking our quick survey **TemeculaCA.gov/LHMP**

Your response will help us ensure that you and the rest of our community can get the help that they need during unforeseen events.


LOCAL HAZARD
MITIGATION PLAN
LOCAL HAZARD
MITIGATION PLAN

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the office of the City Clerk (951) 694-6444. Notification 48 hours prior to a meeting will enable the City to make reasonable arrangements to ensure accessibility to that meeting [28 CFR 35.102.35.104 ADA Title II].

AGENDA

TEMECULA PUBLIC / TRAFFIC SAFETY COMMISSION
REGULAR MEETING
COUNCIL CHAMBERS
41000 MAIN STREET
TEMECULA, CALIFORNIA
OCTOBER 27, 2022 - 6:00 PM

CALL TO ORDER: Chairperson Richardson

FLAG SALUTE: Commissioner Ackerman

ROLL CALL: Ackerman, Carter, Matics, Richardson, Sullivan

PUBLIC COMMENT

A total of 30 minutes is provided for members of the public to address the Commission on matters not listed on the agenda. Each speaker is limited to 3 minutes. Public comments may be made in person at the meeting by submitting a speaker card to the Commission Secretary or by submitting an email to be read aloud into the record at the meeting. Email comments must be submitted to PublicTrafficSafetyCommission@temeculaca.gov. Speaker cards for in-person comments will be called in the order received by the Commission Secretary and then, if time remains, email comments will be read. Email comments on all matters must be received prior to the time the item is called for public comments. All public participation is governed by the Council Policy regarding Public Participation at Meetings adopted by Resolution No. 2021-54.

CONSENT CALENDAR

All matters listed under the Consent Calendar are considered to be routine and all will be enacted by one roll call vote. There will be no discussion of these items unless members of the Commission request specific items be removed from the Consent Calendar for separate action. A total of 30 minutes is provided for members of the public to address the Commission on items that appear on the Consent Calendar. Each speaker is limited to 3 minutes. Public comments may be made in person at the meeting by submitting a speaker card to the Commission Secretary or by submitting an email to be read aloud into the record at the meeting. Email comments must be submitted to PublicTrafficSafetyCommission@temeculaca.gov. Speaker cards for in-person comments will be called in the order received by the Commission Secretary and then, if time remains, email comments will be read. Email comments on all matters must be received prior to the time the item is called for public comments. All public participation is governed by the Council Policy regarding Public Participation at Meetings adopted by Resolution No. 2021-54.

1. Approve Action Minutes of September 22, 2022

   Recommendation: That the Public/Traffic Safety Commission approve the action minutes of September 22, 2022.

   Attachments: Action Minutes

BUSINESS

Members of the public may address the Commission on Business items that appear on the agenda. Each speaker is limited to 5 minutes. Public comments may be made in person at the meeting by submitting a speaker card to the Commission Secretary or by submitting an email to be read aloud into the record at the meeting. Email comments must be submitted to PublicTrafficSafetyCommission@temeculaca.gov. Speaker cards for in-person comments will be called in the order received by the Commission Secretary and then, if time remains, email comments will be read. Email comments on all matters must be received prior to the time the item is called for public comments. All public participation is governed by the Council Policy regarding Public Participation at Meetings adopted by Resolution No. 2021-54.

2. Receive a Presentation on Draft Local Hazard Mitigation Plan Update

   Recommendation: That the Public/Traffic Safety Commission receive and file the Draft Local Hazard Mitigation Plan Update report.

   Attachments: Agenda Report

3. Engineering and Traffic Survey Update

   Recommendation: That the Public/Traffic Safety Commission recommend the City Council adopt an Ordinance reaffirming and adjusting the speed limits identified in the Summary of Recommended Speed Limits.

   Attachments: Agenda Report
   Summary of Recommended Speed Limits
   Willdan Engineering - 2022 Engineering and Traffic Survey

DIVISION REPORT (Receive and File)

4. California Highway Patrol Report

   Attachments: California Highway Patrol Report - September 2022

5. Police Chief's Report

   Attachments: Police Chief's Report - September 2022

6. Fire Chief's Report

   Attachments: Fire Chief's Report - September 2022

7. Traffic Engineer's Report

Attachments: Traffic Engineer's Report - September 2022

DIRECTOR REPORT

COMMISSIONER REPORTS

ADJOURNMENT

The next regular meeting of the Public/Traffic Safety Commission will be held on Thursday, November 24, 2022, at 6:00 p.m., in the Council Chambers located at 41000 Main Street, Temecula, California.

NOTICE TO THE PUBLIC

The full agenda packet (including staff reports and any supplemental material available after the original posting of the agenda), distributed to a majority of the Public/Traffic Safety Commission regarding any item on the agenda, will be available for public viewing in the main reception area of the Temecula Civic Center during normal business hours at least 72 hours prior to the meeting. The material will also be available on the City's website at TemeculaCa.gov. and available for review at the respective meeting. If you have questions regarding any item on the agenda, please contact the Public Works Department at (951) 694-6444.

City of Temecula
Local Hazard Mitigation Plan Update

PUBLIC / TRAFFIC SAFETY COMMISSION PRESENTATION
COMMISSION / PUBLIC KICKOFF

27 October 2022

1

Overview

- Project Scope
  - What and Why we are doing it
- Key Terms
  - Mitigation
  - Local Hazard Mitigation Plan (LHMP)
- LHMP and Update Process
  - What hazards are being addressed
  - How the LHMP will be updated
- What to Expect
  - How you can keep yourself update on plan progress

2

Agenda

- Background
- Definition of Mitigation
- Local Hazard Mitigation Plan (LHMP) Overview
- City of Temecula LHMP Overview
- Public Outreach Effort
- Next Steps

3

Background

- FEMA provides funding after disasters to mitigate future impacts
- Historically difficult to identify eligible projects
  - *Pressure to obligate funds*
- In 2000, FEMA revised regulations to require an LHMP to receive mitigation funds
- LHMP must be comprehensive and identify projects
  - *Project must be in the LHMP to be eligible for funding*

4

Definition of Mitigation

- Part of the Disaster Cycle
- FEMA defines Mitigation as the *"effort to reduce and/or eliminate loss of life and property by lessening the impacts from hazards"*
- Benefits of Mitigation include:
  - Saved lives
  - Reduced damage to property
  - Reduced economic losses
  - Minimized social disruption
  - Shorter recover period for the community

5

Local Hazard Mitigation Plans

- Goal
  - To develop a strategy to reduce and/or eliminate impacts from hazards
- Objectives
  - Apply a comprehensive planning approach
    - Involve the Whole Community (local/regional stakeholders)
    - Address multi-hazards
    - Engage the public
  - Understand capabilities and vulnerabilities to hazards
    - Identify key assets
  - Identify projects and actions
  - Integrated with other planning efforts

6

Local Hazard Mitigation Plans

- LHMP Requirements
  - Locals prepare, adopt, and maintain
    - Must update every 5 years
  - Riverside County Emergency Management Department reviews
  - Cal OES reviews
  - FEMA approves

What are Cal OES and FEMA looking for:

- Proper documentation of the planning process
- Current community, hazard, and impact information
- Validation/Identification of projects and actions
- Method for plan review (updating) and implementation
- Verification plan was adopted

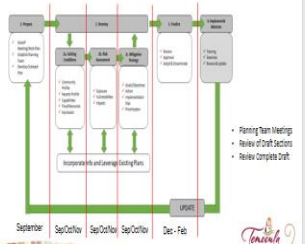
7

City of Temecula LHMP

- Last approved and adopted in 2017
- Can be found on City's website
  - Office of Emergency Management / Local Emergency Plans Tab
    - Search Bar: LHMP Update (select first result)
- Analyzed the following hazards
  - Chemical Agents
  - Chemical/Hazardous Materials Spill
  - Crop Losses/Freezing
  - Dam Breach
  - Disease
  - Drought
  - Earthquake
  - Energy/Power Outage/Excessive Heat
  - Flooding
  - Infestation
  - Mudslide/ Landslide
  - Tornado
  - Wildfire
  - Windstorm
- Mitigation Actions (projects) focused on priority hazards

8

LHMP Update Process



9

City of Temecula LHMP

- Planning Team
  - Representatives from City Departments
  - Representatives from Regional Stakeholders
    - State
    - County
    - Special Districts
    - Local Tribes
    - Non-Governmental Organizations
    - Lifelines (Utilities)
    - Hospitals / Care Facilities
    - Businesses
    - Neighboring Jurisdictions

