
# CITY OF VICTORVILLE
# LOCAL HAZARD MITIGATION PLAN 2021

Last updated: January 2022

# RECORD OF REVIEWS AND REVISIONS

| Revision # | Date | Sections Reviewed or Revisions Made | Entered by |
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# Contents

# SECTION 1: INTRODUCTION

The City of Victorville (City) has prepared the 2021 Local Hazard Mitigation Plan (HMP) in order to assess the natural caused risks to City so as to reduce the potential impact of the hazards by creating mitigation strategies. The 2021 HMP represents the City's commitment to create a safer, more resilient community by taking actions to reduce risks and by committing resources to lessen the effects of hazards on the people and property of the City.

This plan complies with the Federal Disaster Mitigation Act (2000), Federal Register 44 CFR Parts 201 and 206, which modified the Robert T. Stafford Disaster Relief and Emergency Assistance Act by adding a new section, 322 - Mitigation Planning. This law, as of November 1, 2004, requires local governments to develop and submit hazard mitigation plans as a condition of receiving Hazard Mitigation Grant Program (HMGP) and other mitigation project grants. The City Office of Emergency Services has coordinated preparation of the HMP in cooperation with other the City's departments, community stakeholders, partner agencies, and members of the public.

This introduction to the HMP provides a brief description of hazard mitigation planning, local mitigation plan requirements, and an outline of the 2021 HMP. There is also an overview of Federal Emergency Management Agency (FEMA) programs and grants related to hazard mitigation.

## 1.1 Hazard Mitigation Planning

Hazard mitigation is any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards. In general, hazard mitigation is work done to minimize the impact of a hazard event before it occurs, with the goal of reducing losses from future disasters. 44 CFR § 201.1(b) describes the purpose of mitigation planning is for local governments to identify the hazards that impact them, to identify actions and activities to reduce losses from those hazards, and to establish a coordinated process to implement the plan, taking advantage of a wide range of resources. For the City, hazard mitigation planning is a process in which the City will:

- Identify and profile hazards that affect the local area;
- Analyze the population and facilities at risk from those hazards;
- Develop a mitigation strategy and actions to reduce the impact of profiled hazards;
- Implement the strategy and actions that may involve planning, policy changes, programs, projects, and other activities.

The City's implementation of mitigation actions, which may be short-term or long-term strategies, is the primary objective of the planning process. This type of planning will supplement the City's comprehensive planning and emergency management programs.

## 1.2 Local Mitigation Planning Requirements

Hazard mitigation planning is governed by the Stafford Act, as amended by the Disaster Mitigation Act of 2000 (DMA 2000), and by federal regulations implementing the Stafford Act. DMA 2000 revised the Stafford Act to require state, local, and tribal governments to develop and submit to FEMA a mitigation plan that outlines processes for identifying the natural hazards, risks, and

vulnerabilities of the jurisdiction. Plan approval by FEMA is a prerequisite to receiving federal hazard mitigation grant funds. (See 42 USC § 5165(a).)

To implement the mitigation planning requirements of the Stafford Act, FEMA promulgated 44 CFR Part 201, the federal regulations governing the planning process, plan content, and the process for obtaining approval of the plan from FEMA. The planning requirements set forth in the CFR are identified throughout this plan mirroring the order of the FEMA Regulation Checklist in the Local Mitigation Plan Review Tool.

FEMA has produced a *Local Mitigation Plan Review Tool,* which has been tailored by Region IX as an appendix to the *Local Mitigation Planning Handbook (2013),* to demonstrate how the mitigation plan meets the regulation in 44 CFR § 201.6, and offers State and FEMA Mitigation Planners an opportunity to provide feedback to the jurisdiction. The Plan Review Tool has a regulation checklist that provides a summary of FEMA's evaluation of whether the plan has addressed all requirements. Local planners can also use the checklist prior to submitting the plan for approval to ensure they have addressed all the requirements. The Local Mitigation Plan Review Tool Regulation Checklist is provided in Appendix A of this document.

## 1.3 Hazard Mitigation Plan Description

The 2021 HMP consists of the sections and appendices described below:

**Table 1-1: Plan Sections, Appendices, and Descriptions**

| | |
|---|---|
| **Section 1: Plan Introduction** | Section 1 includes an introduction to hazard mitigation planning, lists the HMP planning requirements, provides a description of the plan, and discusses grants related to hazard mitigation. |
| **Section 2: Planning Process** | Section 2 describes the planning process for the 2021 HMP, including an overview of how the HMP was prepared, identification of the HMP planning team, involvement of outside agencies and communities, the inclusion of related plans, reports and information, and stakeholder and public outreach activities. |
| **Section 3: Community Description** | Section 3 includes a description of the natural and built out state of the City, including climate, geography, demographics and economic conditions. |
| **Section 4: Capability Assessment** | Section 4 identifies and evaluates the resources available for hazard mitigation within the City. |
| **Section 5: Risk Assessment** | Section 5 provides a list of the hazards identified in the 2021 HMP, a profile of each hazard and hazard summary, and a risk assessment of the planning area. |
| **Section 6: Mitigation Strategy** | Section 6 identifies and evaluates the current, ongoing, and completed mitigation projects and programs in the City and lists mitigation strategies for reducing potential losses. |
| **Section 7: Plan Maintenance Procedures** | Section 7 describe procedures for updating the HMP to keep it current and for continued public engagement in the planning process. |

| | |
|---|---|
| **Section 8: Adoption Resolution** | Section 8 includes documentation of CalOES and FEMA process and adoption of the HMP by the City Council. |
| **Appendix A** | Appendix A contains the FEMA *Local Mitigation Plan Review Tool* which documents the City's compliance with the local hazard mitigation plan requirements of 44 CFR Part 201. |
| **Appendix B** | Appendix B contains documentation of the planning process for the planning team, including meetings, presentations, emails, etc. |
| **Appendix C** | Appendix C contains documentation of the planning process including meetings, presentations held for the stakeholders and public, and other stakeholder/public outreach efforts. |
| **Appendix D** | Appendix D contains the mitigation activity prioritization plan. |
| **Appendix E** | Appendix D lists acronyms and abbreviations used in the 2021 HMP. |

## 1.4 Assembly Bill 2140

The California Disaster Assistance Act limits the state share for any eligible project to no more than seventy-five percent (75%) of total state eligible costs, except that the state share shall be up to 100% of total state eligible costs connected with certain events. AB 2140 prohibits the state share for any eligible project from exceeding seventy-five (75%) of total state eligible costs unless the local agency is located within a city, county, or city and county that has adopted a local hazard mitigation plan in accordance with the federal DMA 2000 as part of the safety element of its general plan, in which case the Legislature may provide for a state share of local costs that exceeds seventy-five percent (75%) of total state eligible costs.

The California Government Code, Sections 8685.9 and 65302.6, allow for the State Legislature to provide for a state share of local costs that exceeds seventy-five percent (75%) of total state eligible costs where the local agency is located within a city, county, or city and county that has adopted a local hazard mitigation plan in accordance with the federal Disaster Mitigation Act of 2000 (P.L.106-390) as part of the safety element of its general plan adopted pursuant to subdivision (g) of Section 65302.

## 1.5 Grant Programs with Mitigation Plan Requirements

Currently, five (5) FEMA grant programs provide funding to local entities that have a FEMA-approved local mitigation plan meeting federal hazard mitigation plan requirements. Two (2) of the grant programs are authorized under the Stafford Act. The remaining three (3) programs are authorized under the National Flood Insurance Act and the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act.

### 1.5.1 Stafford Act Grant Programs

Funding is provided to state, local, and tribal governments that have an approved Hazard Mitigation Plan through the following programs.

**Hazard Mitigation Grant Program (HMGP)**
The HMGP provides grants to implement long-term hazard mitigation measures after declaration of a major disaster. The purpose of the HMGP is to reduce the loss of life and property due to natural disasters, and to enable mitigation measures to be implemented during the immediate recovery from a disaster. To qualify for HMGP funding, projects must provide a long-term solution to a problem, and the project's potential savings must exceed the cost of implementing the project.

HMGP Funds may be used to protect either public or private property, or to purchase property that has been subjected to, or is in danger of, repetitive damage. The amount of funding available for the HMGP under a particular disaster declaration is limited. Under the program, the federal government may provide a state or tribe with up to twenty percent (20%) of the total disaster grants awarded by FEMA, and may provide up to seventy-five percent (75%) of the cost of projects approved under the program.

**The Pre-Disaster Mitigation (PDM) Program**
The PDM provides funds to state, local, and tribal entities for hazard mitigation planning and mitigation projects before a disaster event. PDM grants are awarded on a nationally competitive basis. The cost benefit of a PDM project must be more than the cost of implementing the project. Funds may be used to protect either public or private property or to purchase property that has been subjected to repetitive damage. In April of 2014, FEMA announced $112 million in funding available through two (2) Hazard Mitigation Assistance (HMA) grant programs: 1) Flood Mitigation Assistance (FMA) and 2) Pre-Disaster Mitigation (PDM). Congress originally appropriated $23 million for PDM grants, but increased the allotment to $63 million. The Federal government provides up to seventy-five percent (75%) of the cost of projects approved under the program.

### 1.5.2 National Flood Insurance Act Grant Programs

**Flood Mitigation Assistance Grant Program**
The goal of the Flood Mitigation Assistance (FMA) Grant Program is to reduce or eliminate flood insurance claims under the National Flood Insurance Program (NFIP). This program places emphasis on mitigating repetitive loss (RL) properties. The primary source of funding for the FMA program is the National Flood Insurance Fund. Grant funding is available for planning, project, and technical assistance. Project grants are awarded to local entities to apply mitigation measures to reduce flood losses to properties insured under the NFIP. In FY 2014, FMA funding totaled $89 million. The cost-share for this grant is seventy-five percent (75%) federal and twenty-five percent (25%) nonfederal. However, a cost-share of ninety percent (90%) federal and ten percent (10%) nonfederal is available in certain situations to mitigate severe repetitive loss (SRL) properties.

If a community adopts and enforces a floodplain management ordinance to reduce future flood risk to new construction in floodplains, the Federal Government will make flood insurance available within the community as a financial protection against flood losses. This insurance is designed to provide an insurance alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods. The following table summarizes the City's participation in the program.

**Table 1-2: City's Participation in NFIP**

| NFIP Participation | | | | | | | |
|---|---|---|---|---|---|---|---|
| **CID** | **Community Name** | **County** | **Init. FHBM Identified** | **Init. FIRM Identified** | **Curr. Eff. Map Date** | **Reg.-Emer. Date** | **Tribal** |
| 060123# | Victorville City Of | San Bernardino County | 05/09/78 | 09/21/73 | 09/02/16 | 09/21/73 | No |

### Repetitive Flood Claims Program

The Repetitive Flood Claims (RFC) Program provides funding to reduce or eliminate the long-term risk of flood damage to residential and non-residential structures insured under the NFIP. Structures considered for mitigation must have had one or more claim payments for flood damages. The City reports that it has no repetitive program properties.

# SECTION 2: PLANNING PROCESS

The requirements for documentation of the HMP planning process are described below. This section summarizes the planning area's hazard mitigation planning efforts in 2020. In addition, the section describes public and stakeholder outreach efforts as part of the HMP planning process. The section also summarizes the review and incorporation of existing plans, studies, and reports used to develop the HMP. Documentation of the 2021 HMP planning process for the Hazard Mitigation Planning Team is provided in Appendix B, and documentation of the planning process for the Public and Stakeholders is found in Appendix C. These appendices document the planning meetings and outreach and include meeting agendas, presentation, materials, and other documentation used to conduct the planning process.

**FEMA REGULATION CHECKLIST: PLANNING PROCESS**

**Documentation of the Planning Process**

**44 CFR § 201.6(c)(1)**: The plan shall include documentation of the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

**Elements**

**A1.** Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? 44 CFR § 201.6(c)(1).

**A2.** Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? 44 CFR 201.6(b)(2)

**A3.** Does the Plan document how the public was involved in the planning process during the drafting stage?

44 CFR 201.6(b)(1) and 201.6(c)(1)

**A4.** Does the Plan document the review and incorporation of existing plans, studies, reports, and technical information? 44 CFR 201.6(b)(3)

Source: FEMA, *Local Mitigation Planning Handbook Review Tool,* March 2013.

The planning process began with the City establishing the planning area and inviting stakeholders within the planning area to participate in the process. In addition, the City identified the financial and technical resources required to update the HMP. Once all the City Departments' financial and technical resources were identified, the City established the Planning Team and created a schedule for the process.

## 2.1 Plan History

This HMP is an update to the 2012 HMP which expired in 2017. It includes an update to the thirty (30) mitigation activities in the prior plan and new mitigation activities developed by the planning team.

## 2.2 Plan Purpose and Authority

The purpose of the Plan is to identify natural hazards that impact the City, assess the vulnerability and risk posed by those hazards to community-wide human and structural assets, develop strategies for mitigation of those identified hazards, present future maintenance procedures for The Plan, and document the planning process. The Plan is prepared in compliance with DMA 2000 requirements and represents an update of the 2012 Plan listed in Section 2.1.

The City is a Charter City. As such, it is empowered to formally plan and adopt the Plan.

Funding for the development of the Plan was provided by a FEMA Section 404 Hazard Mitigation Grant acquired as a subgrantee through Cal OES. In compliance with the City's financial code, and through the competitive bid process, Constant & Associates was retained by the City to provide consulting services in guiding the planning process and Plan development.

## 2.3 Planning Process Description

In July 2020, the planning process for the 2021 HMP began. Select staff from various City departments were invited to the hazard mitigation planning team for the purpose of developing the 2021 HMP.

An invitation was sent to the stakeholders to participate during the City's virtual HMP Project Kickoff Meeting on August 12, 2020 and to be part of the City's planning team. Documentation of the Project Kickoff Meeting invitation is included in **Appendix B**.

## 2.4 Planning Team

Members of the HMP planning team are listed in **Table 2-1**, below.

**Table 2-1: HMP Planning Team**

| Department or Agency | Member Name | Key Role |
|---|---|---|
| EM Coordinator/City PM | Dana Wellborn | Chair of Planning Team, primary point of contact |
| City Finance Technician | Elizabeth Salcido | Contract Manager |
| City Public Information Officer | Sue Jones | Coordinated public hazard mitigation survey release and public review of draft plan |
| City Deputy City Manager | Jenele Davidson | City Manager's Office representitive |
| Airport Director | Eric Ray | Senior Department representative |
| Airport Manager | James Murawski | Primary Southern California Logistics Airport representative |
| City Senior Planner | Michael Szarzynski | Senior Department representative |
| City Engineer | Brian Gengler | Senior Department representative |
| City Parks Supervisor | Ed Sohm | Senior Department representative |

| | | |
|---|---|---|
| City Fire Chief | John Becker | City Fire Department representative |
| City Human Resources Officer | Josie Trevino | Senior Department representative |
| County Sheriff (San Bernardino County) | John Wickum | Contract Law Enforcement representative |
| City Building Official/ Floodplain Administrator | Kevin Collins | Senior Department representative |
| Victorville Water District/Water Supply Supervisor | Arnold Villarreal | Water District representative |

### 2.4.1 Planning Team Activities

Five (5) meetings were held with the planning team: Representatives from the City of Victorville shared the responsibility of chairing the planning team. The City Office of Emergency Services also shared documents for review and sent out meeting notices. A full description of planning team activities with documentation is contained in Appendix B.

**Table 2-2: Planning Activities**

| Date | Activity | Purpose |
|---|---|---|
| August 12, 2020 | Planning Team Kickoff Meeting | Introduced Planning Team members, reviewed project management plan, aligned expectations. |
| September 23, 2020 | Planning Team Meeting #1 | Reviewed potential hazards and selected those that pose risks, distributed data collection sheets, began to develop potential mitigation activities. |
| November 10, 2020 | Planning Team Meeting #2 | Reviewed vulnerability and loss analysis and the status of previous mitigation activities. |
| December 1, 2020 | Planning Team Meeting #3 | Reviewed status of prior mitigation actions identified in 2012 HMP, selected and refined new mitigation goals, identified new mitigation actions, and began development of the mitigation action plan. |
| December 17, 2020 | Review Guide Brief and Mitigation Workshop | Identified critical plan content for participating planning team members to focus on during review and identified additional new mitigation actions. |

### 2.4.2 Other Jurisdictions Agency/Organizational Participation

External organizations actively participated in Planning Team meetings. These parties were engaged as part of the planning process described in Section 2.3 and as documented in **Appendix B**. Additionally, copies of the draft LHMP were provided to neighboring jurisdictions and CalOES for review. No substantive feedback was received from the surrounding jurisdictions. Documentation of this engagement can be found in **Appendix C**. A list of the external organizations/jurisdictions engaged and their points of contact is in **Table 2-3**.

**Table 2-3 External Organization/Jurisdiction Participants**

| Organization/Jurisdiction | Staff Contact | Engagement |
|---|---|---|
| San Bernardino County Sheriff | John Wickum | Planning Team Member |
| Southern California Logistics Airport | Eric Ray | Planning Team Member |
| Southern California Logistics Airport | James Murawski | Planning Team Member |
| Victorville Water District | Arnold Villarreal | Planning Team Member |
| City of Adelanto | Jessie Flores | Draft Review |
| City of Apple Valley | Hannah Raleigh | Draft Review |
| City of Hesperia | Rachel Molina | Draft Review |
| San Bernardino County (Operational Area) | Daniel Munoz | Draft Review |
| Southern California Edison | Juan Lopez | Draft Review |
| Southwest Gas | Christopher Davy | Draft Review |
| Victor Valley Transit Authority | Christine Plasting | Draft Review |

## 2.5 Community Engagement

Once the planning process commenced, the City provided public notification through its website, Facebook, and Twitter accounts. Additionally, the City conducted an online survey to solicit input on the hazards that the communities face and the types of mitigation activities the City should undertake. The draft HMP was placed on the City website for public review and comment. Lastly, notification of the draft HMP review and adoption by the City Council was advertised as required by the Brown Act.