10

Public LHMP Outreach Effort

- Two (2) public meetings
  - Project kickoff (1 meeting) **(tonight's meeting)**
  - Draft plan review (1 meeting)
- Status updates
  - City Social Media (Website, Facebook, Instagram, Twitter, TikTok)
  - City Council / Community Meetings
  - *Possibly* Printed Media (local, regional, city, community organizations)
- City LHMP Update website within OEM
  - Community Survey

11

Next Steps

- Review public comments
- Hold additional Planning Team meetings
- Prepare and Review draft LHMP sections
- Provide status updates to the public
- Bring Draft Plan back to Commission

12

Questions

- Mikel Alford
  - 951-491-9037
  - mikel.alford@TemeculaCA.gov

13

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AGENDA

TEMECULA PUBLIC / TRAFFIC SAFETY COMMISSION
REGULAR MEETING
COUNCIL CHAMBERS
41000 MAIN STREET
TEMECULA, CALIFORNIA
JANUARY 26, 2023 - 6:00 PM

CALL TO ORDER: Chairperson Richardson

FLAG SALUTE: Commissioner Carter

SWEARING IN: James Richardson, Bradley Sullivan

ROLL CALL: Ackerman, Carter, Matics, Richardson, Sullivan

PUBLIC COMMENT

A total of 30 minutes is provided for members of the public to address the Commission on matters not listed on the agenda. Each speaker is limited to 3 minutes. Public comments may be made in person at the meeting by submitting a speaker card to the Commission Secretary or by submitting an email to be read aloud into the record at the meeting. Email comments must be submitted to PublicTrafficSafetyCommission@temeculaca.gov. Speaker cards for in-person comments will be called in the order received by the Commission Secretary and then, if time remains, email comments will be read. Email comments on all matters must be received prior to the time the item is called for public comments. All public participation is governed by the Council Policy regarding Public Participation at Meetings adopted by Resolution No. 2021-54.

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1. Approve Action Minutes of October 27, 2022

Recommendation: That the Public/Traffic Safety Commission approve the Action Minutes of October 27, 2022.

Attachments: Action Minutes

BUSINESS

Members of the public may address the Commission on Business items that appear on the agenda. Each speaker is limited to 5 minutes. Public comments may be made in person at the meeting by submitting a speaker card to the Commission Secretary or by submitting an email to be read aloud into the record at the meeting. Email comments must be submitted to PublicTrafficSafetyCommission@temeculaca.gov. Speaker cards for in-person comments will be called in the order received by the Commission Secretary and then, if time remains, email comments will be read. Email comments on all matters must be received prior to the time the item is called for public comments. All public participation is governed by the Council Policy regarding Public Participation at Meetings adopted by Resolution No. 2021-54.

2. Receive a Presentation on Final Draft of 2022 Local Hazard Mitigation Plan

Recommendation: That the Public/Traffic Safety Commission receive and file the Final Draft of the 2022 Local Hazard Mitigation Plan.

Attachments: Agenda Report
City of Temecula Local Hazard Mitigation Plan 2022
Public Traffic Safety Commission LHMP Brief

3. Approve Change in Ordinance Regarding Golf Carts on City Streets

Recommendation: That the Public/Traffic Safety Commission direct staff to provide an amendment to Chapter 10.44 of the Municipal Code to define and locate golf cart use and crossings in the City.

Attachments: Agenda Report
Exhibit A – Draft Ordinance

4. Campanula Way - Traffic Calming Analysis

Recommendation: That the Public/Traffic Safety Commission direct staff to maintain current design conditions and continue to monitor Campanula Way between de Portola Road and Meadows Parkway.

Attachments: Agenda Report
Exhibit A - Location Map
Exhibit B - Multi-Way Stop Warrant Analysis

5. Election of Chairperson and Vice-Chairperson

Recommendation: That the Public/Traffic Safety Commission elect a Chairperson and Vice-Chairperson to preside through the 2023 Calendar Year.

Attachments: Agenda Report

DIVISION REPORT (Receive and File)

6. California Highway Patrol Report

   Attachments: California Highway Patrol Report - December 2022

7. Police Chief's Report

   Attachments: Police Chief's Report - December 2022

8. Fire Chief's Report

   Attachments: Fire Chief's Report - December 2022

9. Traffic Engineer's Report

   Attachments: Traffic Engineer's Report - December 2022

DIRECTOR REPORT

COMMISSIONER REPORTS

ADJOURNMENT

The next regular meeting of the Public Traffic Safety Commission will be held on Thursday, February 23, 2023, at 6:00 p.m., in the Council Chambers located at 41000 Main Street, Temecula, California.

NOTICE TO THE PUBLIC

The full agenda packet (including staff reports and any supplemental material available after the original posting of the agenda), distributed to a majority of the Public Traffic Safety Commission regarding any item on the agenda, will be available for public viewing in the main reception area of the Temecula Civic Center during normal business hours at least 72 hours prior to the meeting. The material will also be available on the City's website at TemeculaCa.gov. and available for review at the respective meeting. If you have questions regarding any item on the agenda, please contact the Public Works Department at (951) 694-6444.

City of Temecula
Local Hazard Mitigation Plan Update

PUBLIC / TRAFFIC SAFETY COMMISSION PRESENTATION
FINAL DRAFT

28 January 2023

1

Background

- The Disaster Mitigation Act of 2000
  - Requires local governments to have an approved and adopted Hazard Mitigation Plan
  - Required for post-disaster funding
  - Describes processes for
    - Assessing hazards, risks, and vulnerabilities
    - Identifying and prioritizing mitigation actions
    - Soliciting input from the community
  - Must be updated and approved every 5 years

2

Definition of Mitigation

- Part of the Disaster Cycle
- FEMA defines Mitigation as the ***"effort to reduce and/or eliminate loss of life and property by lessening the impacts from hazards"***
- Benefits of Mitigation include:
  - Saved lives
  - Reduced damage to property
  - Reduced economic losses
  - Minimized social disruption
  - Shorter recover period for the community

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City of Temecula LHMP

- Last approved and adopted in 2017
- Top 5 Hazards
  - Transportation
  - Earthquake
  - Flood
  - Terrorism
  - Wildland Fire
- No change in hazards from 2012-2017
- No repetitive loss properties under NFIP

4

2022 Local Hazard Mitigation Plan

- Goal - 2022
  - To develop a strategy to reduce and/or eliminate impacts from hazards
- Objectives
  - Apply a comprehensive planning approach
    - Involve the Whole Community (local/regional stakeholders)
    - All-hazards approach
    - Engage the public
  - Understand capabilities and vulnerabilities to hazards
    - Identify key assets
  - Identify projects and actions

5

2022 LHMP Update Process

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2022 Local Hazard Mitigation Plan

- Streamlined
  - Chapter 1: Introduction
  - Chapter 2: Planning Process
  - Chapter 3: Community Profile
  - Chapter 4: Capability Assessment
  - Chapter 5: Hazard Assessment
  - Chapter 6: Risk & Vulnerability Assessment
  - Chapter 7: Mitigation Strategies
  - Chapter 8: Plan Administration

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Capability Assessment

- Resource availability to support Mitigation
  - Personnel Resources
    - Workforce / Contracts / Volunteers / Mutual Aid / Partnerships
  - Mitigation Governance Resources
    - Laws / Regulations / Codes / Ordinances
    - Plans / Studies / Reports
    - Programs
  - Technical Resources
  - Fiscal Resources
    - Government / Proprietary / Fiduciary Funds

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Hazard Assessment

- Extensive effort to identify all hazards
- Use of external resources
  - Bias HMP
  - Riverside County CA LHMP
  - Jurisdiction LHMPs
  - Lake Elsinore / Menifee / Murrieta
- Developed comprehensive profiles for each hazard

2017 Hazards

1. Transportation
2. Earthquake
3. Flood
4. Terrorism
5. Wildfire

2022 Hazards

1. Transportation Failure
2. Fire (Wildfire)
3. Earthquake
4. Electrical Failure (PSPS)
5. Flooding
6. Communications Failure
7. Pandemic
8. Hazardous Materials Incident
9. Extreme Weather - Heat
10. Drought

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Hazard Assessment

- Prioritization Process for each of the identified hazards
- Utilization of a non-numerical ranking systems
- **Probability**
  - ***High*** (Highly Likely/Likely): There may or may not have been historic occurrences of the hazard in the community or region but experts feel that it is likely that the hazard will occur in the community. Citizens may feel that there is a likelihood of occurrence.
  - ***Medium*** (Possible): There may or may not have been a historic occurrence of the hazard in the community or region, but experts feel that it is possible that the hazard could occur in the community. Citizens may feel that there is a likelihood of occurrence.
  - ***Low*** (Unlikely): There have been no historic occurrences of the hazard in the community or region and both experts and citizens agree that it is highly unlikely that the hazard will occur in the community.
- **Impact**
  - ***High*** (Catastrophic/Critical):Both experts and citizens feel that the consequences will be significant in terms of building damage and loss of life.
  - ***Medium*** (Limited, but not insignificant) Consequences are thought to be related in terms of building damage and loss of life, limited either in geographic extent or magnitude.
  - ***Low*** (Negligible): Consequences are thought to be minimal in terms of building damage and loss of life, limited either in geographic extent or magnitude.