The public survey input from the sixty-two (62) respondents was used to select hazards and rank their affects. Fire events were ranked as the top hazard. Pandemic effects and earthquake/seismic events tied for second. This input was also used to inform the Calculated Priority Risk Index (CPRI) contained in **Table 5-5**. Lastly, survey input was used to select mitigation actions. Input from posting the draft HMP was used to refine the Plan and prepared it for submission for review. **Appendix C** provides documentation of community outreach efforts and public participation.

On February 8, 2021, the City posted a link to the draft HMP on its website and invited public review and comment. **Appendix C** contains screen shots of the website. The feedback period closed on February 22. No substantive feedback was received during the comment period.

## 2.6 Incorporation into Other Planning Mechanisms

The HMP planning process provided the City with an opportunity to review and expand on policies contained in the City's General Plan 2030. The City views the General Plan 2030 and the HMP as complementary documents that work together to reduce risk exposure to the residents of the City. Many of the ongoing recommendations identified in the HMP are programs recommended in the City General Plan Safety Element.

Per California Assembly Bill 2140, the City intends on adopting the HMP in accordance with the federal Disaster Mitigation Act of 2000 as part of the safety element of the general plan, adopted pursuant to Section 65302 (g) of the California Government Code. Additional planning mechanisms and processes that the City will incorporate hazard mitigation hazards and risks, plan recommendations, and mitigation actions into include the following documents:

- Victorville General Plan Safety Element Goals, Policies, and Implementation
- Victorville General Plan Land Use Element Purpose of Element
- Victorville General Plan Land Use Element Land Use Designations
- Victorville General Plan Land Use Element Goals, Policies & Implementation
- Victorville Water District Drought and Water-efficiency Regulations
- Fire Code
- National Flood Insurance Program
- Emergency Operations Plan
- Climate Action Plan
- Development Code
- Community Design Guidelines

Incorporation of action items and processes from the 2021 HMP into various planning documents will be completed as other plans are updated and when new plans are developed. These efforts may coincide with the Plan Maintenance Method and Schedule activities listed in Section 6. Additional action items may be implemented through the creation of new public educational programs, continued interagency coordination, and public input and participation.

## 2.7 References and Documents

In updating the HMP, the planning team used a large number of resource documents and references. **Table 2-4** contains a comprehensive list of guidance and tools incorporated to create the current Plan.

**Table 2-4: Resource and References Reviewed and Incorporated in the Plan Update**

| Referenced Document or Technical Source | Resource Type | Description of Reference and Its Use |
|---|---|---|
| City of Victorville General Plan 2030 | Comprehensive Plan | Source for history, demographic, and development trend data for the unincorporated county. |
| City of Victorville Climate Action Plan | Technical and Planning Resource | City specific plan to address climate change. |
| San Bernardino County Operational Area Emergency Response Plan | Comprehensive Plan | All hazards emergency response plan. |

| Referenced Document or Technical Source | Resource Type | Description of Reference and Its Use |
|---|---|---|
| San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan 2017 | Technical and Planning Resource | County HMP with hazard analysis and declaration history. |
| California Climate Change Center (2006). Our Changing Climate: Assessing the Risks to California. A Summary Report from the California Climate Change Center http://meteora.ucsd.edu/cap/pdffiles/CA_climate_Scenarios.pdf | Technical and Planning Resource | Describes monitoring, analysis, and modeling of climate as well as efforts designed to reduce emissions. |
| California Building Code of Regulation | Technical and Planning Resource | Sets statewide building code regulations. |
| California Fire Code | Technical and Planning Resource | Sets statewide fire code regulations. |
| California Building Energy Efficient Standard | Technical and Planning Resource | Designed to reduce wasteful and unnecessary energy consumption in newly constructed and existing buildings. |
| California Climate Change Center, (2012). Our Changing Climate 2012: Vulnerability & Adaptation to the Increasing Risks from Climate Change in California. A Summary Report on the Third Assessment from the California Climate Change Center | Technical and Planning Resource | Describes monitoring, analysis, and modeling of climate as well as efforts designed to reduce emissions. |
| California Governor's Office of Emergency Services | Technical and Planning Resource | Provides a tool for the general public to discover hazards in their area (e.g. earthquake, flood, fire, and tsunami) and learn steps to reduce personal risk. |
| California Department of Conservation https://www.conservation.ca.gov/cgs/geohazards | Technical and Planning Resource | Identifies significant geologic hazards exist or are likely to exist so that informed land use and emergency response planning decisions can be made. |
| Federal Emergency Management Agency | Technical and Planning Resource | Resource for HMP guidance (How-To series), floodplain and flooding related NFIP data (e.g. mapping, repetitive loss, NFIP statistics), and historic hazard incidents. Used in the risk assessment and mitigation strategy. |

| Referenced Document or Technical Source | Resource Type | Description of Reference and Its Use |
|---|---|---|
| HAZUS-MH | Technical Resource | Based data sets within the program were used in the vulnerability analysis. |
| National Centers for Environmental Information | Technical Resource | Online resource for weather related data and historic hazard event data used in the risk assessment. |
| National Integrated Drought Information System (2020) | Technical Resource | Source for drought related projections and conditions used in the risk assessment. |
| National Inventory of Dams (2018) | Technical Resource | Database used in the dam failure hazard profiling used in the risk assessment. |
| National Weather Service | Technical Resource | Source for hazard information, data sets, and historic event records used in the risk assessment. |
| United States Geological Survey. 2018). Earthquake Hazards Program. | Technical Data | Source for geological hazard data and incident data used in the risk assessment. |
| Western Regional Climate Center | Website Data | Online resource for climate data used in climate discussion. |
| Amethyst Basin Dam Emergency Action Pan | Technical Resource | Emergency action plan with inundation maps. Used to address dam inundation. |

# SECTION 3: PLANNING AREA DESCRIPTION

The following description of the planning area includes its location, geography, history, government, economy, and demographics.

## 3.1 Location

Victorville is a city located in the Victor Valley of San Bernardino County, California (34.5362° N, 117.2928° W) at an elevation of 2,726 feet. It encompasses ZIP Codes: 92392–92395. The City is situated along Interstate 15, north of Hesperia, and west of Apple Valley in an area known as the California High Desert as seen in **Figure 3.1**.

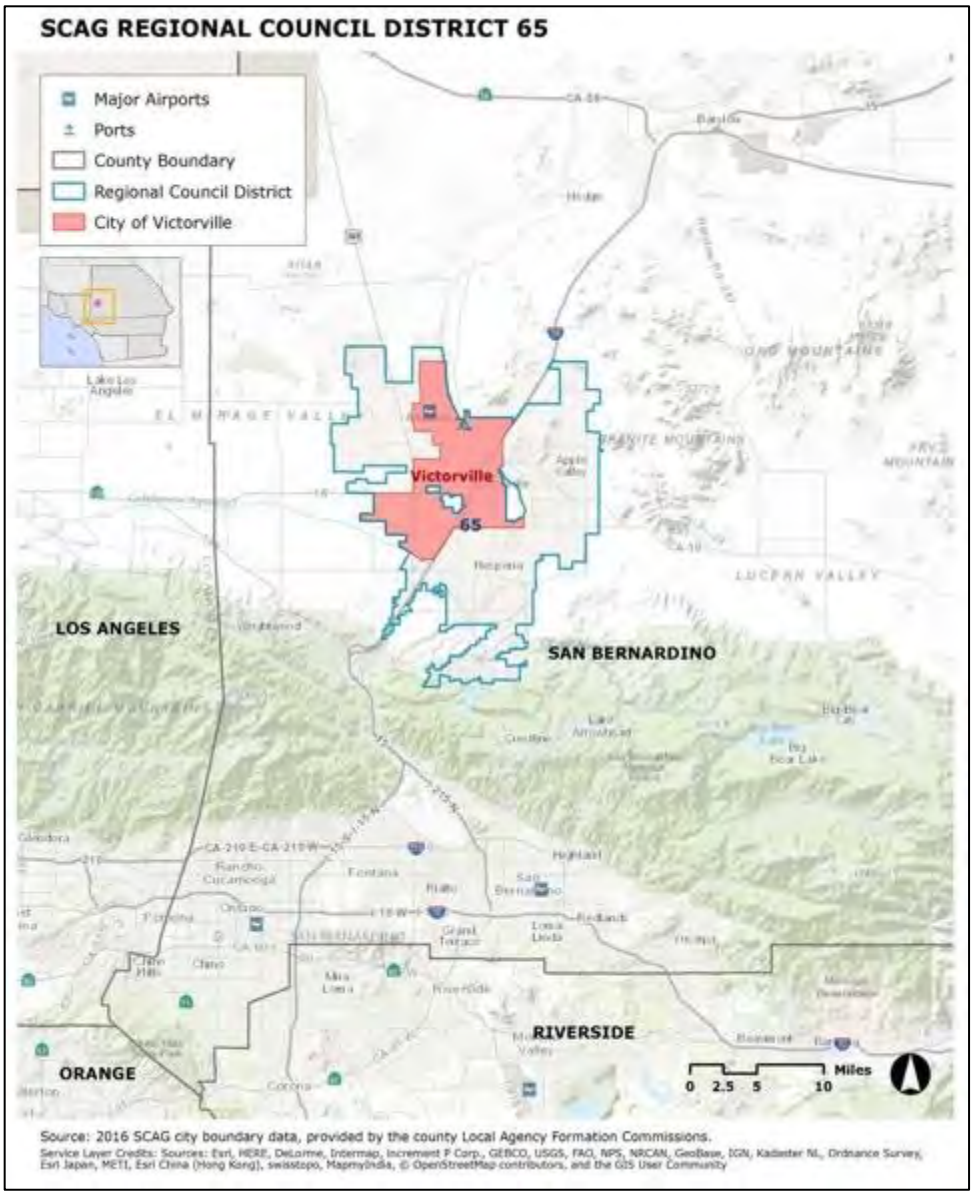



**Figure 3.1: Map of Victorville**

## 3.2 Rivers and Watersheds

The High Desert area is surrounded by many steep mountain ranges that frequently experience summer thunderstorms, which may result in flash flooding in many of the dry washes on the desert floor. As a result, runoff water collects in dry lakebeds throughout the desert area.

Environmental permit processing has delayed or prohibited work in the washes needed to provide adequate flow lines to the many bridges on City roadways. Many of the City's roadways are not outfitted with bridges, resulting in large amounts of water and debris flowing over the roadways and dip crossings. Flash flooding causes road and bridge washouts, erosion of earthen channels and basins near these roadways and dip crossings. The City may experience street closures for several days due to sediment transport and road damage. Many private properties may also experience erosion and sediment deposits due to the sheet flow character of the High Desert.

The Mojave River could be called an "Upside-down and Backwards" river:

- Upside-down as the water flows below ground and under the sand;
- Backwards because instead of flowing toward the ocean as most rivers tend to do, the Mojave flows inland, ending in the middle of the desert.

The Mojave River does come above the ground. First, just before the confluence at Deep Creek and west Miller Creek flowing out of the San Bernardino Mountain watershed; then, further north, at the upper narrows, between Victorville and Apple Valley and downstream past Barstow at the lower narrows and through Afton Canyon. The river winds down the canyon and percolates into the sand, disappearing before it reaches Soda Lake near Baker.

## 3.3 Climate

The High Desert's climate vastly differs from other areas in Southern California, as there is a broad range of temperature fluctuations between the summer and winter months as well as day and night times that characterizes the High Desert's climate. This climate type occurs primarily on the periphery of the true deserts in low-latitude semi-arid steppe regions. It is transitional to the tropical wet-dry climate on the equatorward side and to the Mediterranean climate on its poleward margin with a cooler, wetter winter resulting from the higher latitude and mid-latitude frontal cyclone activity. Annual precipitation totals are greater than in tropical and subtropical desert climates. Yearly variations in amount are not as extreme as in the true deserts but are nevertheless large.

The Köppen Climate Classification subtype for this climate is "BSk" (Tropical and Subtropical Steppe Climate).

The average temperature for the year in Victorville is 62.0°F. The warmest month, on average, is July with an average temperature of 82.0°F. The coolest month on average is January, with an average temperature of 45.0°F. The highest recorded temperature in Victorville is 111.0°F, which was recorded in June. The lowest recorded temperature in Victorville is 9.0°F, which was recorded in January.

The average amount of precipitation for the year in Victorville is 4.5". The month with the most precipitation on average is January with 0.8" of precipitation. The month with the least precipitation on average is June with an average of 0.0". The average snowfall is 1.06”.

**Table 3-1: City Average Temperatures**

| Month | Minimum | Mean | Max |
|---|---|---|---|
| January | 31°F | 45°F | 60°F |
| April | 42°F | 59° | 75°F |
| July | 61°F | 80°F | 99°F |
| October | 45°F | 63°F | 81°F |

## 3.4 History

The City was incorporated on September 21, 1962 as a general law city. At the time, the population was approximately 8,110, and the land area encompassed 9.7 square miles. Since then, the City has experienced significant physical growth with a land mass of 74.16 square miles.

The City’s history dates back more than 100 years prior to incorporation when the first settlers of European descent arrived.

In circa 1885, the community was known as Victor. It was named after Jacob Nash Victor, a construction superintendent for the California Southern Railroad (Santa Fe Railroad). The town was established as a result of the original railroad station constructed approximately one-mile northwest of the narrows of the Mojave River. On January 18, 1886, the Plan of the Town of Victor was prepared which created the grid pattern of the original town. This original subdivision included property between "A" Street through "G" Street and First Street through Eleventh Street. The area encompassed approximately 200 acres or one-third of a square mile.

The abundance of good water and the availability of rich bottom lands led to agricultural development shortly after the establishment of the railroad depot. Near the turn of the century, large deposits of limestone and granite were discovered. Since then the cement manufacturing industry has emerged as the single most important industry of the Victor Valley.

In 1901, the community's name was changed by the United States Post Office from "Victor" to "Victorville" due to the confusion associated with the community of Victor, Colorado.

In 1926, U.S. Route 66 was established, which was one of the main arteries of the National Highway System linking Chicago, Illinois, with California. A portion of this famous highway provided a transportation corridor through Victorville, which was unsurpassed until Interstate 15 was constructed. Seventh Street and "D" Street were a part of this national highway.

During World War II, on July 23, 1941, initial construction of Victorville Army Airfield, later renamed George Air Force Base, began. The base was completed May 18, 1943. When fully activated, the

base supported two (2) Tactical Fighter Wings of the Tactical Air Command whose primary aircraft was the F-4 Phantom. It also employed approximately 6,000 civilian and military personnel.

On January 5, 1989, the Secretary of Defense announced the closure of George Air Force Base under the Base Closure and Realignment Act. The base was deactivated December 15, 1992. The former military base was annexed into the City July 21, 1993, and has been renamed Southern California Logistics Airport.

## 3.5 Government

The City is a Charter City that operates with a council-manager form of government, where the City Council appoints the City Manager. The charter was adopted in 2008. The City Manager is responsible for the day-to-day operations of the City and to ensure that the policies developed by the City Council are executed. The City Council also appoints a City Attorney who is responsible for advising the City Council on legal issues affecting Victorville.

## 3.6 Economy

The economy employs 40,900 people. The largest industries are health care and social assistance (6,090 people), retail trade (5,996 people), and transportation and warehousing (3,981 people), and the highest paying industries are mining, quarrying, and oil and gas extraction ($95,357 USD), utilities ($72,052 USD), and Information ($59,464 USD).

The median household income is $47,895 USD. Males have an average income that is 1.26 times higher than the average income of females, which is $57,252 USD. The income inequality in Victorville, CA (measured using the Gini index) is 0.5, which is higher than the national average.

Major employers include:

| | |
|---|---|
| Victor Valley Community College District | 850 |
| City of Victorville (includes temporary COVID-19 staff) | 452 |
| Walmart Inc. | 400 |
| Macy's, Inc. | 381 |
| E & T Foods, Inc. | 330 |
| Desert Valley Medical Group, Inc. | 300 |
| Walmart Inc. | 272 |
| United States Department of The Air Force | 254 |
| Costco Wholesale Corporation | 250 |
| Federal Bureau of Prisons | 245 |

## 3.7 Demographics

Between 2000 and 2016, the total population of the City increased by 59,481 to 123,510 in 2016. During this sixteen (16) year period, the City's population growth rate of 92.9 percent was higher

than the San Bernardino County rate of 25.1 percent. 5.8 Percent of the total population of San Bernardino County is in the City.

**Table 3-2: City Demographics**

| | |
|---|---|
| Total Population | 126,432 |
| Population Density (Persons per Square Mile) | 1,688 |
| Median Age (Years) | 30.5 |
| Hispanic | 53.2% |
| Non-Hispanic White | 22.2% |
| Non-Hispanic Asian | 3.7% |
| Non-Hispanic Black | 16.6% |
| Non-Hispanic American Indian | 0.6% |
| All Other Non-Hispanic | 3.6% |
| Number of Households | 34,107 |
| Average Household Size | 3.5 |
| Median Household Income | $49,072 |
| Number of Housing Units | 37,614 |
| Home Ownership Rate | 61.7% |
| Median Existing Home Sales Price | $210,000 |
| 2015 - 2016 Median Home Sales Price Change | 11.1% |
| Drive Alone to Work | 71.8% |
| Mean Travel Time to Work (minutes) | 37.0 |
| Number of Jobs | 32,980 |
| 2014 - 2015 Total Jobs Change | 924 |
| Average Salary per Job | $37,896 |
| K-12 Public School Student Enrollment | 30,084 |

Sources: U.S. Census Bureau American Community Survey, 2015; Nielsen Co.; California Department of Finance E-5, May 2020; CoreLogic/DataQuick; California Department of Education; and SCAG

## 3.8 Utilities

Southwest Gas Corporation, located at 13471 Mariposa Road in Victorville, provides natural gas to most of the City. For those areas in which there are no service lines available, many residents rely on propane offered by private companies.

Southern California Edison, located at 12353 Hesperia Road in Victorville, supplies electrical power to the area.

Victorville Municipal Utility Service provides gas and electric for most of the Southern California Logistics Airport, as well as electric at the Foxborough Industrial Park.

The Victorville Water District, governed by the Victorville City Council as a department of the city, provides water services to approximately 36,100 customer connections, serving a population of approximately 125,000, within its eighty-five (85) square mile service area, The District's Water Enterprise includes approximately 694 miles of distribution and transmission mains, thirty-four (34) active wells, four (4) booster pumping stations, twenty-six (26) water storage reservoirs, one (1) recycled water storage tank, and twenty-five (25) pressure-regulating stations. Residential customers make up approximately ninety-three percent (93%) of the District's customer base, but consume only seventy percent (70%) of the water produced annually by the District.

## 3.9 Land Use

Land use description and plans function as a guide to the ultimate pattern of development for the City, both within its incorporated boundaries and sphere of influence. The General Plan Land Use Element provides for a wide variety of residential dwelling unit densities, commercial centers and industrial areas. Good land use planning balances the community's vision with its physical attributes and constraints. Current land use based on the 2008 General Plan is contained in **Table 3-3** below. A zoning map is shown in **Figure 1.2**. A large version of the map is available at https://www.mightydevelopment.com/LunaRd/Zoning_Map.pdf

**Table 3-3: Land Use Data**

| GENERAL PLAN 2030 LAND USES BY AMOUNT AND PERCENT OF ACREAGE | |
|---|---|
| **Land Use Category** | **General Plan 2030 Acres** |
| Very Low Density | 8,097 |
| Low Density | 26,968 |
| Medium Density | 510 |
| High Density | 2,255 |
| Mixed Density | 78 |
| **Subtotal Residential** | **37,908** |
| Office Professional | 393 |
| Commercial | 6,685 |
| **Subtotal Commercial** | **7,078** |
| Light Industrial | 5,220 |
| Heavy Industrial | 1,501 |
| **Subtotal Industrial** | **6,721** |

| | |
|---|---|
| Mixed Use-High Density | 609 |
| Public/Institutional | 1,200 |
| Open Space | 22,348 |
| **Subtotal Public Institutional & Open Space** | **24,157** |
| Specific Plan | 23,042 |
| **TOTAL ACREAGES** | **98,906** |
| Percent of Residential to Total Acres | 38% |
| Percent of Commercial to Total Acres | 7% |
| Percent of Industrial to Total Acres | 7% |
| Percent of Public Institutional & Open Space to Total Acres | 25% |
| Percent of Specific Plan to Total Acres | 23% |

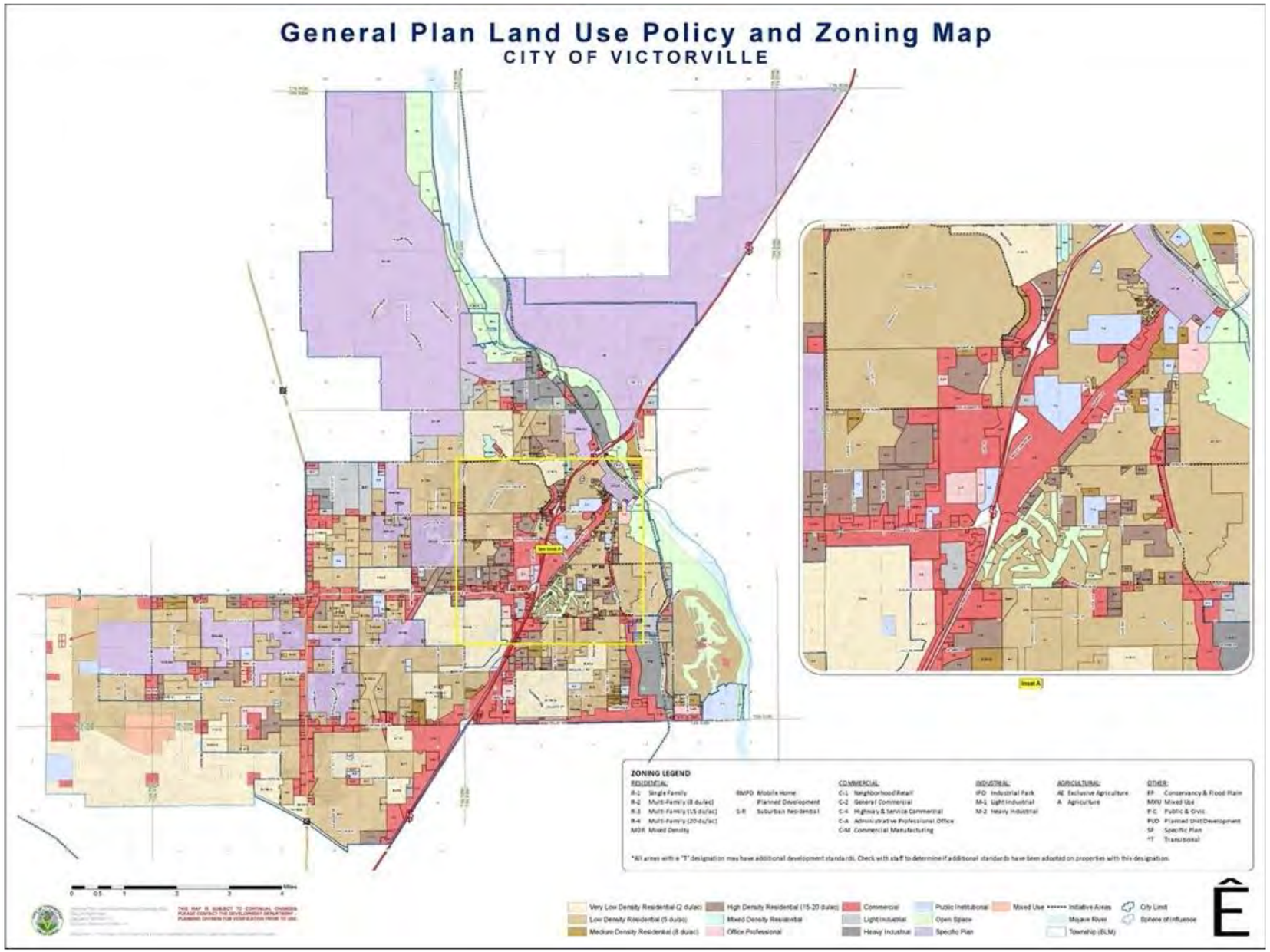



**Figure 3.2 City of Victorville General Plan Land Use Zoning Map**

## 3.10 Development Trends

The City and surrounding High Desert communities grew rapidly in population and development from 1980 through 2008. The economic crash of 2009 resulted in a slump in development and a decline in housing prices during the next several years. The recession severely affected the City which has been slower to recover than California as a whole. Population growth since 2010 has been approximately six percent (6%). Future population growth is expected to be less than one percent (>1%) annually.

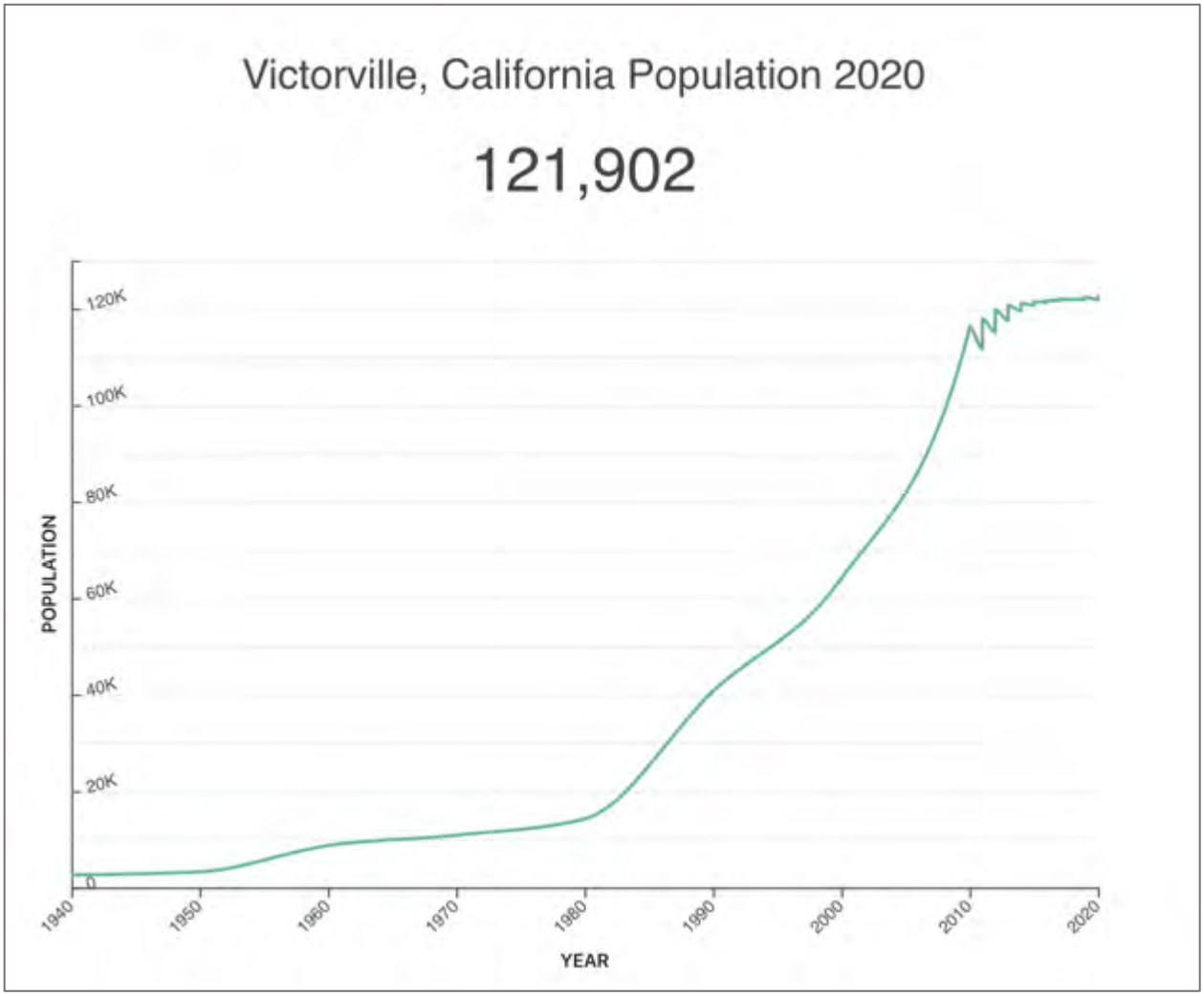



**Figure 1.3 City of Victorville Population 2020** *Source: World Population Review*

During August 2020, the median rental price for a single-family home in Victorville was $1,411 USD and median sales price for a single-family home in the city was $239,000 USD.

As of the end of 2017, the total count of existing housing units in the City was 37,809. Single family housing units make up the vast majority 79.98% of Victorville's housing with 30,240 units

total. Multi-family units make up fifteen percent (15%), or approximately 5,819 facilities. As of 2019, the average housing density (people per household) was 3.46, compared with the state average of 2.97. At the end of the period, about 3,314 of housing units in the City were unoccupied.

The City is finalizing updates to its residential zoning code to fully comply with State Laws SB 1069 and AB 2299 which allow for accessory dwelling units (ADUs) to be developed on most single-family lots. More commonly referred to as “Granny Flats” and “In-Law Units,” in the City, as many as 17,841 homes may now be eligible to add some form of second dwelling unit.

These laws are intended by The State to boost opportunities for housing production in cities in an effort to address the growing housing deficits communities face across the State. Typically, secondary units are constructed by homeowners in backyards, converted garages and basements of single-family residences. These new regulations now allow individual homeowners to play a significant role to increase housing production in Victorville over the coming years. If just one percent of eligible homeowners in Victorville built an ADU each year, it would contribute an additional 892 units to the City's housing stock over the next five (5) years and create hundreds of new local construction jobs.

New development should only result in modest changes to the City’s vulnerability to hazards. Risk should remain relatively stable over the next five (5) years because land use trends have not substantially changed the City’s risks and hazards exposure since the 2015 HMP. However, the change in severity to potentially extreme draught conditions and extreme heat, driven by climate change, has increased since 2015. This hazard exposure will continue to intensify. Climate change has been added as a stand-alone hazard since the 2015 HMP. New mitigation activities such as identifying water resources management and conservation opportunities have been included in the new HMP.

# SECTION 4: CAPABILITIES ASSESSMENT

The federal regulations require local mitigation plans to identify goals for reducing long-term vulnerabilities to the identified hazards in the planning area (Section 201.6(c)(3)(i)).

**FEMA REGULATION CHECKLIST: CAPABILITY ASSESSMENT**

**44 CFR § 201.6(c)(3):** – The plan must include mitigation strategies based on the jurisdiction's "existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools."

**Elements**

**C1.** Does the plan document the jurisdiction's existing authorities, policies, programs and resources, and its ability to expand on and improve these existing policies and programs? 44 CFR § 201.6(c)(3).

**C2.** Does the Plan address the jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? 44 CFR § 201.6(c)(3)(ii).

Source: FEMA, *Local Mitigation Planning Handbook Review Tool,* March 2013.

A HMP's primary focus is the mitigation strategy. It represents the efforts selected by the City to reduce or prevent losses resulting from the hazards identified in the risk assessment. The strategy includes mitigation actions and projects to address the risk and vulnerabilities discovered in the risk assessment. The mitigation strategy consists of the following steps:

- Identify and profile hazards and risk within the City;
- Identify projects and activities that can prevent or mitigate damage and injury to the population and buildings;
- Develop a mitigation strategy to implement the mitigation actions;
- Develop an action plan to prioritize, implement, and administer the mitigation actions;
- Implement the HMP mitigation action plan.

A capability assessment was conducted of City's authorities, policies, programs, and resources. From the assessment, goals and mitigation actions were developed. The planning team also developed a plan to prioritize, implement, and administer the mitigation actions to reduce risk to existing buildings and new development. This section also includes information regarding Victorville's implementation of and continued participation in the National Flood Insurance Program (NFIP).

## 4.1 Existing Authorities, Policies, Programs, and Resources

An assessment of the City's capabilities that contribute to the reduction of long-term vulnerabilities to hazards. The capabilities include authorities and policies, such as legal and regulatory resources, staff, and fiscal resources (e.g. technical personnel such as planners/engineers with knowledge of land development and land management practices, engineers trained in

construction practices related to building and infrastructure, planners and engineers with an understanding of natural or human-caused hazards, floodplain managers, surveyors, personnel with GIS skills, and staff with expertise of the hazards in the City). The planning team also considered ways to expand on and improve these existing policies and programs with the goal of integrating hazard mitigation into the day-to-day activities and programs of the City. **Tables 4-1**, **4-2**, **4-3**, and **4-4** summarize the existing authorities, policies, programs, and resources to implement mitigation actions and projects.

### 4.1.1 Planning and Regulatory Capabilities

These include local ordinances, policies and laws to manage growth and development. Examples include land use plans, capital improvement plans, transportation plans, emergency preparedness and response plans, building codes and zoning ordinances. These capabilities and resources may be used to support mitigation activities.

The City will adopt the approved 2021 HMP into the Safety Element of the City's General Plan for AB 2140 compliance.