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Hazard Prioritization Matrix
Hazard Profile Development

- Grey Area (Top Hazards)
  - Ranked by HMPT (Discussion)
- Profile Composition
  - Ranking
  - Description
  - Location and Extent
  - History
  - Probability
  - Climate Change Considerations

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Risk / Vulnerability Assessment

- "Risk" as defined by FEMA, "is a combination of hazard, vulnerability, and exposure"
  - It is the impact that a hazard would have on people, services, facilities, and structures in the community and the likelihood of a hazard event resulting in an adverse condition
- City Disaster Proclamation History (1993 – 2022)
  - Flooding (1993 / 2007)
  - High Winds (2007)
  - COVID-19 (2020 / 2021)

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Risk / Vulnerability Assessment

- Each Hazard was rated using the Calculated Priority Risk Index (CPRI)
  - Examines 4 criteria
    - Probability
    - Magnitude / Severity
    - Warning Time
    - Duration
  - Tied back to original hazard prioritization

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Risk / Vulnerability Assessment

- Identification of Critical Facilities and Assets
- Cultural and Natural Resources Inventory
- Risk Assessment and Potential Loss
  - Evaluation of City Owned Property
  - Population exposed to hazard
- Analysis of Potential Losses

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2022-2027 Mitigation Strategies

- Goal 1: Minimize Loss of Life and Injuries
- Goal 2: Improve Community and Agency Awareness
- Goal 3: Improve the Community's Capability to Mitigate Hazards and Reduce Exposure to Hazard Related Losses
- Goal 4: Reduce Hazard Related Property Loss
- Goal 5: Maintain Coordination for Disaster Planning and Integrated Public Policy
- Goal 6: Improve Emergency Management Capability

- 2022 Plan Changes
  - 2017 Goals: 2
  - 2022 Goals:
    - Updated 1 from 2017
    - Added 1 new goal
    - Removed 2

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2022-2027 Mitigation Actions/Projects

- 2017
- 2022

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2022-2027 Mitigation Actions/Projects

- New to the 2022 Plan
  - List of 28 "proposed" mitigation actions
  - Continuous "living" process

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Mitigation Awareness

- Public Meetings
- Preparedness Fairs
- Social Media
- Public Survey / Comments

- Public Comment Period
  - December 1-30, 2022

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Public LHMP Outreach Effort

- City LHMP Update website within OEM
  - Community Survey
    - 226 Responses
    - Data is being analyzed for "next steps"
      - Referral to other City Departments
      - Referral to Public Works
      - Items for consideration for Emergency Management (Outreach Communications)

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Next Steps

- ***Feb 1, 2023***: Submit Plan to Riverside County Emergency Management Department
- ***Feb - March 2023***: FEMA & CalOES Plan Review
  - Minimum of 45 days
  - FEMA / CalOES will review plan simultaneously
  - Answer any requests for information/updates/changes
  - Receive approval letter from FEMA
- ***April (TBD) 2023***: Submit FINAL LHMP to Council for approval and adoption by resolution

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Questions

- Mikel Alford
  - 951-491-9037
  - mikel.alford@TemeculaCA.gov

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Appendix 5 – Key Assets and Facilities

Table App 5.1 - Essential (Critical) Facilities - City of Temecula

Facility Name	Address	Year Built	Bldg. Area (Sq. Ft.)	Structure Type	Building Replacement Cost
Fire Department (FD)					
Fire Station 12	28330 Mercedes St	1947	6,000 sq ft	Conventional Wood Frame Structure over concrete slab foundation	$ 1,065,000
Fire Station 73	27415 Enterprise Circle West	2016	6,956 sq ft	Conventional Wood Frame Structure over concrete slab foundation	$2,260,700.00
Fire Station 84	30650 Pauba Rd	1996	9,727 sq ft	Concrete Masonry bearing walls w wood roof deck supported by wood joists	$3,161,275.00
Fire Station 92	32211 Wolf Creek Dr	2007	9,030 sq ft	Conventional Wood Frame Structure over concrete slab foundation	$2,934,750.00
Fire Station 95	32131 South Loop Ranch	2005	6,000 sq ft	Conventional Wood Frame Structure over concrete slab foundation	$1,950,000.00
Fire Station 73	27415 Enterprise Circle West	2016	6,956 sq ft	Conventional Wood Frame Structure over concrete slab foundation	$2,260,700.00
Emergency Management					
Emergency Operations Center (Primary)	41000 Main St	2010	100,000 sq ft	Pre-engineered Steel Structure over concrete pad column footings over a concrete slab foundation	$32,500,000.00
Emergency Operations Center (Alternate)	30600 Pauba Rd	2006	34,003 sq ft	Concrete tilt-up bearing walls, steel framing, wood roof deck supported by wood joists	$11,050,975.00
TCC Trailer / CERT Compound	32364 Overland Trail	2005	1,000 sq ft	Manufactured Trailer	
Riverside County Sheriff's Department (RSD)					
Old Town Temecula Store Front	28690 Mercedes St. St B	2009	3,330 sq ft	Steel Frame w Concrete Topped Metal Decks	$1,082,250.00
Promenade Mall Store Front	40820 Winchester Rd #2020	1999	3,000 sq ft	Steel Frame w Concrete Topped Metal Decks	
California Highway Patrol	27685 Commerce Center Drive		6,950 sq ft		

Facility Name	Address	Year Built	Bldg. Area (Sq. Ft.)	Structure Type	Building Replacement Cost
City of Temecula Facilities					
Food Pantry / Help Center and Barn	28922 Pujol St	1967	1,800 sq ft	Conventional Wood Frame Structure over basement foundation	$585,000.00
S.A.F.E.	28910 Pujol St	2009	3,700 sq ft	Conventional Wood Frame Structure over concrete slab foundation	$1,202,500.00
Civic Center	41000 Main St	2010	100,000 sq ft	Pre-engineered Steel Structure over concrete pad column footings over a concrete slab foundation	$32,500,000.00
Temecula Wedding Chapel	41970 Moreno Rd	1997	1,587 sq ft	Conventional Wood Frame Structure over concrete slab foundation	$515,775.00
Temecula Valley Museum	28314 Mercedes	1999	7,200 sq ft	Conventional Wood Frame Structure over concrete slab foundation	$2,340,000.00
Temecula Children's Museum	42081 Main Street	1990	7,600 sq ft	Conventional Wood Frame Structure over crawl space foundation	$2,470,000.00
Mercantile Building	42051 Main Street	1890	22,330 sq ft	Steel Frame w Metal Decks over concrete raft foundation slab for the new building. Masonry Bearing walls w roof deck supported by wood joists w wall footing foundation system for the old building.	$7,257,250.00
Mary Phillips Senior Center	41845 Sixth St	1993	9,296 sq ft	Masonry bearing walls and wood framed structure on concrete slab	$3,021,200.00
Field Operations Center I	43230 Business Park Dr	2007	17,747 sq ft	Steel Frame w Concrete Topped Metal Decks over concrete pad column footings	$5,767,775.00
Field Operations Center II (West Wing)	43210 Business Park Dr	2001	8,862 sq ft	Steel Frame w Concrete Topped Metal Decks over concrete pad column footings	$2,880,150.00
Temecula Valley Entrepreneurs Exchange (TVE2)	43200 Business Park Dr	1990	30,187 sq ft	Concrete tilt-up bearing walls, steel framing, metal roof deck, steel joists	$9,810,775.00