**Table 4-1: Local Legal and Regulatory Capabilities**

| Name | Version/ Date | Hazards Addressed | Description (Effect on Hazard Mitigation) |
|---|---|---|---|
| Victorville General Plan Safety Element Goals, Policies, and Implementation | General Plan 2020 Adopted 2008 | All | PROTECT THE COMMUNITY AGAINST NATURAL AND MAN-MADE HAZARDS<br><br>Objectives, Policies & Implementation Measures may be found at the following link:<br>https://www.victorvilleca.gov/government/city-departments/development/planning/general-plan<br><br>Expansion and Improvement: The HMP will be informed by reference into the Public Safety Element of the General Plan. The City will adopt the approved HMP as part of the General Plan Safety Element to meet the requirements of AB 2140. The City is current updating this Element to be adopted in 2021-2022. |
| Victorville General Plan Land Use Element Purpose of Element | General Plan 2020 Adopted 2008 | Earthquake, Fire, Flood, High winds/Tornadoes/ Pipeline/Hazardous material release | The Land Use Element functions as a guide to the ultimate pattern of development for the City, both within its incorporated boundaries and sphere of influence.<br><br>The entire Land Use Element may be found at the following link:<br>https://www.victorvilleca.gov/government/city-departments/development/planning/general-plan<br><br>Expansion and Improvement: The HMP will be informed by reference into the Land Use Element of the General Plan. The City is current updating this Element to be adopted in 2021-2022. |
| Victorville General Plan Land Use Element Land Use Designations | General Plan 2020 Adopted 2008 | Flooding and accompanying hazards | Open Space (OS) General Plan Designation – Refers to land that is to remain undeveloped due to severe development constraints, lake, or river bodies and floodplains, and reserved public open space in parks and golf courses. The purpose of this district is to provide for the protection of the public health, safety and general welfare in those areas of the city which, under present conditions, are subject to periodic flooding and accompanying hazards and to conserve natural resources of benefit to the general public interest.<br><br>Expansion and Improvement: The HMP will be informed by reference into the Land Use Element of the General Plan. The HMP contains mitigation activities |

| | | | |
|---|---|---|---|
| | | | that promote maintaining open space, particularly in areas at high risk for hazards. Information in the HMP on flood occurrence areas should be used when updating this section of the General Plan. The City is current updating this Element to be adopted in 2021-2022. |
| Victorville General Plan<br>Land Use Element<br>Goals, Policies & Implementation | General Plan 2020<br>Adopted 2008 | Aviation accident | Implementation Measure 1.2.1.1: Reserve the space around SCLA for airport compatible uses and specifically bar residential development within the flight pattern and noise cones of the airport.<br><br>Expansion and Improvement: The HMP will be informed by reference into the Use Element Goals, Policies & Implementation.<br>Aviation accident mitigation measures can be incorporated in Implementation Measure 1.2.1.1. |
| Specific Plans | Varies | Earthquake, Fire, Flood, High winds/Tornadoes/<br>Pipeline/Hazardous material release | Various Specific Plans that address the Growth and Development and Environmental concerns within those boundaries including the Civic Center Specific Plan, The Old Town Specific Plan and the soon to be updated Southern California Logistics Airport Specific Plan. Those Plans may be found at the following link:<br>https://www.victorvilleca.gov/government/city-departments/development/planning/land-use-plans<br><br>Expansion and Improvement: As specific plans are updated, they may benefit from an understanding of the risks and hazards in the HMP. Specific projects may be eligible for HMGP funding. |
| Fire Code | | Fire | Title 16, Chapter 5 of the City of Victorville Development Code adopted one copy of the 2010 San Bernardino County Fire Code, incorporating by reference the 2010 California Fire Code and Appendices known as the California Code of Regulations, Title 24, Part 9; and, the 2009 International Fire Code, published by the International Code Council with California amendments.<br><br>Expansion and Improvement: Adherence to Municipal Code including local and State Fire Code regulates growth and controls land use patterns. Addressing known hazards, as City Code is updated, results in lowered risk and potentially less losses. |
| National Flood Insurance Program | | Flood | NFIP makes federally backed flood insurance available to homeowners, renters, and business owners in participating communities. The City will continue to participate in the NFIP program and will make changes accordingly. |

| | | | |
|---|---|---|---|
| | | | Expansion and Improvement: City websites and social media accounts will include information on the value of flood insurance for properties located in flood hazard areas and how to buy the insurance. |
| Emergency Operations Plan | | All | Explains how the City will respond to a major emergency or disaster and coordinate between the Emergency Operations Center (EOC) and field level Incident Commanders; includes the hazards with a description of each; the concept of operations during a major emergency or disaster; the role of the EOC, and the coordination that occurs between the EOC and City's departments and other local, state, and federal governments in times of disaster.<br><br>Expansion and Improvement: The hazards section of the Emergency Operations Plan (EOP) is informed by the HMP as the two are closely correlated. |
| Climate Action Plan | September 2015 | Climate change, Drought, Excess Heat, Wildland fire, Flood, High winds/Tornado/ Severe storm | This is a Greenhouse Gas Reduction document for the City to help achieve its goals to reduce greenhouse gases which contribute to climate change impacts. The City is currently working with SBCTA to update its CAP.<br>The plan may be found at the following link:<br>https://www.victorvilleca.gov/government/city-departments/development/planning/land-use-plans<br><br>Expansion and Improvement: The HMP and City Climate Action Plan should be closely correlated. As the Climate Action Plan is updated, mitigation measures from the new HMP can be incorporated. |
| Development Code | Varies | Growth and Land Use Hazard Impacts | In general, this land use document, also referred to as Title 16, regulates land use at the micro level under the General Plan and plays a role in mitigating growth and hazards.<br><br>A link to the Development Code may be found here:<br>https://library.municode.com/ca/victorville/codes/code_of_ordinances?nodeId=TIT16DECO<br><br>Expansion and Improvement: Adherence to Municipal Code including regulates growth and controls land use patterns. Addressing known hazards, as City Code is updated, results in lowered risk and potentially less losses. |

### 4.1.2 Administrative and Technical Capabilities

These capabilities include community (including public and private) staff and their skills and tools used for mitigation planning and implementation. This includes engineers, planners, emergency managers, GIS analysts, building inspectors, grant writers, and floodplain managers. Small communities may rely on other government entities such as counties or special districts for resources. These capabilities and resources may be used to support mitigation activities.

**Table 4-2: Administrative and Technical Capabilities**

| Capability | Hazards Addressed | Relation to Hazard Mitigation | Lead Organization |
|---|---|---|---|
| Building Official, City Planner | Earthquake, Flood, Pipeline Rupture Severe Wind | Oversees the 2019 Building Code, Zone Code, General Plan, and Specific Plans. Able to apply for grants (Grant Writer). | Planning Department, Building Department |
| Engineering design, development review, traffic analysis and surveying | All | Provides engineering services including:<br>• Capital Improvement Program - Plans, designs and administers the construction of public projects, including the rehabilitation and reconstruction of existing public infrastructure,<br>• Development Review - Responsible for the review and inspection of public infrastructure for new development projects.<br>• Traffic Engineering - Responsible for the design of an efficient and safe street network for all users including motor vehicles, public transit, bicycles and pedestrians.<br>• Surveying - Checks private development subdivision maps, lot line adjustments, easement documents, and legal descriptions for technical correctness. | Engineering Department |
| Land use analysis and building standards | All | Responsible for all aspects of private development, including land use and building standards, and works alongside the City's Economic Development Department to offer comprehensive development services. | Planning Department, Building Department |
| Emergency preparedness and response | All | Develops preparedness plans, conducts training for City staff and exercise plans. Leads the City's efforts to respond to a disaster incident. | Fire Department |
| Water Conservation | Drought | Provides education on and conducts internal operations to conserve water. Maintains a demonstration garden to show customer plants and methods to save water. | Water Conservation Division of the Public Works and Water Department |

| Capability | Hazards Addressed | Relation to Hazard Mitigation | Lead Organization |
|---|---|---|---|
| Geospatial mapping and data base management | All | Provide services that improve efficiency and decision making of land use, development planning and emergency response through the use of spatial information and interactive mapping. | Information Technology Division of the Finance Department |

### 4.1.3 Financial Capabilities

**Table 4-3** contains a list of financial capabilities available to the City. Based upon procedures for each resource, these financial resources may be used to support mitigation activities.

**Table 4-3: Financial Resources**

| Financial Resource | Administrator | Purpose |
|---|---|---|
| General Fund | Department Specific | Program operations and specific projects. Consists of property tax, sales tax, transient occupancy tax, and franchise tax that can be used for general purposes. |
| Enterprise Funds | Fund specific | The City receives revenue from five Enterprise Funds:<br>• Sanitary<br>• Victorville Water District<br>• Victorville Municipal Utilities<br>• Southern California Logistics Airport Authority<br>• Solid Waste |
| Special Revenue Funds | Fund specific | The City operates twelve (12) Special Revenue Funds. Special Revenue Funds are used to account for revenue derived from specific taxes or other revenue sources that are restricted by law or administrative action to be expended for specified purposes. |
| Community Development Block Grants (CDBG) | Planning Department | The CDBG program provides funding for eligible senior activities such as in-home care, art classes, counseling and home delivered meals. HUD also provides Disaster Recovery Assistance in the form of flexible grants to help cities, counties, and States recover from Presidentially declared disasters, especially in low-income areas, subject to availability of supplemental appropriations. |
| Hazard Mitigation Grant Program (HMPG) | Fire Department | Provides support for pre- and post-disaster mitigation plans and projects. |
| Building Resilient Infrastructure and Communities (BRIC) | Fire Department | Provides support for pre-disaster mitigation plans and projects. |
| Flood Mitigation Assistance grant program (FMA) | Fire Department | Mitigates structures and infrastructure that have been repetitively flooded. |

### 4.1.4 Education and Outreach Capabilities

**Table 4-4** lists City 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 4-4: Education and Outreach Resources**

| Name | Description (Effect on Hazard Mitigation) | Lead Organization |
|---|---|---|
| Demonstration Garden | Maintains a demonstration garden to show customer landscaping alternatives and methods to save water. | Water Conservation and Parks Divisions of the Public Works and Water Department |
| 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.). | Victorville Fire Department |
| Smoke Detector Installation Program | An annual project for the last three (3) years, the City collaborates with the ARC to place smoke detectors in low-income and senior communities. Usually takes place in mobile home parks to get the most done in the in the shortest amount of time. | American Red Cross |
| County Emergency/Disaster Readiness App | The City promotes the San Bernardino County readiness app. It is a great tool for the community to use in preparation for all major disaster types. | San Bernardino County |
| Telephone Emergency Notification System | The County operates the Telephone Emergency Notification System (TENS). A link is provided on the Emergency Services page. Since sixty percent (60%) of people only use cell phones, cell phone registration is encouraged. | San Bernardino County |
| Public Event Outreach and Awareness Programming | The City OES provides information on training, emergency preparedness, and resources every year at public events. These events include neighborhood pop-ups, the City's fall festival (hosting 30,000 people), and National Night Out. OES performs outreach presentations to various community groups upon request (e.g. Kiwanis, Rotary, church groups, mobile home parks, etc.). | Fire Department |
| CERT Team | City is looking to establish a CERT team during this fiscal year dependent on COVID-19 developments. | Fire Department |
| City Website Emergency Preparedness Information | https://www.victorvilleca.gov/government/city-departments/emergency-services/emergency-management FEMA Ready link plus information on earthquake preparedness, heat risk, storm readiness, run hide fight/active shooter, fire home safety (i.e. risk awareness and preparedness information). | Fire Department |

### 4.1.5 National Flood Insurance Program Participation

The City has been designated on the Flood Insurance Rate Map (FIRM), as being in Zone X, which is a Non-Special Flood Hazard Area. Zone X includes areas:

- Outside the one percent (1%) annual flood risk floodplain;
- Of one percent (1%) annual shallow flooding risk where average depths are less than one (1) foot;

- Of one percent (1%) annual stream flooding risk where the contributing drainage area is less than one (1.0) square mile;
- Protected by levees from the one percent annual flood risk.

These areas 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 Areas are still at risk. Because the City is within Zone X, insurance purchase is not required. Notwithstanding, the City participates in the NFIP.

**Table 4-5: National Flood Insurance Program Participation**

| NFIP Participation | | | | | | | |
|---|---|---|---|---|---|---|---|
| **CID** | **Community Name** | **County** | **Init. FHBM Identified** | **Init. FIRM Identified** | **Curr. Eff. Map Date** | **Reg.- Emer. Date** | **Tribal** |
| 060123# | Victorville City Of | San Bernardino County | 05/09/78 | 12/04/79 | (NSFHA) | 08/13/79 | No |

Additionally, the City had adopted language consistent with the NIFP flood plain management program into City Code. Article 16: - Flood Damage Prevention of the City Code states:

*The Legislature of the State of California has in Government Code Sections 65302, 65560 and 65800 conferred upon local government units' authority to adopt regulations designed to promote the public health, safety and general welfare of its citizenry. Therefore, the City Council of the City does adopt the following floodplain management regulations.*

It further provides extensive guidance on floodplain management including.

*Basis for Establishing the Areas of Special Flood Hazard. The areas of special flood hazard identified by the Federal Insurance Administration (FIA) of the Federal Emergency Management Agency (FEMA) in the San Bernardino County and incorporated areas flood insurance study (FIS), dated September 2, 2016, and accompanying flood insurance rate map (FIRM), dated September 2, 2016, and all subsequent amendments and/or revisions are adopted by reference and declared to be a part of this Chapter. This FIS and attendant mapping is the minimum area of applicability of this Chapter and may be supplemented by studies for other areas that allow implementation of this Chapter and are recommended to the City Council by the floodplain administrator. The FIS and FIRM are on file in the office of the floodplain administrator at 14343 Civic Drive, Victorville, California.*

The full code may be found at: Article 16: - Flood Damage Prevention.

# SECTION 5: HAZARD ANAYSIS AND RISK ASSESSMENT

A hazard analysis consists of identifying, screening, and profiling each hazard. The hazard analysis encompasses natural, human-caused, and technological hazards. Natural hazards result from unexpected or uncontrollable natural events of significant size and destructive power. Human-caused hazards result from human activity and encompass technological hazards. Technological hazards are generally accidental or result from events with unintended consequences (for example, an accidental release of hazardous materials).

The requirements for hazard identification, as stipulated in DMA 2000 and its implementing regulations are described below.

**FEMA REGULATION CHECKLIST: RISK ASSESSMENT**

**Hazard Identification**

**44 CFR § 201.6(c)(2)(i):** The risk assessment shall include a description of the type of all natural hazards that can affect the jurisdiction.

**Elements**

**B1.** Does the Plan include a description of the type, location, and extent of all natural hazards that can affect the jurisdiction? Requirement § 201.6(c)(2)(i).

**B2.** Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for the jurisdiction? See 44 CFR § 201.6(c)(2)(i).

**B3.** Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? Requirement § 201.6(c)(2)(ii).

**B4.** Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? Requirement § 201.6(c)(2)(ii).

Source: FEMA, *Local Mitigation Planning Handbook Review Tool,* March 2013.

The goal of mitigation is to reduce the future impacts of hazards, including loss of life, property damage, disruption to the local economy, and the expenditure of public and private funds for recovery.

## 5.1 City Disaster Proclamation History

The planning team reviewed historical information and more recent past events to identify hazards where an emergency or disaster was proclaimed within the City. The following table shows the emergency or disaster proclamation history for the City.

**Table 5-1: Emergency or Disaster Proclamations**

| Year | Resolution Number | Emergency/Disaster Type |
|---|---|---|
| 2020 | 20-001 | COVID-19 Pandemic |

## 5.2 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 has made one City proclamation of emergency. On March 17, 2020, the City Manager in his capacity as Director of Emergency Services signed Proclamation No. 20-01 to address the COVID-19 pandemic. The City Council ratified the City Manager's Proclamation by adopting Resolution No. 20-011 in a Special Emergency Meeting held on March 19, 2020.

A copy of the resolution must be provided to the San Bernardino 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).

The table below lists the State and Federal disaster declarations since 2015 affecting San Bernardino County, which encompass the cities within the County. Disaster proclamations for hazards that are not present in Victorville (landslides, tsunami, etc.) were excluded from the table,

**Table 5-2: San Bernardino County Disaster Proclamation History**

| Year | Disaster # | Hazard | Declaration |
|---|---|---|---|
| 2020 | DR 4569 | California 2020 Fires | Disaster |
| 2020 | | Fires | Governor |
| 2020 | DR 4482 | COVID-19 Pandemic | Disaster |
| 2020 | EM 3428 | COVID-19 Pandemic | Emergency |
| 2019 | | Ridgecrest Earthquake | Governor |
| 2018 | | Monsoonal Rainstorms | Governor |
| 2017 | | Storm System | Governor |
| 2016 | | Wildfire | Governor |
| 2015 | | Rainstorms | Governor |

## 5.3 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. The risk assessment defines and quantifies vulnerable populations, buildings, 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 2021 HMP 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 shown below in **Table 5-3**. 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 shown in **Table 5-4**. **Table 5-5** is an overall summary of the hazard evaluations for the City.

**Table 5-3: Calculated Priority Risk Index**

| 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** | |
| | 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).<br>Injuries or illnesses are treatable with first aid and there are no deaths.<br>Negligible quality of life lost.<br>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).<br>Injuries and illnesses do not result in permanent disability and there are no deaths.<br>Moderate quality of life lost. | **2** | |

| | | | | |
|---|---|---|---|---|
| | | Shut down of critical facilities for more than one (1) day and less than one (1) week. | | |
| | Critical | Moderate property damages (greater than 25% and less than fifty (50%) of critical and non-critical facilities and infrastructures).<br>Injuries or illnesses result in permanent disability and at least one death.<br>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).<br>Injuries or illnesses result in permanent disability and multiple deaths.<br>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** | |
| **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 hrs. 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 5-4: 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 5-5: Hazard CPRI Rating Summary**

| Hazard | Probability (45%) | Magnitude/ Severity (30%) | Warning Time (15%) | Duration (10%) | Weighted Score | Risk Level |
|---|---|---|---|---|---|---|
| 1. Aviation Accident | 1 | 3 | 4 | 2 | 2.15 | Moderate |
| 2. Climate Change | 4 | 3 | 1 | 4 | 3.25 | High |
| 3. Dam Inundation | 3 | 4 | 2 | 3 | 3.15 | High |
| 4. Drought | 4 | 2 | 1 | 4 | 2.95 | Moderate |

| Hazard | Probability (45%) | Magnitude/ Severity (30%) | Warning Time (15%) | Duration (10%) | Weighted Score | Risk Level |
|---|---|---|---|---|---|---|
| 5. Earthquake/ Seismic | 3 | 4 | 4 | 4 | 3.55 | High |
| 6. Extreme Heat | 3 | 2 | 2 | 3 | 2.55 | Moderate |
| 7. Fire/Wildfire | 1 | 2 | 4 | 1 | 1.75 | Low |
| 8. Flood/Flashflood | 4 | 3 | 3 | 3 | 3.45 | High |
| 9. High Winds/ Severe Storm | 3 | 2 | 2 | 3 | 2.55 | Moderate |
| 10. Pandemic | 2 | 4 | 2 | 4 | 2.80 | Moderate |
| 11. Pipeline Rupture HAZMAT Release | 2 | 4 | 4 | 1 | 2.80 | Moderate |
| 12. Power Failure/ PSPS | 2 | 4 | 3 | 3 | 2.85 | Moderate |
| 13. Terrorism | 4 | 2 | 1 | 3 | 2.85 | Moderate |

## 5.4 Hazard Risk Profiles

The requirements for hazard profiles are stipulated in DMA 2000 and its implementing regulations. The hazards that the hazard mitigation team selected for the 2021 HMP have been profiled using federal, state, regional, and local resources that have mapped, documented, or reported on hazards. Both natural and man-made hazards are included.