Facility Name	Address	Year Built	Bldg. Area (Sq. Ft.)	Structure Type	Building Replacement Cost
Temecula Public / Ronald Roberts library	30600 Pauba Rd	2006	34,003 sq ft	Concrete tilt-up bearing walls, steel framing, wood roof deck supported by wood joists	$11,050,975.00
Grace Mellman	41000 County Center D	1972	15,000 sq ft		
Jefferson Recreation Center	41375 McCabe Court	1993	20,000 sq ft	Conventional Wood Frame Str over Concrete Slab Foundation	$6,500,000.00
Harveston Community Room	28582 Harveston Dr	2004	1750 sq ft	Mason Bearing Walls w Wood Frame Roof	$568,750.00
Temecula community Center (TCC)	28816 Pujol St	1984	5918 sq ft	Conventional Wood Frame Str over Concrete Slab Foundation	$1,923,350.00
Community Recreational Center (CRC) / Pool	30875 Rancho Vista Rd	1993	26480 sq ft	Mason Bearing Walls w wood roof deck supported by wood joists	$8,606,000.00
Margarita Recreation Center	29119 Margarita Rd	2016	8,069 sq ft	Under Construction	
Mary Phillips Senior Center	41845 6th Street	1993	9,248 sq ft	Conventional Wood Frame Str over Concrete Slab Foundation	$3,021,200
Old Town Temecula Community Theater	42051 Main St	2005	22,330 sq ft	Mason Bearing Walls w wood roof deck supported by wood joists	$7,257,250

Table App 5.2 - Additional (Critical) Facilities - City of Temecula

Facility Name	Address	Year Built	Bldg. Area (Sq. Ft.)	Structure Type	Replacement Cost
Fire Stations					
Pechanga Station 1	48240 Pechanga Rd	1998			
Universities					
Mt. San Jacinto College (MSJC) Temecula Valley Campus	41888 Motor Car Pkwy	2008	358,500 sq ft	Commercial / Industrial	$ 152,824,913.00
California State University San Marcos (CSUSM)	43890 Margarita Rd				
University of Redlands	One Better World Circle Suite 200	2005	4,773 sq ft		
San Joaquin Valley College (SJVC)	27270 Madison Ave #103	2003	1,649 sq ft		
The University of America	41707 Winchester Rd #301	1988			
St. John's University	40945 County Center Drive Suite H	1988	1,433 sq ft		
Residential Care Facilities					
Temecula Healthcare Center	44280 Campanula Wy	2020	65,877 sq ft	Commercial / Industrial	$29,868,335.00
Temecula Memory Care	44320 Campanula Way	2020	25,441 sq ft	Commercial /Industrial	$29,868,335.00
Chardonnay Hills Care Home	31416 Chemin Chevalier	2002	3,352 sq ft	Modern Single-Family Residence (Post 1990)	$660,000.00
Highgate Senior Living at Temecula	42301 Moraga Rd	2017	98,906 sq ft	Commercial / Industrial	$17,669,401.00
Atria Park of Vintage Hills	41780 Butterfield Stage Rd	2000	67,469 sq ft	Commercial / Industrial	$10,831,720.00
Family First Residential Care	42299 Faber Ct	2005	3,254 sq ft	Modern Single-Family Residence (Post 1990)	$573,907.00
Senior Wyze Senior Care & Assisted Living	41593 Winchester Rd	1989	43,797 sq ft	Commercial / Industrial	$9,600,000.00
Rising Star Care Home	40600 Chantemar Wy	2001	1,999 sq ft	Modern Single-Family Residence (Post 1990)	$348,845.00
Pebble Brook Senior Assisted Living	33722 Pebble Brook Cir	2006	3,528 sq ft	Modern Single-Family Residence (Post 1990)	$720,590.00
The Hills of Alcoba	34038 Turtle Creek	2006	3,243 sq ft	Modern Single-Family Residence (Post 1990)	$510,129.00
Gentle Care	39799 Longleaf St	2002	3,538 sq ft	Modern Single-Family Residence (Post 1990)	$482,971.00

Facility Name	Address	Year Built	Bldg. Area (Sq. Ft.)	Structure Type	Replacement Cost
Assisted Living Enterprises	30951 Sawgrass Ct	1986	2,288 sq ft	Modern Single-Family Residence (Post 1990)	$525,384.00
Helping Hands Care Homes	33999 Tuscan Creek Way	2006	3,243 sq ft	Modern Single-Family Residence (Post 1990)	$590,513.00
Khayal Ami Care, Inc	27475 Ynez Rd	2016	5,107 sq ft	Commercial / Industrial	$1,827,374.00
Hospitals					
Temecula Valley Hospital	31700 Temecula Pkwy	2013	202,640 sq ft	Commercial / industrial	$133,521,929.00
Mass Care and Shelter Sites					
Community Recreation Center	30875 Rancho Vista Road	1993	26,480 sq ft	Mason Bearing Walls w wood roof deck supported by wood joists	$8,606,000.00
Temecula Valley High School	31555 Rancho Vista Road	1985	371,823 sq ft		$119,693,420
Great Oak High School	32555 Deer Hollow Way	2004	290,388 sq ft		$96,179,570
Chaparral High School	27215 Nicolas Road	1996	377,513 sq ft		$84,778,820
Pechanga Resort and Casino	45000 Pechanga Parkway	1998		Conventional Wood Frame Structure over concrete slab foundation	

Table App 5.3 – New Additional Critical Assets - City of Temecula

Name	Address	Year Built	Bldg. Area (Sq. Ft.)	Structure Type	Replacement Cost (estimate)
Utilities					
SMER Solar Farm	Santa Margarita Ecological Reserve	2017	16 acres	10,000 plus photovoltaic (PV) modules	
Rancho Ca Water District Solar Farm	42135 Winchester Road	2016	17 acres	Solar Photovoltaic	
Parks					
Ranch at Sommers Bend Sports Park	32125 Verbena Way	2020	800 sq ft	Conventional Wood Frame Str over Concrete Slab Foundation	$260,000.00
Patricia H. Birdsall Sports Park and Snack Shack	32380 Deer Hollow Way	2006	800 sq ft	Mason Bearing Walls w wood roof deck supported by wood joists on a concrete raft slab foundation	$260,000.00
Wastewater Complex					
Temecula Valley Regional Water Reclamation Facility	42565 Avenida Alvarado	1975	95 sq ft		
Water Complex					
San Diego Aqueduct		1945		Pre-case concrete pipe, 48-96 inches in diameter	

Table App 5.4 – Houses of Worship - City of Temecula

Name	Address	Year Built	Bldg. Area (Sq. Ft.)	Structure Type	Replacement Cost (estimate)
Houses of Worship					
Crossroads Church	26090 Ynez Rd Ste A	1998	102,200 sq ft	Commercial / Industrial	$6,494,590.00
Crosspoint Church	28753 Via Montezuma	1987	19,480 sq ft	Commercial / Industrial	$1,809,708.00
Reliance Church	29825 Santiago Rd	1890	1,430 sq ft	Commercial / Industrial	$1,318,722.00
Sunridge Community Church	42299 Winchester Rd	1890	1,430 sq ft	Commercial / Industrial	$1,359,030.00
Calvary Chapel of Temecula	27462 Enterprise Circle West	1989	8,848 sq ft	Commercial / Industrial	$1,543,178.00
Rancho Church	31300 Rancho Community Wy	2017	73,783 sq ft	Commercial / Industrial	$19,532,446.00
Temecula Christian Fellowship	27715 Jefferson Ave Suite 114	1982	3,890 sq ft		
Beyond the Walls Community Church	42110 Remington Ave	2006	5,572 sq ft	Commercial / Industrial	$811,512.00
Temecula Hills Christian Fellowship	28780 Single Oak Dr Ste 120	1985	2,618 sq ft	Commercial / Industrial	
Cornerstone Christian Baptist	40880 County Center Dr Ste N	1991	41,210 sq ft	Commercial / Industrial	$2,723,769.00
Rancho Baptist Church	29775 Santiago Rd	1992	4,200 sq ft	Commercial / Industrial	$2,394,308.00
Springs Community Church	41735 Winchester Rd	1992			
Atmosphere Church	27500 Jefferson Ave.	2019	91,991 sq ft	Commercial / Industrial	$3,926,468.00
Calvary Baptist Church	31087 Nicolas Rd	1776	21,453 sq ft	Commercial / Industrial	$3,721,207.00
Hope Lutheran Church	29043 Vallejo Ave	2016	15,000 sq ft	Commercial / Industrial	$4,977,040.00
Fusion Christian Church	26770 Ynez Ct	1999	16,978 sq ft	Commercial / Industrial	$2,798,594.00
New Life Church	27620 Commerce Center Dr #105	1985	25,920 sq ft	Commercial / Industrial	$1,751,389.00
Grace A.M.E. Church	41625 Enterprise Cir S B-2	1987	5,850 sq ft	Commercial / Industrial	$2,383,182.00
Temecula United Methodist	42690 Margarita Rd	1995	5,063 sq ft	Commercial / Industrial	$1,558,073.00
Covenant Fountain Church	27645 Jefferson Ave Ste 111	1989	27,745 sq ft	Commercial / Industrial	$5,694,574.00
St Catherine of Alexandria	41875 C St	1991	11,295 sq ft	Commercial / Industrial	$2,996,171.00
True Vine Pentecostal Church	28780 Old Town Front St Ste D5	1776		Commercial / Industrial	$4,369,816.00
Providence Presbyterian	31950 Pauba Rd	1990	14,278 sq ft	Commercial / Industrial	$9,510,737.00
Faith Bible Church Murrieta	27470 Jefferson Ave	1991	16,000 sq ft	Commercial / Industrial	$1,981,706.00

Name	Address	Year Built	Bldg. Area (Sq. Ft.)	Structure Type	Replacement Cost (estimate)
Grace Presbyterian Church	31143 Nicolas Rd	2006	14,275 sq ft	Commercial / Industrial	$3,721,207.00
Trellis Community Church	27576 Commerce Center Dr Ste 108			Commercial / Industrial	$5,916,000.00
The Place City of Miracles Cathedral	41823 Enterprise Cir N #100	2004	18,894 sq ft	Commercial / Industrial	$2,928,058.00
Light of Faith Christian Center	27727 Jefferson Ave	1987	17,285 sq ft	Commercial / Industrial	$1,529,079.00
Temecula Valley Church / St Thomas of Canterbury Episcopal	44651 Avenida De Missiones	2009	16,371 sq ft	Commercial / Industrial	$4,723,446.00
The Church in Temecula	45764 Corte Mislanca	2013	3,779 sq ft	single family residence (post 1990)	$472,082.00
The Potters House Christian Church	41669 Winchester Rd Ste 106	1991	18,555 sq ft	Commercial / Industrial	$3,213,000.00
The Church of Jesus Christ LDS	44650 La Paz St	2004	14,760 sq ft	Commercial / Industrial	$3,291,881.00
Nu-Way Christian Ministries	27576 Commerce Center Dr			Commercial / Industrial	
Transformation Church	41636 Enterprise Cir N D-E	1999	3,564 sq ft	Commercial / Industrial	$529,200.00
Trinity Temecula	30470 Pauba Rd	1997	5,590 sq ft and 3,369 sq ft	Commercial / Industrial	$2,575,540.00
Grace Fellowship	41710 Enterprise Cir S #C	1989	14,848 sq ft	Commercial / Industrial	$867,339.00
The Call of Temecula Valley	43234 Business Park Dr #107			Commercial / Industrial	$6,775,043.00
Oasis Christian Fellowship	27475 Ynez Rd				$7,493,986.00
Iglesia Bautista Del Valle De Temecula	28639 Pujol St	1983	2,520 sq ft	Commercial / Industrial	$1,257,179.00
Bethlehem Temple Community Church	28780 Old Town Front St	1776		Commercial / Industrial	$4,369,816.00
Ridgeline Community Church	41951 Moraga Rd			School	
St Rafael Orthodox Christian Church	28924 Old Town Front St #102				$1,734,000.00
Jesus Love Korean Church	27570 Commerce Center #125	1988	23,794 sq ft	Commercial / Industrial	$4,008,249.00
Christian Science Society	28780 Old Town Front Street A6	1776		Commercial / Industrial	$4,369,816.00
St Thomas the Hermit Coptic Orthodox	42101 Moraga Rd	1989	7,336 sq ft	Commercial / Industrial	$1,040,476.00
The Church of Jesus Christ LDS	32374 Pauba Rd	2006	24,119 sq ft	Commercial / Industrial	$6,565,232.00
Mosiac Assembly of God	31217 Pauba Rd				$3,300,000.00
The Holy Spirit Empowered Presbyterian	39830 Longleaf St	2002	3,966 sq ft	Single family residence (post 1990)	$365,783.00

Name	Address	Year Built	Bldg. Area (Sq. Ft.)	Structure Type	Replacement Cost (estimate)
Harvest House Temecula	28975 Old Town Front St Ste 101				$3,393,062.00
Temecula Valley Korean Presbyterian	28030 Del Rio Rd	1973	10,000 sq ft	Commercial / industrial	$1,416,340.00
Iglesia Cristiana Jesu Cristo es la Respuesta	27713 Jefferson Ave #105	1984	9,560 sq ft	Commercial / industrial	$1,366,800.00
Virgin Mary Arabic Church, Melkite Catholic	42030 Avenida Alvarado Ste A				$1,760,007.00
Family Life Church of the Valley	41743 Enterprise Cir N #108				$3,307,500.00
The Church in Temecula	41783 Niblick Rd	2000	2,552 sq ft	Modern single-family residence (post 1990)	$439,570.00
The Church of Jesus Christ LDS	29657 N General Kearny Rd	2003	6,558 sq ft	Commercial / industrial	$5,451,043.00
Essential Church	41710 Enterprise Cir S	1989	14,848 sq ft	Commercial / industrial	$867,339.00
Southern Cal District Church of Nazarene	28465 Old Town Front Street #313	1984	5,385 sq ft	Commercial / industrial	$1,081,107.00
Center for Spiritual Living	27895 Diaz Rd Suite A	1981	6,000 sq ft	Commercial / industrial	$415,210.00
World Mission Society Church	42041 Avenida Alvarado #A	1987	17,552 sq ft	Commercial / industrial	$612,379.00
Calvary Chapel Bible Fellowship	34180 Rancho California Rd	1987	3,600 sq ft 11,056 sq ft 2,304 sq ft 1,200 sq ft	Commercial / industrial	$2,824,018.00
The Church of Jesus Christ LDS	43940 Pacific Sunset Dr	2009	16,300 sq ft	Commercial / industrial	$5,945,813.00
Iglesia Rancho en Espanol	31300 Rancho Community Way	2017	73,783 sq ft	Commercial / industrial	$18,953,105.00
Iglesia Ni Cristo	29385 Rancho California Rd	1997	14,481 sq ft	Commercial / industrial	$2,871,252.00
Unity Church Temecula Valley	41919 Moreno Rd	1977	2,560 sq ft	Commercial / industrial	$1,136,553.00
Circle of Care Ministry	26090 Ynez Rd	1998	102,200 sq ft	Commercial / industrial	$6,494,590.00
Church Growth Network	29850 Gateview Ct	1989	3,433 sq ft	Modern single-family residence (1950-1990)	$311,322.00
Renewal Life Christian Fellowship	27576 Commerce Center Dr Ste 111				$5,916,000.00
Islamic Center of Temecula	31061 Nicholas Rd	2018	4,205 sq ft	Commercial / industrial	$1,610,709.00
Temple Beth Sholom	28600 Mercedes St Ste 102				$1,586,589.00
Chabad of Temecula	42021 Avenida Vista Ladera	1988	3,673 sq ft	Modern single-family residence (1950-1990)	$440,400.00
Church of Scientology Mission	40945 County Center Dr C				$2,880,696.00

Table App 5.5 - Temecula Valley Unified School District Inventory Data by School Site