The hazards that exist in the City are profiled below. Each hazard profile includes a description of the type, location, extent, previous occurrences, regulatory environment and probability of future events within the description. Maps and graphs are used in this plan to display hazard identification data. Except for the future earthquake probability, which was taken from the third Uniform California Earthquake Rupture Forecast (UCERF3), the probability of future hazard events was calculated based on existing data. Probability was determined by dividing the number of events observed by the number of years on record and multiplying by 100. This gives the percent chance of an event happening in any given year (e.g. three (3) tornados over a thirty (30) year period equates to a ten percent (10%) chance of a tornado in any given year).

### 5.4.1 Aircraft Accident

**Description:**

The National Transportation Safety Board defines an airplane accident as an occurrence associated with the operation of an aircraft that takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage (see 49 CFR 830).

**History:**
The Southern California Logistics Airport (SCLA) has had two (2) accidents in approximately the past twenty-five (25) years.

- On June 7, 2001, the copilot of a Learjet 24A, registration number N805NA, inadvertently induced a lateral oscillation and lost directional control of the aircraft during touch-and-go landing practice with the yaw damper disengaged. After dragging the right-hand tip tank on the runway, the aircraft landed hard, collapsing the main landing gear and sliding off the runway. The aircraft was substantially damaged but its three (3) occupants were not injured. The accident was attributed to the copilot's inadvertent loss of control and the pilot in command's failure to adequately supervise the copilot.
- On August 20, 2000, a Pulsar 100 (N601SP) lost engine power on approach to Runway 21. The pilot was unable to restart the engine which resulted in a landing off the runway. The aircraft hit a ravine and collapsed the landing gear.

**Location:**
The SCLA encompasses approximately 2,200 acres of the former George Air Force Base (GAFB) and is located in northwest corner of the City in the southeast corner of Mojave Desert approximately ninety (90) miles northeast of Los Angeles. GAFB was officially decommissioned in December 1992. It has two (2) runways;

- Runway 17/35: 15,050 ft × 150 ft surface: Asphalt/concrete;
- Runway 03/21: 9,138 ft × 150 ft surface: Asphalt/concrete.

The Southern California International Airport, the immediate predecessor to the SCLA, opened in October 1994, shortly after the Air Force executed a lease for the former base. The Airport was granted a FAA Part 139 Certificate in February 1995 to serve passenger and cargo operators.

**Extent:**
In aviation, an accident is defined by the Convention on International Civil Aviation Annex 13 as an occurrence associated with the operation of an aircraft which takes place from the time any person boards the aircraft with the intention of flight until all such persons have disembarked and in which: 1) a person is fatally or seriously injured, 2) the aircraft sustains significant damage or structural failure, or 3) the aircraft goes missing or becomes completely inaccessible. Annex 13 defines an incident as an occurrence, other than an accident, associated with the operation of an aircraft that affects or could affect the safety of operation. A hull loss occurs if an aircraft is destroyed, damaged beyond repair, lost, or becomes completely inaccessible.

Although a crash by aircraft operated from SCLA would be traumatic for the immediate impact area, it is not expected that this would have a long-term impact on service operations within the City. The crash of a major airliner in the City would be catastrophic. A large area would be affected with plane wreckage, burning fuel, destroyed buildings, and casualties beyond the capability of local fire and emergency medical services personnel. Media attention would be overwhelming. Any air accident will involve coordination among federal, state, and local agencies to provide the necessary resources to manage such an event. Mass casualty transportation accidents typically

require these agencies to establish a unified command post, activate disaster mortuary teams, set up medical aid stations, and develop a plan for moving patients and resources.

**Regulatory Context:**
14 CFR Part 139 requires the FAA to issue airport operating certificates to airports that:

- Serve scheduled and unscheduled air carrier aircraft with more than thirty (30) seats;
- Serve scheduled air carrier operations in aircraft with more than nine (9) seats, but less than thirty-one (31) seats;
- The FAA Administrator requires to have a certificate;
- This Part does not apply to airports at which air carrier passenger operations are conducted only because the airport has been designated as an alternate airport.

Airport Operating Certificates serve to ensure safety in air transportation. To obtain a certificate, an airport must agree to certain operational and safety standards and provide for such things as firefighting and rescue equipment. These requirements vary depending on the size of the airport and the type of flights available.

FAA Circular 150 Series provides detailed guidance on airport operations and management.

**Probability of Future Events:**
Based upon the history of airplane crashes associated with SCLA, future crashes may be expected to occur within the next fifty (50) years.

### 5.4.2 Climate Change

**Description:**
The earth's climate is changing. The State has warmed about two degrees F (2°F) in the last century. Throughout the southwestern United States, heat waves are becoming more common, and snow is melting earlier in spring. In the coming decades, changing climate is likely to decrease the flow of water in the Colorado River, threaten the health of livestock, increase the frequency and intensity of wildfires, and convert some rangelands to desert.

Our climate is changing because the earth is warming. People have increased the amount of carbon dioxide in the air by forty percent (40%) since the late 1700s. Other heat-trapping greenhouse gases are also increasing. These gases have warmed the surface and lower atmosphere of our planet about one degree (1.0°F) during the last fifty (50) years. Evaporation increases as the atmosphere warms which increases humidity, average rainfall, and the frequency of heavy rainstorms in many places, but contributes to drought in others. Greenhouse gases are also changing the world's oceans and ice cover. Carbon dioxide reacts with water to form carbonic acid, so the oceans are becoming more acidic. The surface of the ocean has warmed about one degree (1.0°F) during the last eighty (80) years.

The U.S. Environmental Protection Agency (EPA) describes climate change as "any significant change in the measures of climate lasting for an extended period of time. In other words, climate

change includes major changes in temperature, precipitation, or wind patterns, among other effects, that occur over several decades or longer."

Many people confuse climate change with global warming, the recent and ongoing rise in global average temperatures near Earth's surface. However, global warming represents only one aspect of climate change. The Earth's average temperature has risen by 1.4°F over the past century and is projected to rise another 2.0°F to 11.5°F over the next hundred years. Rising global temperatures have been accompanied by changes in weather and climate. Many places have seen changes in rainfall resulting in more floods, droughts, or intense rain, as well as more frequent and severe heat waves. The planet's oceans and glaciers have also experienced changes - oceans are warming and becoming more acidic, ice caps are melting, and sea levels are rising. The effects of these indicators include:

- **Greenhouse Gases:** Human activities have increased the emissions of greenhouse gases. As a result of the increase in emissions, average concentrations of heat-trapping gases in the atmosphere are also increasing.
- **Weather and Climate:** Average U.S. and global temperatures are increasing while attributes of weather and climate, such as precipitation, drought and tropical cyclone activity are changing.
- **Oceans:** Average oceanic temperatures are increasing. Sea levels are rising around the world due to thermal expansion and increases from ice melt, and waters are becoming more acidic.
- **Snow and Ice:** Glaciers in the U.S. and around the world are generally shrinking, while snowfall and snow cover in the U.S. have decreased overall. The extent of the Arctic Sea ice is declining.
- **Health and Society:** Warmer temperatures and later fall frosts allow ragweed plants to produce pollen later into the year, potentially prolonging allergy season. The length of ragweed pollen season has increased at ten (10) out of eleven (11) locations studied in the central U.S. and Canada since 1995. The change becomes more pronounced from south to north.
- **Ecosystems:** Many areas are experiencing earlier spring events, such as peak stream runoff and flower blooms. Bird migration patterns are changing, and wildfire zone size has increased.

**History:**
Climate change has occurred throughout the history of the planet. Due to variations in the earth's inclination to the sun, volcanic activity, and other factors such as asteroid impacts and the amount of solar radiation reaching the earth's surface rises and falls. The temperature of the planet correlates to the amount of solar radiation arriving at the surface and with it the climate.

In relatively recent history, the last glacial period, popularly known as the Ice Age, occurred from c. 110,000 to 12,000 years ago. This most recent glacial period is part of a larger pattern of glacial and interglacial periods known as the Quaternary glaciation (c. 2,588,000 years ago to present).

From this point of view, scientists consider this "ice age" to be merely the latest glaciation event in a much larger ice age, one that dates back over two (2) million years and is still ongoing.

During this last glacial period, there were several changes between glacier advance and retreat. The Last Glacial Maximum, the maximum extent of glaciation within the last glacial period, was approximately 22,000 years ago. While the general pattern of global cooling and glacier advance was similar, local differences in the development of glacier advance and retreat make it difficult to compare the details from continent to continent. Generally, the pattern of temperature variation and glaciation has lagged atmospheric carbon dioxide (CO2) content. **Figure 5.1** depicts global variations during the past 400,000 years as a correlation between temperature and atmospheric CO2 content in part per million.[1]

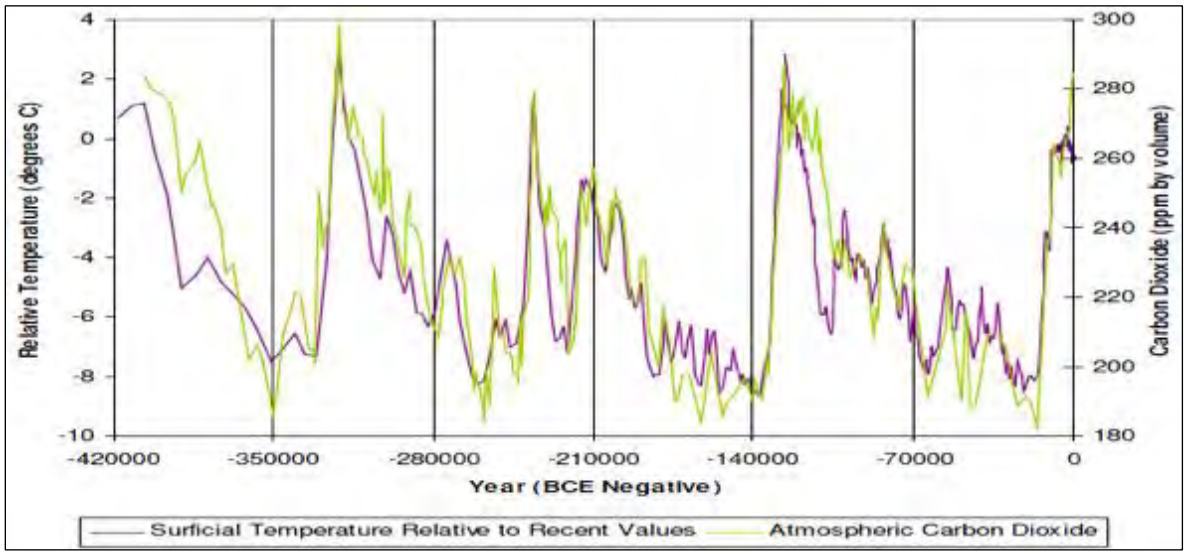



**Figure 5.1: Temperature and Atmospheric CO2 Variation Past 400,000 Years**

Since 22,000 years ago, the planet has slowly warmed and the glaciers retreated to high northern latitudes and mountains. In the last several decades of this period, human activity has likely led to a rapid increase in atmospheric CO2 and a matching rise in global temperature. The result has been that climate change may be accelerating. **Figure 5.2** provides a graphical depiction of the recent history of temperature rise.[2]

[1] Hogg, A.M., 2008, Glacial cycles and carbon dioxide: A conceptual model. Geophysical Research Letters, 35, L01701

[2] NOAA

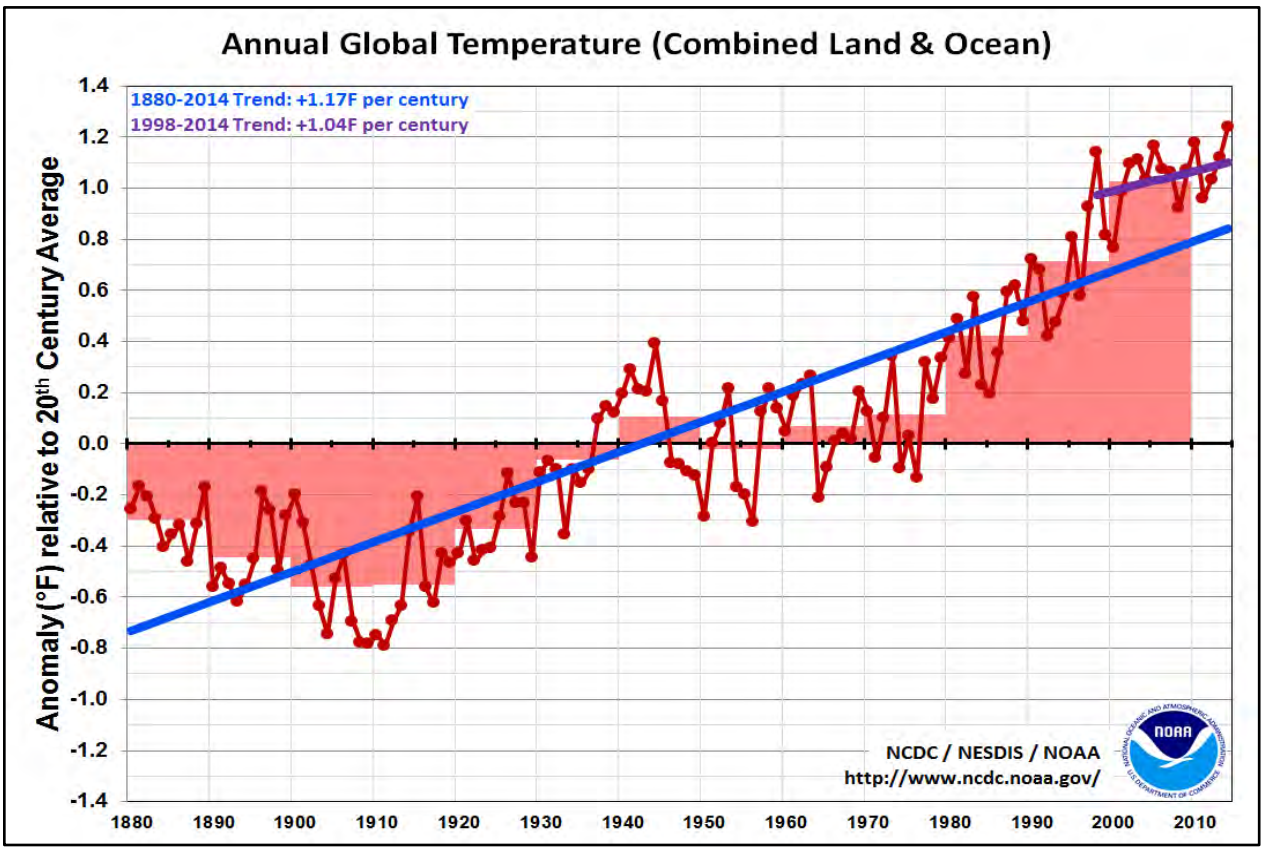



**Figure 5.2: Temperature Rise Since 1880**

**Location:**
Warming and climate change are occurring globally with wide variations based on location and latitude. The polar regions have experienced particularly rapid changes in climate with increased ice melt and more sea-ice free days.

**Extent:**
Climate change is likely to affect the entire earth's population. More widespread drought and associated crop failure, movement of invasive species, more frequent wildfires, increased energy emergencies, and more intense climate events such as storms and extreme heat will occur throughout the City. The entire planning area is subject to climate change.

Specific likely impacts on California include:

- Increasing droughts and higher temperatures are likely to affect California's top agricultural products including cattle, dairy, and vegetables. Hot temperatures threaten the health of cows and causes them to eat less, grow more slowly, and produce less milk. Livestock operations could also be impaired by fire, the lack of water, and changes in the landscape from grassland to woody shrubs more typical of a desert. Reduced availability of water would also create challenges for irrigated farms, which account for two-thirds of the water used in the state.

- Wildfires, changing landscapes, higher temperatures, and drought are likely to increase the severity, frequency, and extent of wildfires which could harm property, livelihoods, and human health. On average, more than two percent (2%) of the land in California has burned per decade since 1984. Wildfire smoke can reduce air quality and increase medical visits for chest pains, respiratory problems, and heart problems. The combination of more fires and drier conditions may expand deserts and otherwise change parts of California's landscape. Many plants and animals living in arid lands are already near the limits of what they can tolerate. A warmer and drier climate would generally extend deserts to higher elevations and expand their geographic ranges. In some cases, native vegetation may persist and delay or prevent expansion of the desert. In other cases, fires or livestock grazing may accelerate the conversion of grassland to desert in response to a changing climate. For similar reasons, some forests may change to desert or grassland.
- Warmer and drier conditions make forests more susceptible to pests. Drought reduces the ability of trees to mount a defense against attacks from pests such as bark beetles which have infested 100,000s of acres in California. Temperature controls the life cycle and winter mortality rates of many pests. With higher winter temperatures, some pests can persist year-round and new pests and diseases may become established.
- Hot days can be unhealthy, even dangerous. Certain people are especially vulnerable, including children, the elderly, the sick, and the poor. High air temperatures can cause heat stroke and dehydration and affect people's cardiovascular, respiratory, and nervous systems. Higher temperatures are amplified in urban settings where paved and other surfaces tend to store heat. Construction crews may have to increasingly operate on altered time schedules to avoid the heat of the day.
- Rising temperatures can increase the formation of ground-level ozone, a key component of smog. Ozone has a variety of health effects, aggravates lung diseases such as asthma, and increases the risk of premature death from heart or lung disease. Both the U.S. EPA and the California Air Resources Board have been working to reduce ozone concentrations. As the climate changes, continued progress toward clean air will be more difficult.

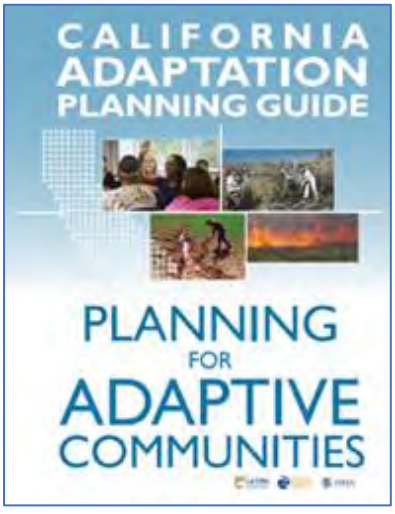
**Regulatory Context:**
The State of California has stepped into a leadership role in planning for both the reduction of greenhouse gas emissions and the adaptation to the potential impacts of climate change. Key laws, regulations, and policies helping to reduce GHG emissions include:

- The California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32 and Senate Bill [SB] 32): AB 32 is the primary legislation that has driven GHG regulation and analysis in California between 2006 and 2016, by instructing the California Air Resource Board (CARB) to develop and enforce regulations for the reporting and verifying of statewide GHG emissions. The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020. Based on CARB's calculations of emissions levels, California must reduce GHG emissions by approximately fifteen percent (15%) below 2005 levels to achieve this goal. In September 2016, the Governor signed SB 32, which builds upon the statewide targets for 2020 by establishing a longer-term target so that

"statewide greenhouse gas emissions are reduced to forty percent (40%) below the 1990 levels by 2030." The bill further authorized CARB to adopt regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions.

- California Executive Orders S-3-05 (2005) and B-30-15 (2015): These two (2) executive orders highlight longer-term GHG emissions reduction targets for the state, though such targets have not yet been adopted by the legislature and signed into law. Specifically, Executive Order (EO) S 3 05 seeks to achieve a reduction of GHG emissions of eighty percent (80%) below 1990 levels by 2050, consistent with the scientific consensus that developed regions will need to reduce emissions at least eighty percent (80%) below 1990 levels to limit global warming to two degrees Celsius (2.0°C). Executive Order B-30-15 seeks to establish an interim target, between the 2020 target established through AB 32 and the long-term targets in EO S-3-05, to achieve a reduction of GHG emissions of forty percent (40%) below 1990 levels by 2030.
- CEQA and Greenhouse Gas Emissions (Senate Bill 97): In 2007, the Natural Resources Agency was directed by the legislature to prepare amendments to the California Environmental Quality Act (CEQA) Guidelines, providing direction to lead agencies on how to analyze and mitigate greenhouse gas emissions.
- Senate Bill 379 (2015) Planning and Zoning Law: This legislation requires that the next revision of a jurisdiction's local hazard mitigation plan on or after January 1, 2017, or, if the local jurisdiction has not adopted a local hazard mitigation plan, beginning on or before January 1, 2022, include a review and update of the safety element to address climate adaptation and resiliency strategies applicable to that city or county. The bill would require the update to include a set of goals, policies, and objectives based on a vulnerability assessment, identifying the risks that climate change poses to the local jurisdiction and the geographic areas at risk from climate change impacts.

California has also prepared programs and guidance for local governments to consider in identifying hazards and adapting to a changing climate.



- California Climate Adaptation Strategy – Executive Order S-13-08: In 2008, the Governor signed EO S-13-08 which directed the California Natural Resources Agency to lead a statewide effort to develop a climate adaptation strategy. Published in 2009, the statewide plan describes climate trends and the potential impacts of climate change on key sectors, and it outlines short- and long-term actions that state and local governments can take to address future climate impacts.
- California Adaptation Planning Guide (APG): Published in 2012, this statewide resource serves as a guide to local governments to identify, evaluate, and plan for the range of unavoidable consequences their community may face in the future due to climate change. The APG includes a step-by-step process for conducting a vulnerability assessment and identifying potential adaptation strategies.

**Probability of Future Events:**
Climate change is an ongoing occurrence. Essentially, it has occurred, is occurring, and will continue to occur for several decades, centuries or longer.

### 5.4.3 Dam Inundation

**Description:**
Dams and reservoirs of jurisdictional size are defined in the California Water Code Sections 6000 through 6008. There are currently more than 1,400 dams of jurisdictional size in California. Approximately 1,250 of these dams are under the jurisdiction of California's Department of Water Resources, Division of Safety of Dams. Dams and reservoirs owned by the federal government are not subject to state jurisdiction except as otherwise provided by federal law. In California, there are currently 149 dams owned by federal government agencies such as the United States Forest Service, Bureau of Reclamation, Army Corps of Engineers, and the U.S. Military.

The term "dam failure" encompasses a wide variety of circumstances. Situations that would constitute a dam failure vary widely, from developing problems to a partial or catastrophic collapse of the entire dam. Potential causes of a dam failure are numerous and can be attributed to deficiencies in the original design of the dam, the quality of construction, the maintenance of the dam, operation of the appurtenances while the dam is in operation, and acts of nature including precipitation in excess of the design, flood, and damage from earthquakes.

Water overtopping the dam crest is a common cause of failure in earth dams. Overtopping will cause erosion and the dam crest and eventual dam breach. Piping of each dam is another common form of failure. Piping is a form of erosion that occurs underground caused by rodent burring and the presence of extensive root systems from vegetation growing on and around the dam.

This type of disaster is especially dangerous because it can occur suddenly, providing little warning or evacuation time for the downstream communities. The flows resulting from dam failure generally are much larger than the capacity of the downstream channels and therefore lead to

extensive flooding. Flood damage occurs as a result of the momentum of the flood caused by the sediment-laden water flooding over the channel banks and impact debris carried by the flow.

**History:**
Dam failure has not affected the City in the past. Dams within southern California have failed or had the potential to fail within the past 100 years. Major incidents include:

- March 12, 1928: The St. Frances Dam catastrophically failed, resulting in as many as 400 fatalities. The collapse is considered to be one of the worst American civil engineering disasters of the 20th century and remains the second-greatest loss of life due to a disaster in California's history.
- December 14, 1963: The Baldwin Hills Dam inundated the neighborhood of South Los Angeles when the dam suffered a catastrophic failure and flooded the residential neighborhoods surrounding it. It began with signs of lining failure, followed by increasingly serious leakage through the dam at its east abutment. After three hours the dam breached, with a total release of 250 million US gallons resulting in five (5) deaths and the destruction of 277 homes. Vigorous rescue efforts averted a greater loss of life.
- February 9, 1971: The San Fernando region was struck by one of the most devastating earthquakes in California history. With a Richter magnitude of 6.6, it claimed sixty-five (65) lives and damage estimated at half a billion dollars It was California's third worst earthquake in terms of lives lost, only exceeded by San Francisco (1906) and Long Beach (1933).
- The San Fernando quake could have been a catastrophe instead of just a costly disaster. That conclusion arises from its most striking episode: the near-collapse of the lower dam at the Van Norman reservoir. The 1,100-foot dam held 3.6 billion gallons of water, but it was only half full and the water level was thirty-six (36) feet below the lip. The top thirty (30) feet of the structure crumbled, leaving the water only six (6) feet from the top and fresh chunks of earth falling off with each aftershock. A UCLA study estimated that collapse of the dam could have killed between 71,600 and 123,400 people.

**Location:**
**Amethyst Basin Dam:** The Department of Public Works, San Bernardino County Flood Control District (SBCFCD) owns and operates Amethyst Basin Dam in the City of Victorville. Amethyst Basin is part of the SBCFCD's Mojave River System, along the Oro Grande Wash, and consists of a homogenous earthen flood control dam approximately forty-three (43) feet high (Crest Elevation 3265 feet) with a reservoir flood storage area of about 357 acre-feet (at Spillway Crest Elevation 3255.5 feet).

Amethyst Basin is located in the south-west section of the City of Victorville; one (1) mile west of the Interstate 15 (I-15) at Bear Valley Road interchange. It has never experienced any high flow issues or flooding of downstream facilities. Amethyst Basin is also utilized as a groundwater recharge facility by the Mojave Water Agency, contributing to the region's sustainability.

Amethyst Basin is under the jurisdiction of the California's Division of Safety of Dams (DSOD). SBCFCD design of the dam, spillway, outlets, and reservoir were reviewed and approved by DSOD under Application 87-20 on August 2017. The construction of the facilities occurred over a year from May 2018 to May 2019.


**Figure 5.3: Amethyst Basin Vicinity Map**

**Cedar Springs Dam:** The Cedar Springs Dam created Silverwood Reservoir in 1971 as part of the State Water Project. The dam can potentially impound 73,000-acre feet of water. The dam has a thirty-inch (30") Cone valve underneath the dam for use during storm releases as well as two (2) five by nine-inch (5" x 9") Gates underneath the dam that can be opened during heavy storms.

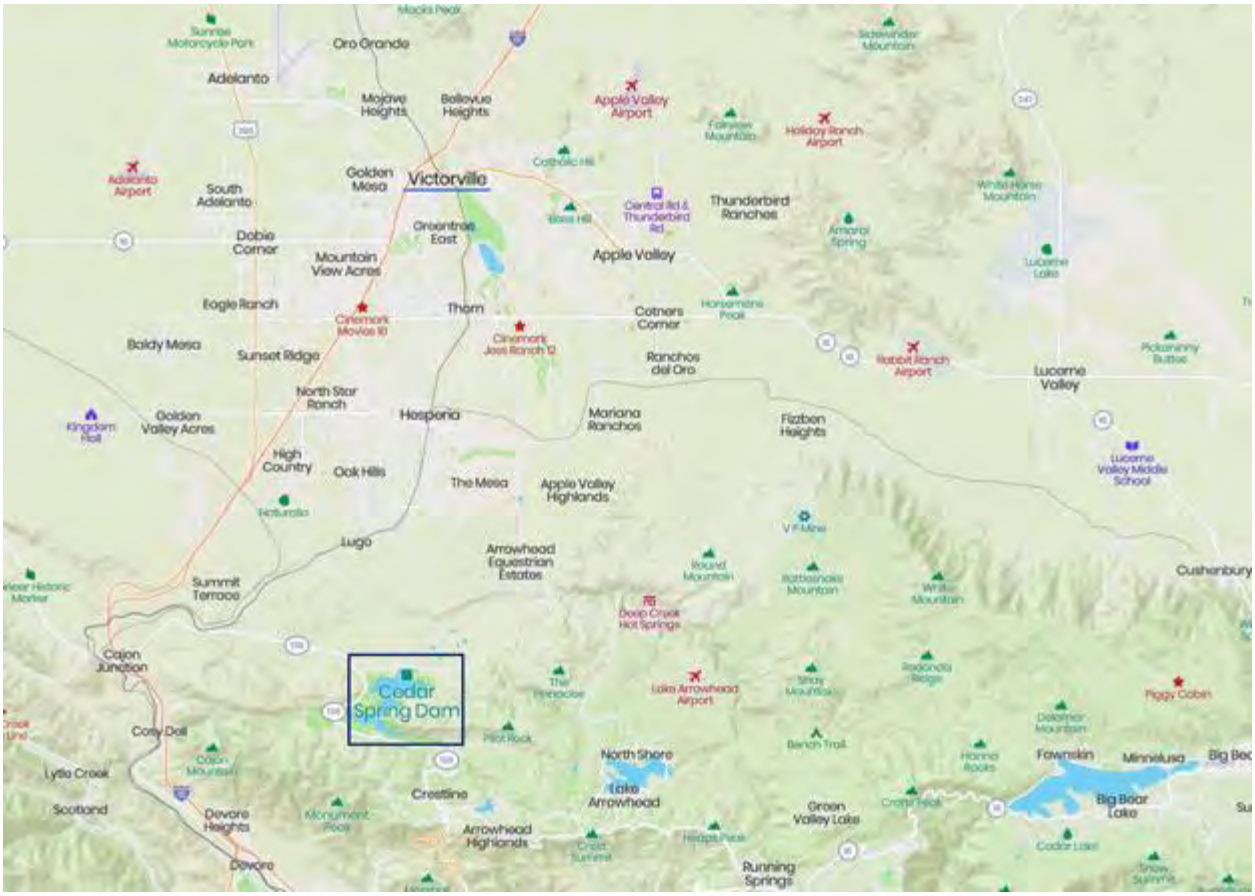



**Figure 5.4: Cedar Spring Dam Location Map**

**Mojave Forks Dam:** The Mojave River Dam is a flood risk management project located on the Mojave River in San Bernardino County, Calif., approximately fourteen (14) miles south of Victorville and just downstream (north) of the confluence of the West Fork Mojave River and Deep Creek.

The 79,000-acre feet Dam is an ungated flood control structure located on the northern side of the San Bernardino Mountains. The drainage area above the dam consists of about 215 square miles of mountainous terrain, drained by two (2) main tributaries, Deep Creek and West Fork Mojave River, which converge just above the dam to form the Mojave River. In its entirety, the Mojave River basin comprises about 4,700 square miles of which ninety-five percent (95%) is desert.

Officials for the U.S. Army Corps of Engineers release a statement in November 2019 that raised the risk factor for the Mojave River Dam from "low" to "high urgency action" because of "performance concerns" discovered at the forty-eight (48) year old structure.

The Corps is considering strategies to shore up the dam and counter the impacts of extreme weather shifts due to climate change. This dam was built in 1971. Failure of the 200-foot-tall earthen dam on the northern flanks of the San Bernardino Mountains would send water rushing down the river channel, inundating 16,000 people and $1.5 billion USD in property as far away as Baker, more than 100 miles northwest. Flood flows have never spilled over the top of the dam, but a series of storms in 2005 raised the water level behind it to a record seventy (77) feet, about seventy-two (72) feet below its concrete emergency spillway.

**Figure 5.5: Mojave River Dam**

**Extent:**
A failure of the Amethyst Basin, Mojave Forks or Cedar Springs Dam will inundate the parts of the City.

The pending dam inundation map for Amethyst Basin is shown below. Although only a small segment of the City may be inundated, several wells that supply the City Water District that are in the inundation zone, could be impacted.

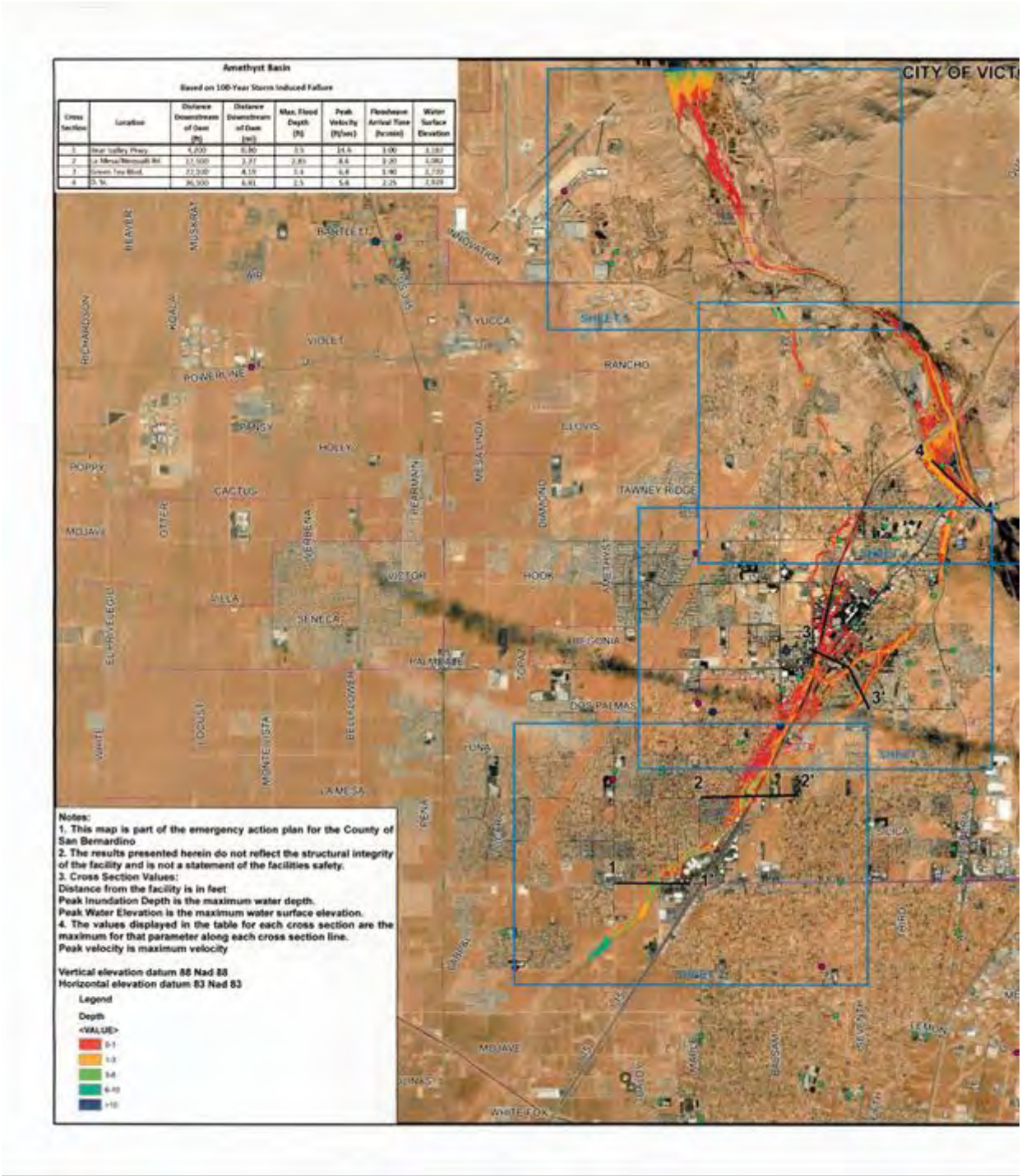



**Figure 5.6 A: Inundation Map Amethyst Basin**

The approved dam inundation map for Cedar Springs Dam is shown in below. Although only a small segment of the City may be inundated, several wells that supply the City Water District that are in the inundation zone, could be impacted.