Name	Address	Year Built*	# of Buildings		Bldg. Area (Sq. Ft.)	Building Replacement Value ($1,000)
			Permanent	Portable		
TVUSD District Facilities	31350 Rancho Vista Road	1989	4	24	70,588 sq ft	$12,766,890
TVUSD District & Transportation Facility	40516 Roripaugh Road	1995	8	1	41,621 sq ft	$4,945,360
Abby Reinke Elementary School	43799 Sunny Meadows Drive	1999	8	2	88,119 sq ft	$24,234,690
Alamos Elementary School	38200 Pacific Park Drive	2004	9	1	87,604 sq ft	$25,639,780
Bella Vista Middle School	31650 Browning Street	2004	12	0	130,865 sq ft	$41,418,360
Chapparal High School	27215 Nicolas Road	1996	29	31	377,513 sq ft	$84,778,820
Crowne Hill Elementary School	33535 Old Kent Road	2005	8	1	87,925 sq ft	$25,823,350
Earle Stanley Gardner Middle School	45125 Via Del Colorado	2003	8	0	110,781 sq ft	$35,810,270
French Valley Elementary School	26680 Cady Road	2003	8	1	79,719 sq ft	$25,452,510
Great Oak High School	32555 Deer Hollow Way	2004	39	0	290,388 sq ft	$96,179,570
Helen Hunt Jackson Elementary School	32400 Camino San Dimas	1999	2	15	59,048 sq ft	$20,839,580
James L. Day Middle School	40775 Camino Campos Verdes	1999	6	24	97,653 sq ft	$28,433,210
Joan F. Sparkman Alternative Education	32225 Pio Pico Road	1988	3	12	59,705 sq ft	$20,435,020
K8 Steam Academy	35780 Abelia Street	2021	4	6	54,424 sq ft	$18,904,480
Margarita Middle School	30600 Margarita Road	1990	4	19	114,730 sq ft	$37,199,040
Nicolas Valley Elementary School	39600 North General Kearney Road	1990	2	33	78,351 sq ft	$22,856,370
Paloma Elementary School	42940 Via Rami	1995	2	16	63,027 sq ft	$21,679,810
Pauba Valley Elementary School	33125 Regina Drive	1996	3	10	70,976 sq ft	$25,189,980
Rancho Elementary School	31530 La Serena Way	1986	9	0	70,619 sq ft	$21,868,310
Red Hawk Elementary School	32045 Camino San Jose	1991	4	2	56,093 sq ft	$21,928,830
Susan La Vorgna Elementary School	31777 Algarve	2004	9	1	78,839 sq ft	$25,346,810
Temecula Elementary School	41951 Moraga Road	1978	7	1	63,719 sq ft	$20,791,200
Temecula Luiseno	45754 Wolf Creek	2005	8	1	78,759 sq ft	$25,276,510

Name	Address	Year Built*	# of Buildings		Bldg. Area (Sq. Ft.)	Building Replacement Value ($1,000)
			Permanent	Portable		
Elementary School	Drive North					
Temecula Middle School	42075 Meadows Parkway	1991	6	16	102,818 sq ft	$31,719,950
Temecula Prepatory School	35777 Abelia Street	2006	1	62	74,600 sq ft	$12,780,220
Temecula Valley Charter School	35755 Abelia Street	2008	31	1	33,168 sq ft	$5,826,040
Temecula Valley High School	31555 Rancho Vista Road	1985	26	38	371,823 sq ft	$119,693,420
Tony Tobin Elementary School	45200 Morgan Hill Drive	2005	8	2	80,678 sq ft	$24,869,790
Vail Elementary School	29915 Mira Loma Drive	1979	7	3	71,387 sq ft	$23,600,710
Vail Ranch Middle School	33340 Camino Piedra Rojo	1994	6	33	105,528 sq ft	$29,769,170
Vintage Hills Elementary School	42240 Camino Romo	1997	2	13	68,827 sq ft	$24,288,010
Ysabel Barnett Elementary School	39925 Harveston Drive	2001	9	1	78,708 sq ft	$25,301,340
TOTAL			**292**	**370**	**3,298,603 sq ft**	**$985,647,400**

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Appendix 6 – List of Significant Earthquakes in California Since 1700

Date	Magnitude	Name, Location, or Region Affected	Loss of Life and Property
1700, Jan. 26	9.0	Offshore, somewhere between Cape Mendocino and Canada	Limited data available, magnitude is an estimate. Shook northern California, Oregon, Washington, and southern British Columbia; caused tsunami damage to villages in Japan and western US
1857, Jan 9	7.9	Great Fort Tejon earthquake	1 dead; damage from Monterey to San Bernardino County
1906, Apr 18	7.8	Great 1906 San Francisco Earthquake and Fire	3,000 dead; $524 million in property damage (includes damage from fire)
1838, Jun	7.4	San Francisco to San Juan Bautista	Limited data available, magnitude is an estimate. Damage to San Francisco and Santa Clara
1872, Mar 26	7.4	Owens Valley	27 dead; 56 injured; $250,000 in property damage
1980, Nov 8	7.4	West of Eureka	6 injured; $2 million in property damage
1812, Dec 8	7.3	Wrightwood	Limited data available, magnitude is an estimate. 40 dead at San Juan Capistrano
1892, Feb 24	7.3	Laguna Salida, Baja California	Damage to San Diego and Imperial Valley
1922, Jan 31	7.3	Offshore, about 70 mi W of Eureka	
1952, Jul 21	7.3	Kern County earthquake	12 dead; $60 million in property damage
1954, Dec 16	7.3	Fairview Peak, near Fallon, NV	
1992, Jun 28	7.3	Landers	1 dead; 402 injured; $91.1 million in property damage
1923, Jan 22	7.2	Off Cape Mendocino	Destructive in Humboldt County; strongly felt in Reno
1932, Dec 21	7.2	Cedar Mountain, near Gabb's, NV	
1992, Apr 25	7.2	Petrolia	356 injured; $48.3 million in property damage
1812, Dec 21	7.1	Los Angeles, Ventura, Santa Barbara	Limited data available, magnitude is an estimate. 1 dead
1927, Nov 4	7.1	40 km west of Lompoc	Damage in Santa Barbara and San Luis Obispo counties
1954, Dec 16	7.1	Dixie Valley, near Fallon, NV	
1868, Oct 21	7.0	Hayward Fault	30 dead; $350,000 in property damage
1899, Apr 16	7.0	Offshore, about 80 miles west of Eureka	
1934, Dec 31	7.0	In Mexico, about 100 miles SE of El Centro	
1940, May 19	7.0	Imperial Valley	9 dead; $6 million in property damage
1991, Aug 17	7.0	Offshore, about 100 miles NW of Eureka	Preceded by two quakes (M 6.3 and 6.2) on Aug. 16 and 17

Date	Magnitude	Name, Location, or Region Affected	Loss of Life and Property
1994, Sep 1	7.0	Offshore, about 70 miles W of Cape Mendocino	
1873, Nov 23	6.9	Crescent City region	Damage in California-Oregon border area
1989, Oct 17	6.9	Loma Prieta	63 dead; 3,737 injured; $6 billion in property damage
1872, Mar 26	6.8	Owens Valley	Aftershock of previous entry
1872, Apr 11	6.8	Owens Valley	Aftershock of March 26, 1872, quake
1890, Feb 9	6.8	San Jacinto fault	Little damage
1918, Apr 21	6.8	San Jacinto	1 dead; several injuries; $200,000 in property damage
1925, Jun 29	6.8	Santa Barbara	13 dead; $8 million in property damage
1954, Jul 6	6.8	Rainbow Mountain, near Fallon, NV	
1999, Oct 16	7.1	Bullion Mountains (Hector Mine)	Minimal injuries and damage due to sparse population in affected area
1954, Aug 24	6.8	Rainbow Mountain, near Fallon, NV	
1976, Nov 26	6.8	Offshore, about 100 mi WNW of Eureka	
1898, Apr 15	6.7	Fort Bragg - Mendocino	Limited data available, magnitude is an estimate. Damage from Fort Bragg to Mendocino; 3 houses collapsed; landslides reported
1899, Dec 25	6.7	San Jacinto and Hemet	6 dead; $50,000 in property damage
1994, Jan 17	6.7	Northridge	57 dead; more than 9,000 injured; about $40 billion in property damage
1892, Apr 19	6.6	Vacaville	1 dead; $225,000 in property damage
1915, Nov 21	6.6	In Mexico, about 60 miles S of El Centro	
1941, Feb 9	6.6	Offshore, about 65 miles W of Eureka	
1954, Dec 21	6.6	East of Arcata	1 dead; several injured; $2.1 million in property damage
1968, Apr 8	6.6	Borrego Mountain	
1971, Feb 9	6.6	San Fernando	65 dead; more than 2,000 injured; $505 million in losses
1987, Nov 24	6.6	Superstition Hills	part of above damage
1992, Apr 26	6.6	Petrolia	Aftershock of the Apr. 25 quake
1992, Apr 26	6.6	Petrolia	Another aftershock of Apr. 25 quake
1852, Nov 29	6.5	Near Fort Yuma, Arizona	Limited data available, magnitude is an estimate.
1860, Mar 15	6.5	Carson City	Limited data available, magnitude is an estimate.
1865, Oct 8	6.5	Santa Cruz Mountains	$0.5 million in property damage
1918, Jul 15	6.5	Offshore, about 40 W of Eureka	