**Figure 5.6B: Cedar Springs Dam Inundation Map. Source: California Department of Water Resources Division of Safety of Dams**

An approved inundation map for the Mojave Forks Dam was unavailable.

The Mojave River Dam currently reduces flooding risk for more than 16,000 people and $1.5 billion in property. In 2019, the U.S. Army Corps of Engineers changed Mojave River Dam's risk characterization from low to high urgency of action. The change was the result of risk assessment findings that, during an extreme flood event, water could exceed the design capacity of the dam and overtop it. This could potentially result in dam failure, flooding the communities of Hesperia, Apple Valley, Victorville and Barstow, located adjacent to the Mojave River. Flood waters also could reach Baker, more than 140 miles downstream of the dam.

**Impact of Climate Change:**
Severe weather such as more powerful rainstorms are likely to occur as a result of climate change. Atmospheric rivers which can create flooding throughout California may occur more frequently due to warmer weather and more moisture in storm systems. Climate change has the potential to cause more frequent and more heavy precipitation incidents. The results could be additional flows into the Silver Lake and Mojave Reservoirs with the potential for overtopping or other dam failure mechanisms.

**Probability/Magnitude:**
Dam failure can result from numerous natural or human activities. Earthquakes, internal erosion, improper siting, structural and design flaws, or rising floodwaters can all result in the collapse or failure of a dam. A dam failure may also be a result of the age of the structure or inadequate spillway capacity. The probability of a future dam failure affecting the City is unknown. While possible, it is unlikely that a dam failure event will occur within the next ten (10) years. Based on event history, likelihood is less than or equal to ten percent (10%) per year.

### 5.4.4 Drought

Drought is an extended period of years when a region is deficient in its water supply or consistently receives below average precipitation. Drought patterns in the West are related to large-scale climate patterns in the Pacific Ocean, such as the El Niño–Southern Oscillation. As these large-scale ocean climate patterns vary in relation to each other, drought conditions in the U.S. shift from region-to-region. Drought produces a variety of impacts that span many sectors of the economy including: reduced crops, rangeland, and forest productivity; increased fire hazard; reduced water levels; increased livestock and wildlife mortality; and rationing are a few examples of direct impacts. These problems can result in reduced income for farmers and agribusiness, increased prices for food and lumber, unemployment, reduced tax revenues, increased crime, and foreclosures on bank loans to farmers and businesses, and migration. Populations that rely on or are affected by a lack of water or annual rainfall are most directly affected by droughts.

The California Department of Water Resources (DWR) tracks water supply conditions across the state. Indicators include the annual snowpack, precipitation, runoff, and reservoir storage. There are ten (10) major hydrologic regions in the state. By tracking the indicators in the hydrologic

regions, the DWR can continually monitor drought conditions and forecast potential drought or dry years in the fifty-eight (58) counties across the state.

**History:**
Since record keeping began, California and the western region of the United States have experienced several multi-year drought conditions, which are described briefly in **Figure 5.7**.

**Location:**
When a drought is in effect, the entire region is affected. California experienced an unprecedented drought beginning in 2012 that lasted through 2016, the longest drought in over a century. Reservoirs, groundwater basins and ecosystems were at half-capacity or less. 2014 was the state's third driest in 119 years of record, based on statewide precipitation.

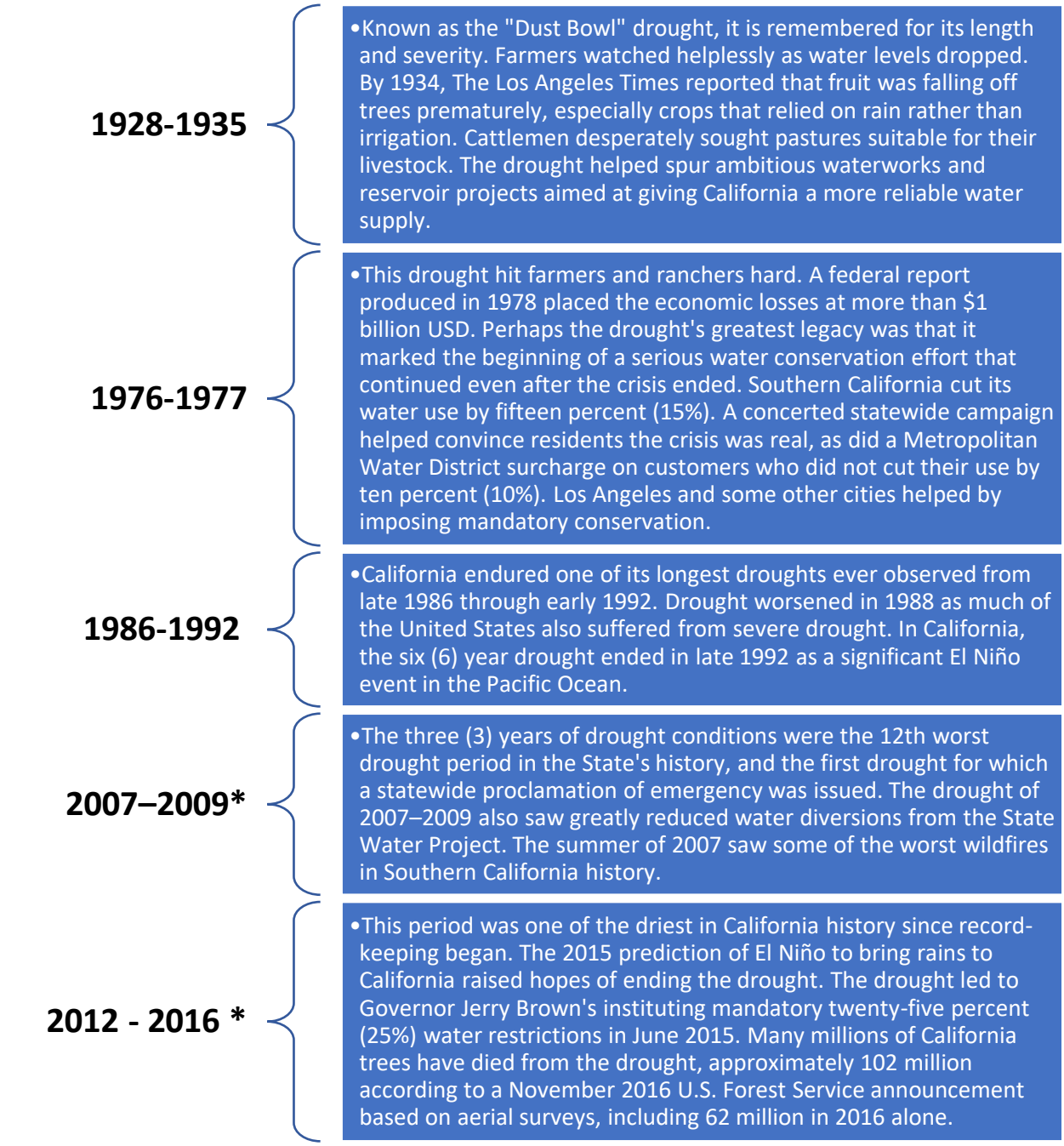



**Figure 5.7: History of Droughts in California**

* Victorville experienced severe drought from April 2007 through December 2009 and severe to exceptional drought February 2013 through January 2017. Source: U.S. Drought Monitor.

The following maps show the extent of drought conditions in California from mid-December 2020, 2015, and 2010.

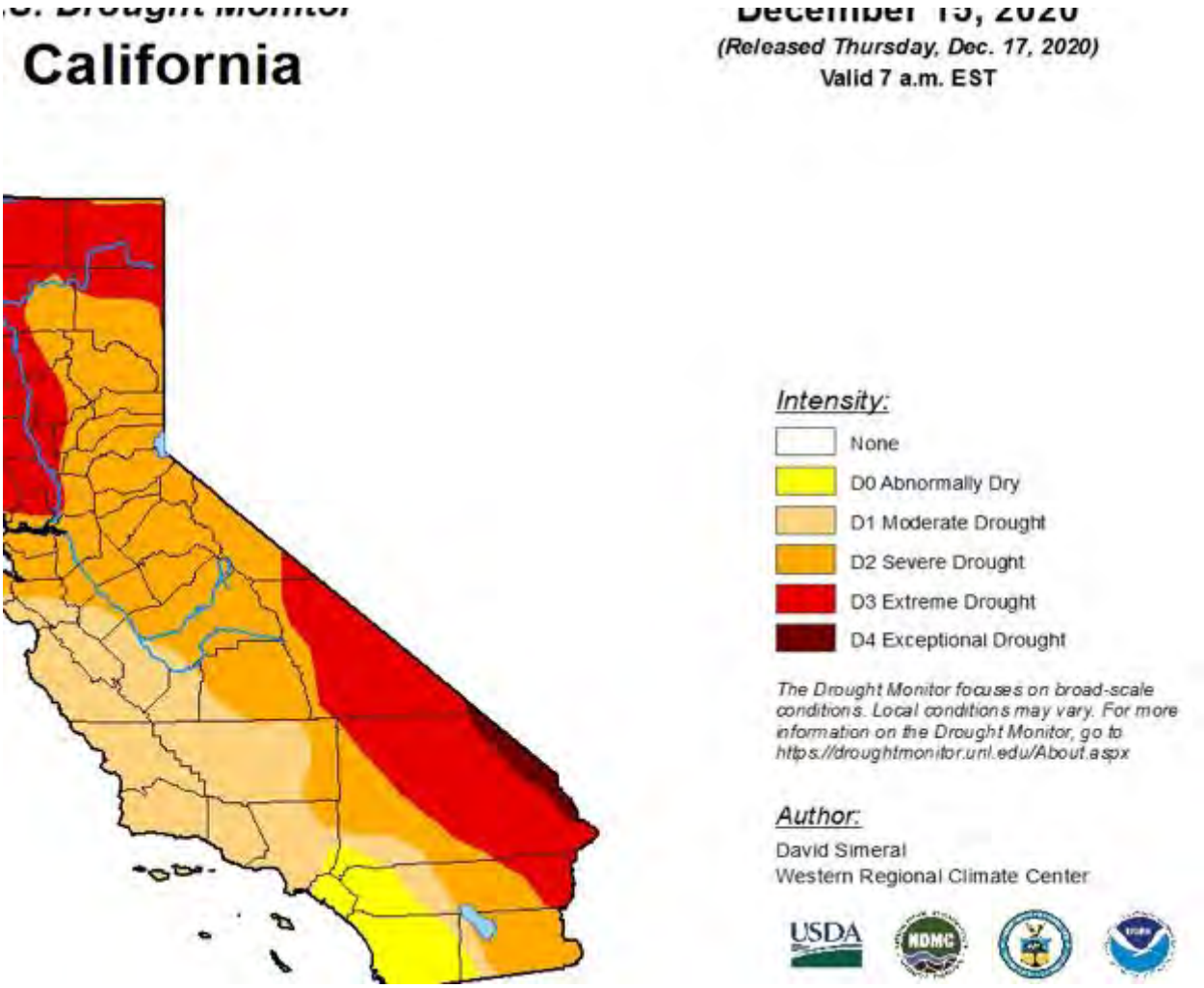



**Figure 5.8: California Drought Monitor 2020**

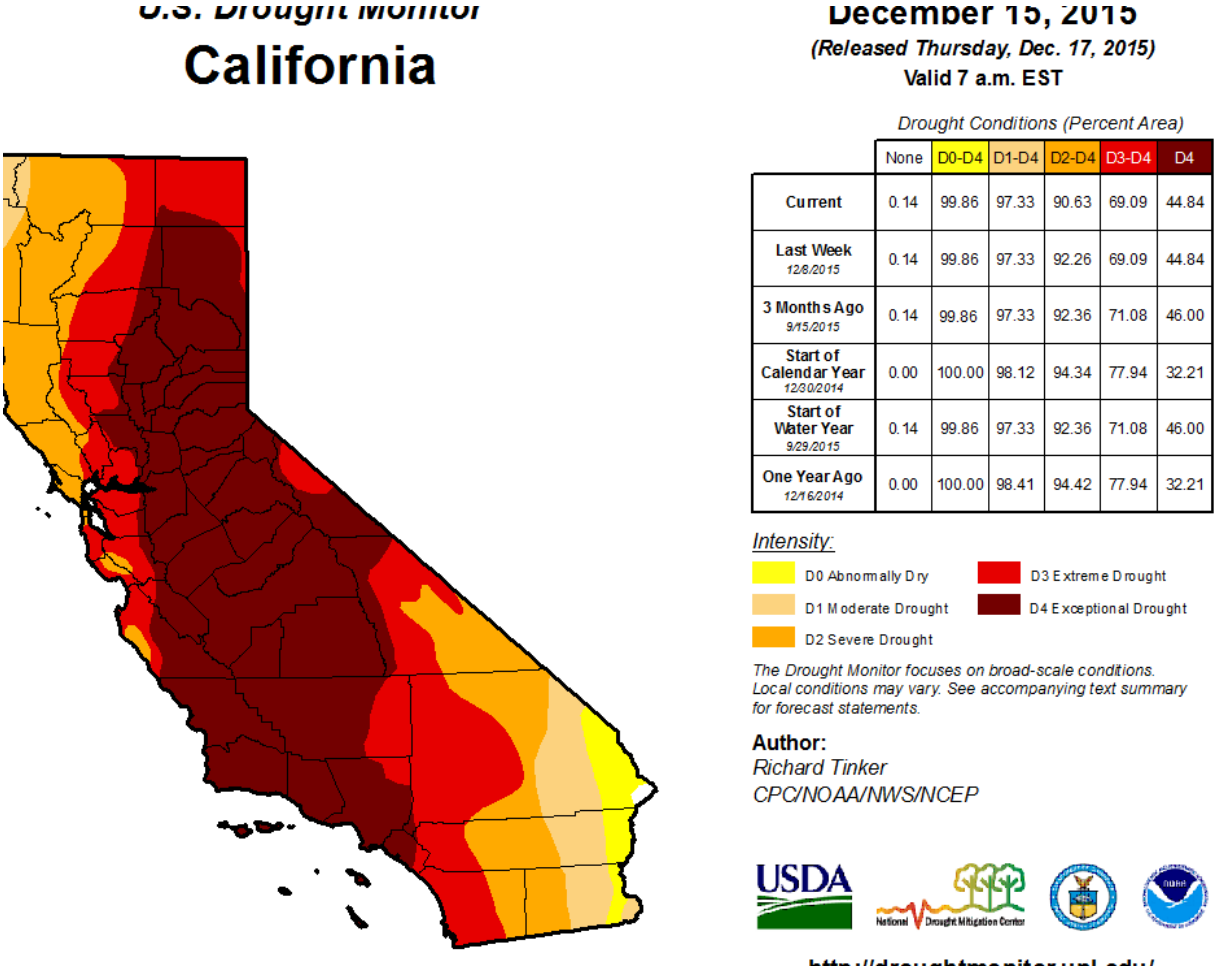



**Figure 5.9: California Drought Monitor 2015**

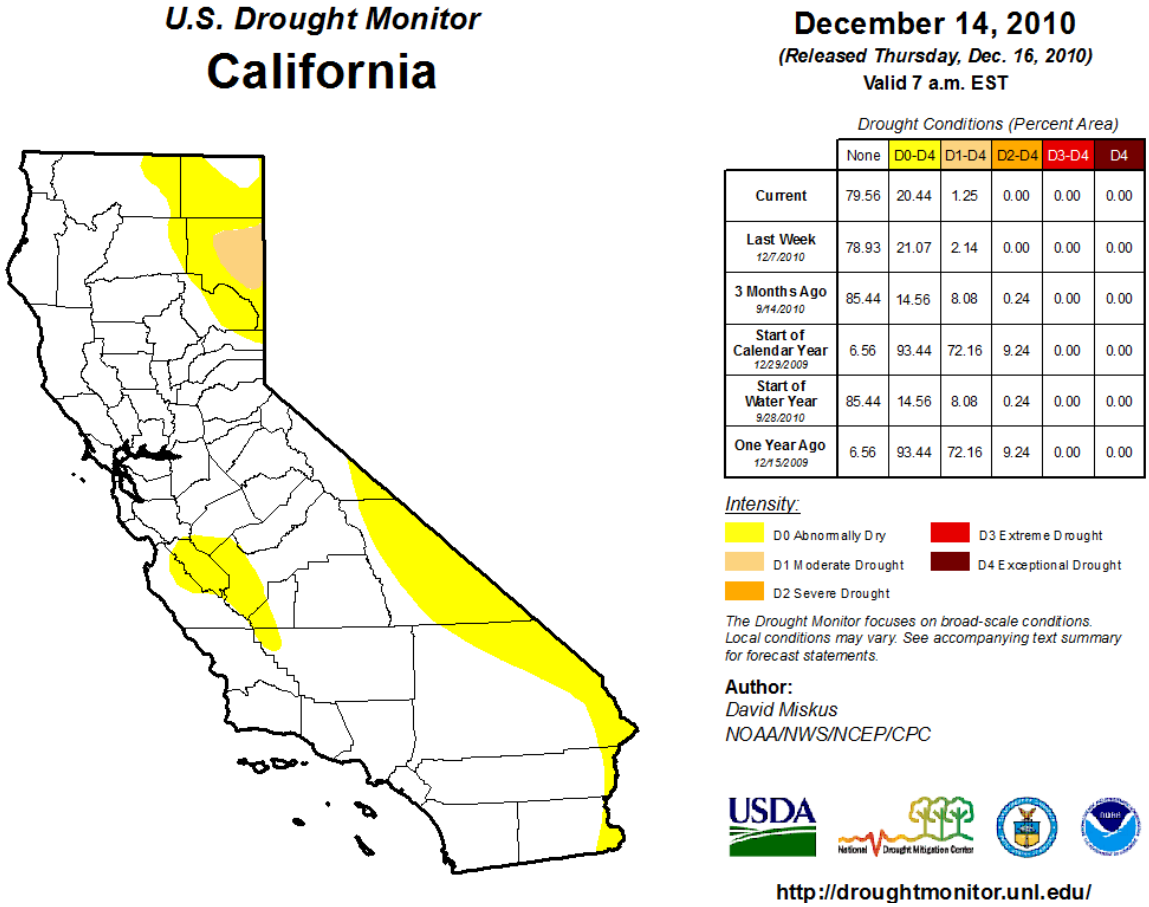



**Figure 5.10: California Drought Monitor 2010**

**Extent:**

During a drought, the entire planning area will be affected. At the height of the most recent drought, over ninety-eight percent (>98%) of the State of California was experiencing drought conditions. More than forty-four (>44%) of California was is in “exceptional” drought, the worst level of drought. On January 17, 2014 Governor Brown declared a drought state of emergency. In late July 2015, the U.S. Drought Monitor classified fifty-eight percent (58%) of California in “exceptional” drought, the most severe on the U.S. Drought Monitor’s five-point scale, and that percentage remained unchanged through September. More than eighty percent (>80%) was in "extreme" drought (CA Department of Water Resources).