Date	Magnitude	Name, Location, or Region Affected	Loss of Life and Property
1934, Jul 6	6.5	Offshore, about 100 mi WNW of Eureka	
1934, Dec 30	6.5	In Mexico, about 40 miles S of El Centro	
1947, Apr 10	6.5	East of Yermo	
1956, Feb 9	6.5	In Mexico, about 80 miles SW of El Centro	
1979, Oct 15	6.5	Imperial Valley	9 injured; $30 million in property damage
1992, June 28	6.5	Big Bear	Included with Landers losses, above
2003, Dec 22	6.5	San Simeon	
1836, Jun 10	6.4	Near San Juan Bautista	Limited data available, magnitude is estimate. Older reports reported quake as possibly larger and centered near Oakland
1898, Mar 31	6.4	Mare Island	$350,000 in property damage
1991, Jul 12	6.6	Offshore west of Crescent City	
1899, Jul 22	6.4	Wrightwood	Chimneys knocked down; landslides reported
1911, Jul 1	6.4	Morgan Hill area	
1933, Mar 11	6.4	Long Beach	115 dead; $40 million in property damage
1942, Oct 21	6.4	About 25 miles W of Westmoreland	
1983, May 2	6.4	Coalinga	
1986, Jul 21	6.4	Chalfant Valley	
1800, Nov 22	6.3	San Diego/San Juan Capistrano region	Limited data available, magnitude is an estimate. Damaged adobe walls of missions in San Diego and San Juan Capistrano
1922, Mar 10	6.3	Parkfield	
1995, Feb 19	6.3	Offshore, about 70 miles W of Cape Mendocino	
1980, May 25	6.2	Mammoth Lakes	
1984, Apr 24	6.2	Morgan Hill	$8 million in property damage
1908, Nov 4	6.0	SW of Death Valley	
1948, Dec 4	6.0	East of Yermo	
1980, May 25	6.0	Mammoth Lakes	
1987, Oct 1	6.0	Whittier Narrows	8 dead; $358 million in property damage to 10,500 homes and businesses

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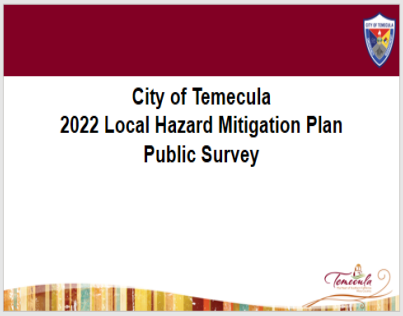
Appendix 7 – Public Survey Results



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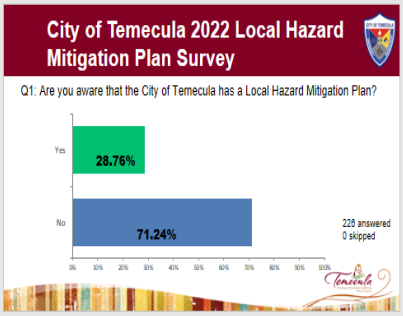

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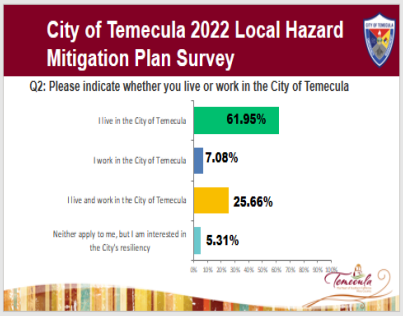

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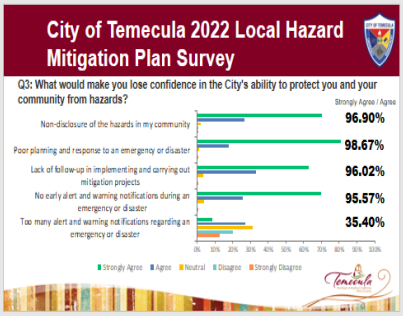

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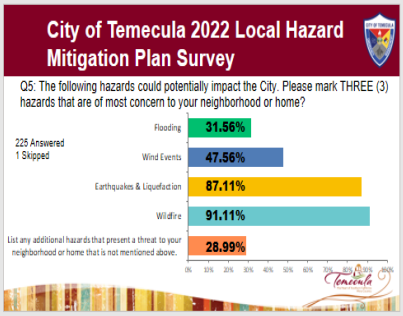

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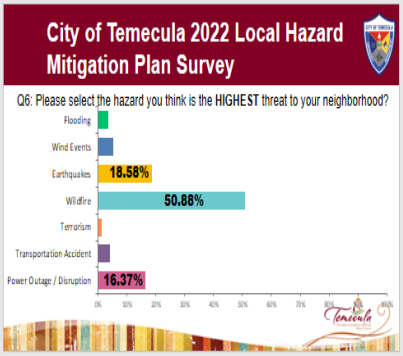

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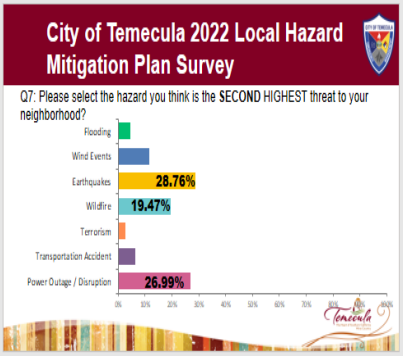

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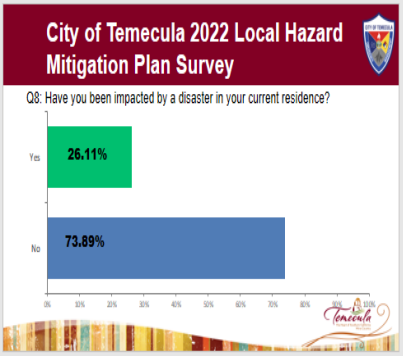

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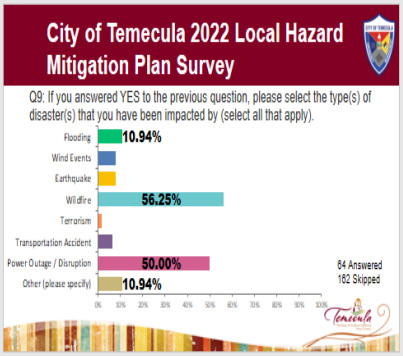

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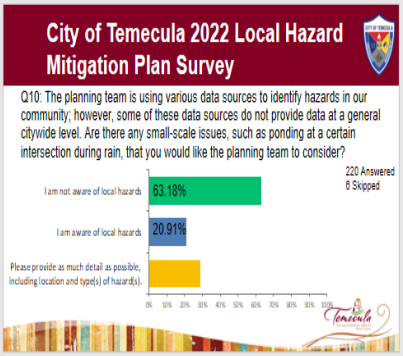

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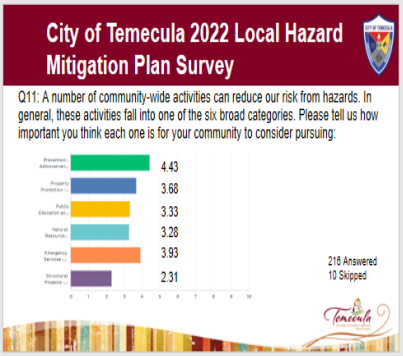

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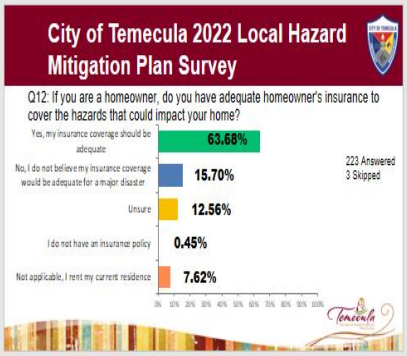

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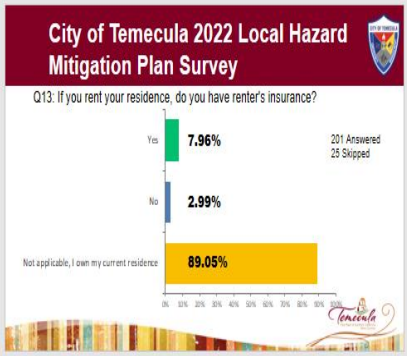

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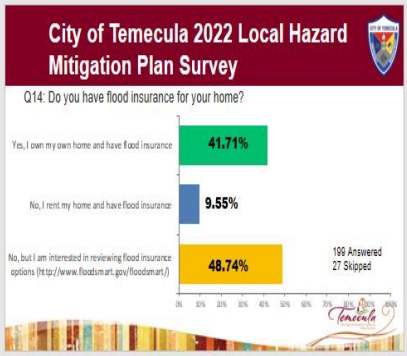

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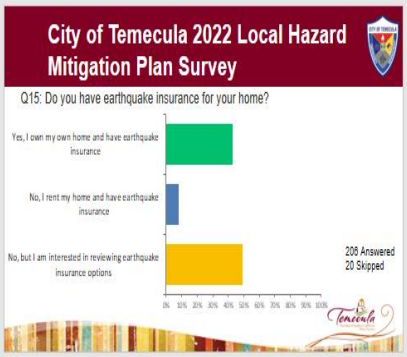

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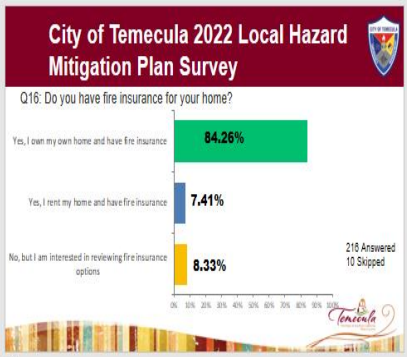

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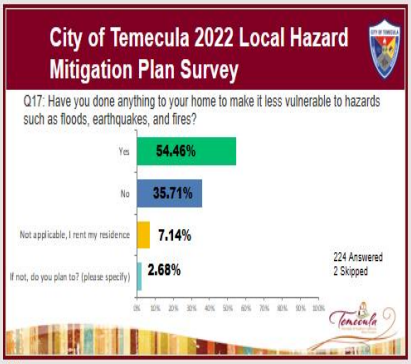

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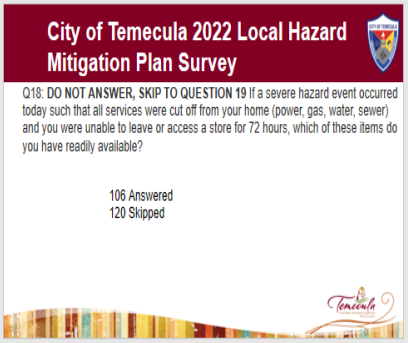

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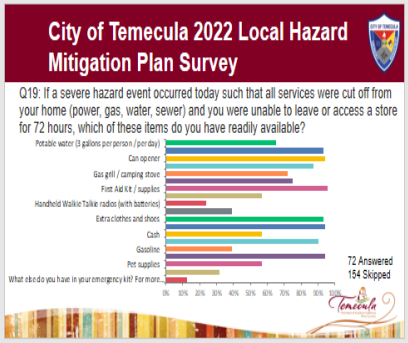

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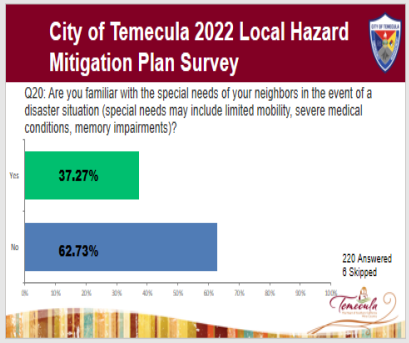

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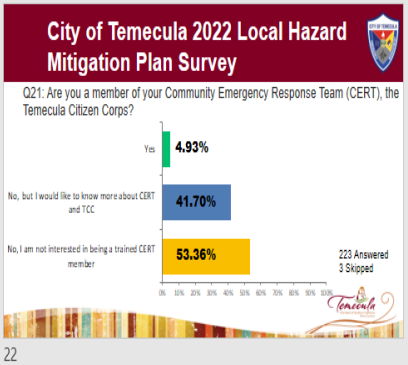

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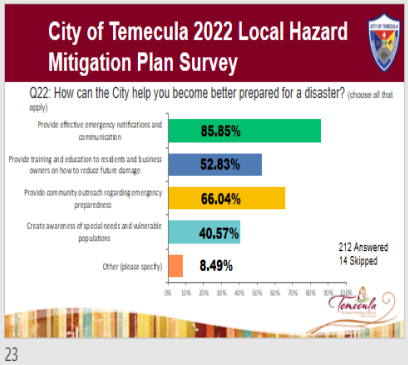

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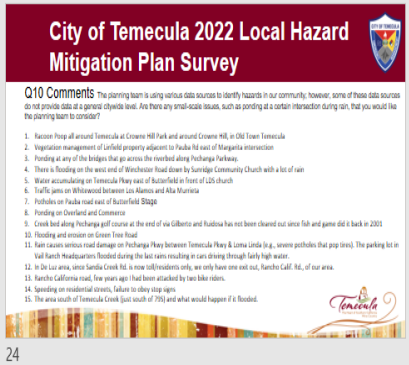

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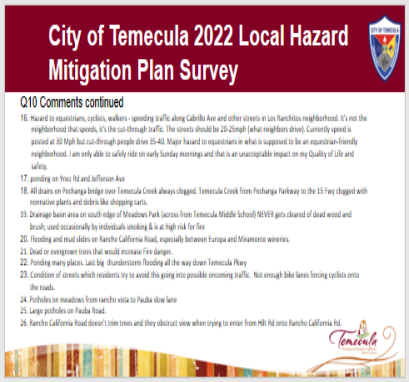

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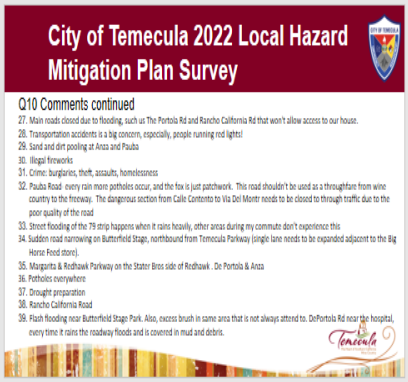

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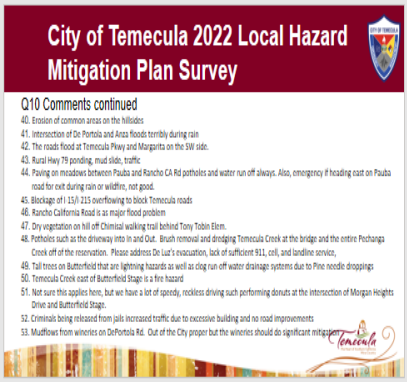

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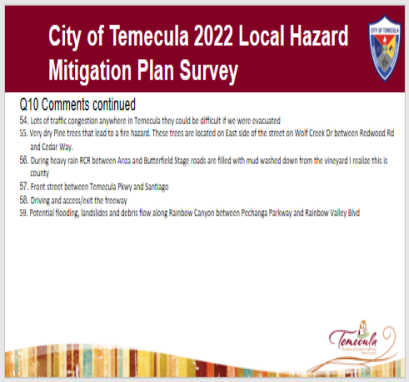

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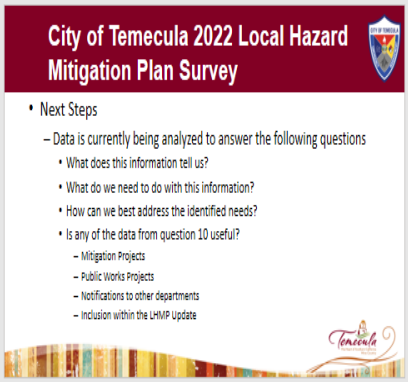

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