On July 15, 2014, the California State Water Resources Control Board approved an emergency regulation to ensure agencies and state residents increase water conservation allowing local agencies to ask courts to fine water users up to $500 USD per day for failure to implement conservation requirements. Unprecedented precipitation during the winter of 2016 – 2017 resulted in significant drought relief throughout California.

**Impacts:**
The City routinely declares winter and summer water hours for the customers of the Victorville Water District that restricts yard watering to three days a week. The Water District has implemented and aggressive water conservation program.

**Impact of Climate Change:**
Climate change is already having a profound impact on California water resources as evidenced by changes in snowpack, sea-level, and river flows. These changes are expected to continue in the future and more precipitation will likely fall as rain instead of snow. This potential change in weather patterns will add additional challenges for water supply reliability.

The mountain snowpack provides as much as a third of California's water supply by accumulating snow during wet winters and releasing it slowly during the spring and summer, when need is the greatest. Warmer temperatures will cause snow to melt faster and earlier, making it more difficult to store and use.

By the end of this century, the Sierra snowpack is projected to experience a forty-eight percent (48%) to sixty-five percent (65%) loss from the historical April 1st average. This loss of snowpack means less water will be available for Californians to use.

Climate change is also expected to result in more variable weather patterns throughout California. More variability can lead to longer and more severe droughts. In addition, rising sea-levels will continue to threaten the Sacramento-San Joaquin Delta, the heart of the California water supply system and the source of water for twenty-five (25) million Californians and millions of acres of prime farmland.

**Regulatory Context:**
The State Water Resources Control Board (State Water Board) and the nine (9) Regional Water Quality Control Boards (Regional Boards) protect water quality and allocate surface water rights. The State Water Board was created by the Legislature in 1967. The mission of the Water Board is to ensure the highest reasonable quality for waters of the State, while allocating those waters to achieve the optimum balance of beneficial uses. The joint authority of water allocation and water quality protection enables the Water Board to provide comprehensive protection for California's waters. Regional Boards are semi-autonomous and have broad responsibilities within the framework of State regulatory guidance. The Department of Water Resources is responsible for the management of water usage including the delivery of water to two-thirds of California’s population through the State Water Project.

**Probability of Future Occurrences:**
An extreme multiyear drought as intense as the 2012 - 2016 drought could impact the region with little warning. Combinations of low precipitation and unusually high temperatures could occur over several consecutive years. Intensified by such conditions, extreme wildfires could break out throughout the region, increasing the need for water. Surrounding communities, also in drought

conditions, could increase their demand for water supplies relied upon by the planning partnership, causing social and political conflicts. If such conditions persisted for several years, mandatory rationing could impact residents and City businesses.

### 5.4.5 Earthquake and Seismic Hazards

**Descriptions:**

An earthquake is a sudden motion or trembling caused by a release of energy accumulated within or along the edge of the earth's tectonic plates. The effects of an earthquake can be felt far beyond the epicenter (i.e. where the earthquake originates). Earthquakes usually occur without warning and can cause massive damage and extensive casualties in just a few seconds. Ground motion and shaking, surface fault ruptures, and ground failure are common effects of earthquakes. Ground motion is the vibration or shaking of the ground during an earthquake. When a fault ruptures, seismic waves radiate and cause the ground to vibrate. The severity of the vibration increases as the amount of energy released increases and decreases with distance from the fault or epicenter.

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

- **Ground Shaking:** Ground shaking is the motion felt on the earth's surface caused by seismic waves from an earthquake. It is the primary cause of earthquake damage. The strength of ground shaking depends on the magnitude of the earthquake, the type of fault, and distance from the epicenter. Buildings on poorly consolidated and thick soils will typically see more damage than buildings on consolidated soils and bedrock.
- **Amplification:** Soils and soft sedimentary rocks near the earth's surface can modify ground shaking caused by earthquakes. One of these modifications is amplification. 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 other structures built on soft and unconsolidated soils can face greater risk. Amplification can also occur in areas with deep sediment-filled basins and ridge tops.
- **Earthquake-Induced 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 and are common in areas with steep slopes.
- **Liquefaction:** Liquefaction, a secondary earthquake hazard, occurs when ground shaking causes wet granular soils to change from a solid state to a liquid state. This results in the loss of soil strength and the soil's ability to support weight. Buildings and their occupants are at risk when the ground can no longer support these buildings and structures. Many communities in Southern California are built on ancient river bottoms and have sandy soil. In some cases, this ground may be subject to liquefaction, depending on the depth of the water table. Liquefaction occurs primarily in saturated and loose, fine- to

medium-grained soils, in areas where the groundwater table lies within fifty (50) feet of the ground surface.

The Richter scale is often used to rate the strength of an earthquake and is an indirect measure of seismic energy released. The scale is logarithmic, with each one-point increase corresponding to a ten-fold increase in the amplitude of the seismic shock waves generated by the earthquake. However, in actual energy released, each one-point increase on the Richter scale corresponds to about a thirty-two-fold increase in energy released. Therefore, a magnitude (M) 7.0 earthquake is 100 times (10×10) more powerful than an M 5 earthquake and releases 1,024 times (32×32) the energy.

**Table 5-6** quantifies the intensity of ground shaking. Intensity in this scale is a function of distance from the epicenter (the closer a site is to the epicenter, the greater the intensity at that site), ground acceleration, duration of ground shaking, and degree of structural damage. The Modified Mercali Intensity (MMI) rates the severity of an earthquake by the amount of damage and perceived shaking.

**Table 5-6: Modified Mercalli Intensity Scale**

| MMI Value | Shaking Severity | Summary Damage | Description |
|---|---|---|---|
| I | Micro | Little to none | Not felt except by a very few under especially favorable conditions. |
| II | Minor | Little to none | Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing. |
| III | Minor | Hanging objects move | 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. Vibration similar to the passing of a truck. Duration estimated. |
| IV | Light | Hanging objects move | Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed and walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably. |
| V | Light | Pictures Move | Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop. |
| VI | Moderate | Objects Fall | Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight. |
| VII | Strong | Nonstructural Damage | Damage negligible in buildings of good design and construction. Slight to moderate in well-built ordinary structures and considerable damage in poorly built or badly designed structures. Some chimneys broken. |
| VIII | Very Strong | Moderate Damage | Damage slight in specially designed structures and considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, and walls. Heavy furniture overturned. |

| | | | |
|---|---|---|---|
| X | Very Violent | Extreme Damage | Damage considerable in specially designed structures and well-designed frame structures thrown out of plumb. Damage great in substantial buildings with partial collapse. Buildings shifted off foundations. |
| XI | Very Violent | Extreme Damage | Some well-built wooden structures destroyed. Most masonry and frame structures destroyed with foundations. Rails bent. |
| XII | Very Violent | Total Damage | Few, if any (masonry) structures remain standing. Bridges destroyed. Rails bent greatly. |

*Source: United States Geological Survey 2016*

Earthquake faults are indications of past seismic activity. Those that have been active most recently are the most likely to be active in the future. According to the California Geological Survey Alquist-Priolo Earthquake Fault Zoning Act, an "active" fault is one that has ruptured in the last 11,000 years. Faults that are "potentially active" have been active within the last two (2) million years and are referred to as being in the Quaternary Period.

**Location:**
The City is part of the seismically active Southern California region, probably best known for the 750-mile-long San Andreas Fault, which stretches from the Mexican Border to San Francisco. A map of the major faults in Southern California is provided in **Figure 5.11.** An interactive, detailed map of faults is available from the Southern California Earthquake Data Center. The City is approximately twenty (20) miles northeast of the San Andreas Fault and within seventy (70) miles of the Garlock Fault to the north. Smaller faults east and northeast of the City include the Lenwood Fault, the Lockhart Fault and the Helendale Fault. The Mirage Valley Fault is northwest of the City.

The City's location poses a unique set of potentially disruptive concerns. The Cajon Pass on Interstate-15 (I-15), between the San Gabriel and San Bernardino Mountains is the central transportation, utility, and energy corridor between Southern California and the Nation. Sixty percent of the trade from the Ports of Long Beach and Los Angeles is transported by rail through Cajon Pass and seventy-four percent of the trade moved by truck out of the Los Angeles basin traverses the Cajon Pass via (I-15). Additionally, per a 2012 Caltrans District 8 Annual Traffic Survey, a daily average of 163,000 commuters travel to and from Southern California along 1-15 through the Cajon Pass.

Aside from its economic importance regionally and nationally, all of the region's critical infrastructure and utility services that support Southern California traverse the San Andreas Fault through the heart of the Cajon Pass. These services include electricity, fiber optic internet, water raw water and treated water distribution, and natural gas and other fuels to operate power plants and commercial businesses. Emergency response operations rely on many of these services to perform life-saving missions such as fighting fires and providing food, water, and shelter.

A major earthquake along this fault would wreak havoc on vital critical infrastructure, severing the arteries running through the Pass. Moreover, a catastrophic 7.8 earthquake occurring along the

San Jacinto Section of the San Andreas Fault could result in a regional loss of power, fuel shortages, and communication disruptions that could affect Southern California and the greater Las Vegas area, which receives eighty percent of its fuel through the Cajon Pass. The country's economy could suffer losses of $200 billion, as shippers struggle to reroute goods that are normally moved through the Pass.

Recognizing the regional significance of the Cajon Pass and 1-15 corridor, and taking into consideration the potential consequences of a 7.8 earthquake at any time, the San Bernardino County Fire Department, Office of Emergency Services (OES) has taken the lead in bringing critical stakeholders together to address the vulnerabilities and challenges that might be faced in a catastrophic incident. Stabilizing and restoring critical utilities is of the utmost importance to sustaining life, restoring the economy, and overall recovery. This document is a result of those efforts.

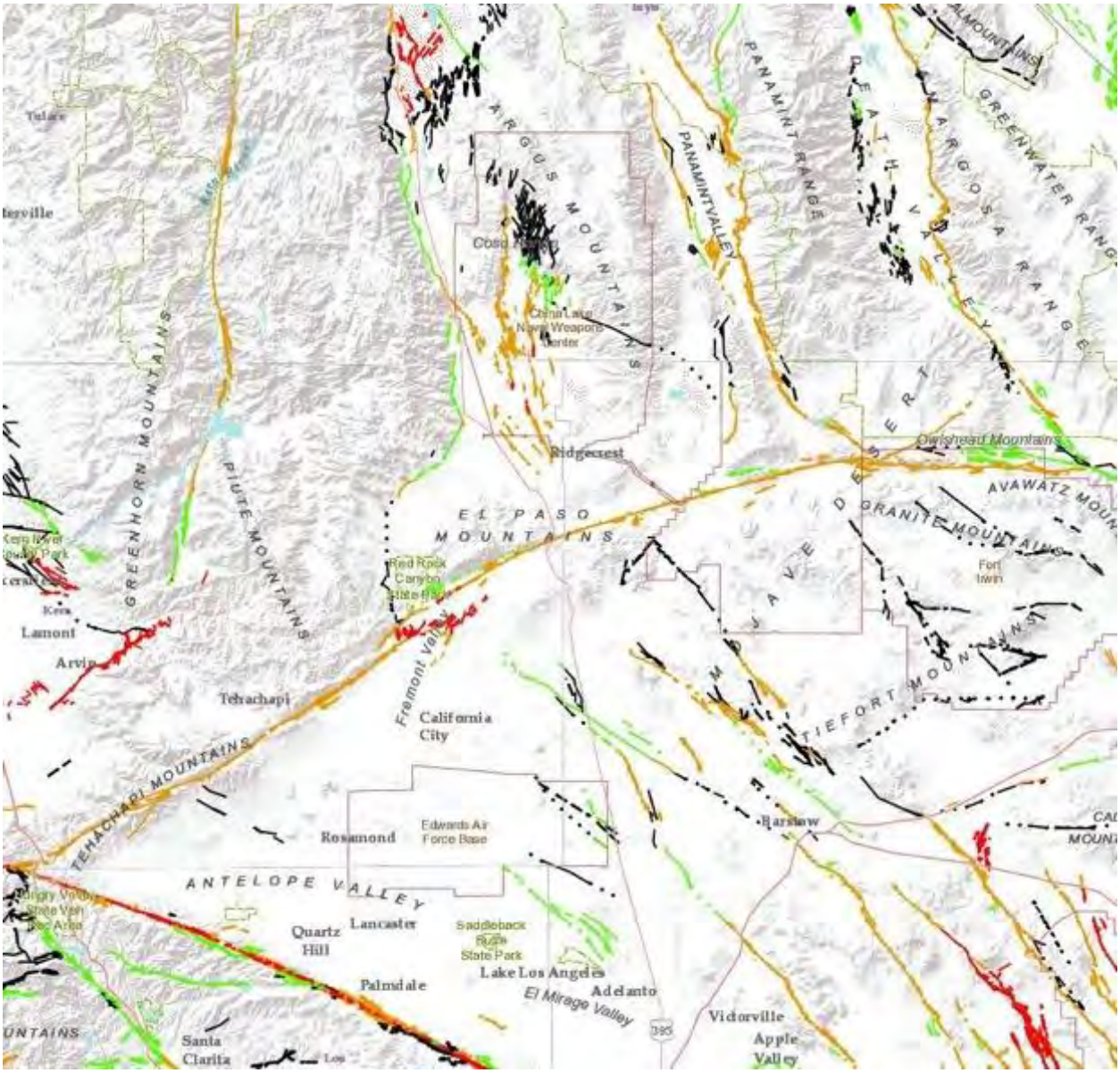



**Figure 5.11: Major Southern California Faults Map** *Source: USGS*

The most significant earthquake event affecting Southern California was the Monday, January 17, 1994 Northridge Earthquake. At 4:31 A.M., a moderate but 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. Fifty-seven (57) people were killed and more than 1,500 people seriously injured. For days afterward, thousands of homes and businesses were without electricity, tens of thousands had no gas, and nearly 50,000 had little or no water. Approximately 15,000 structures were moderately to severely damaged, which left thousands of people temporarily homeless. 66,500 buildings were inspected. Nearly 4,000 were severely damaged and over 11,000 were moderately damaged. Several collapsed bridges and overpasses significantly disrupted commuter travel on the freeway system.

Extensive damage was caused by ground shaking, but earthquake triggered liquefaction and dozens of fires also caused additional severe damage. This extremely strong ground motion in large portions of San Bernardino County resulted in record economic losses. However, the earthquake occurred early in the morning on a holiday. This circumstance considerably reduced the potential effects. Many collapsed buildings were unoccupied, and most businesses were not yet open.

The direct and indirect economic losses ran into the tens of billions of dollars. **Table 5-7** lists earthquakes with a magnitude of 6.5 or greater that have occurred in Southern California since 1900. The Southern California Earthquake Data Center contains a wealth of information on earthquakes including an extensive list of historical earthquakes with detailed descriptions.

**Table 5-7: Southern California Earthquakes above 6.5M since 1900**

| Magnitude | Name | Location (approx.) | Date | Notes |
|---|---|---|---|---|
| **6.8** | San Jacinto | San Jacinto | 4/21/1918 | |
| **7.1** | Lompoc | Lompoc | 11/4/1927 | Two (2) meter tsunami |
| **6.9** | Imperial Valley | Imperial Valley | 5/18/1940 | |
| **6.6** | Fish Creek | Brawley | 10/21/1942 | |
| **7.5** | Kern County | Bakersfield | 7/21/1952 | $50M USD property damage, twelve (12) deaths |
| **6.5** | San Fernando | Sylmar | 2/9/1971 | $500M USD property damage, sixty-five (65) deaths |
| **7.3** | Landers | Yucca Valley | 5/28/1992 | |
| **6.7** | Northridge | Northridge | 2/17/1994 | $20B property damage, fifty-seven (57) deaths, up to 125K temporary homeless, 82K structures damaged or destroyed |
| **7.1** | Hector Mine | Joshua Tree | 10/16/1999 | |
| **7.2** | Sierra el Mayor | Calexico | 4/4/2010 | |
| **6.4/7.1** | Ridgecrest* | Searles Valley | 7/5/2019 | $1B property damage |

*Source : http://scedc.caltech.edu/significant/chron-index.html*

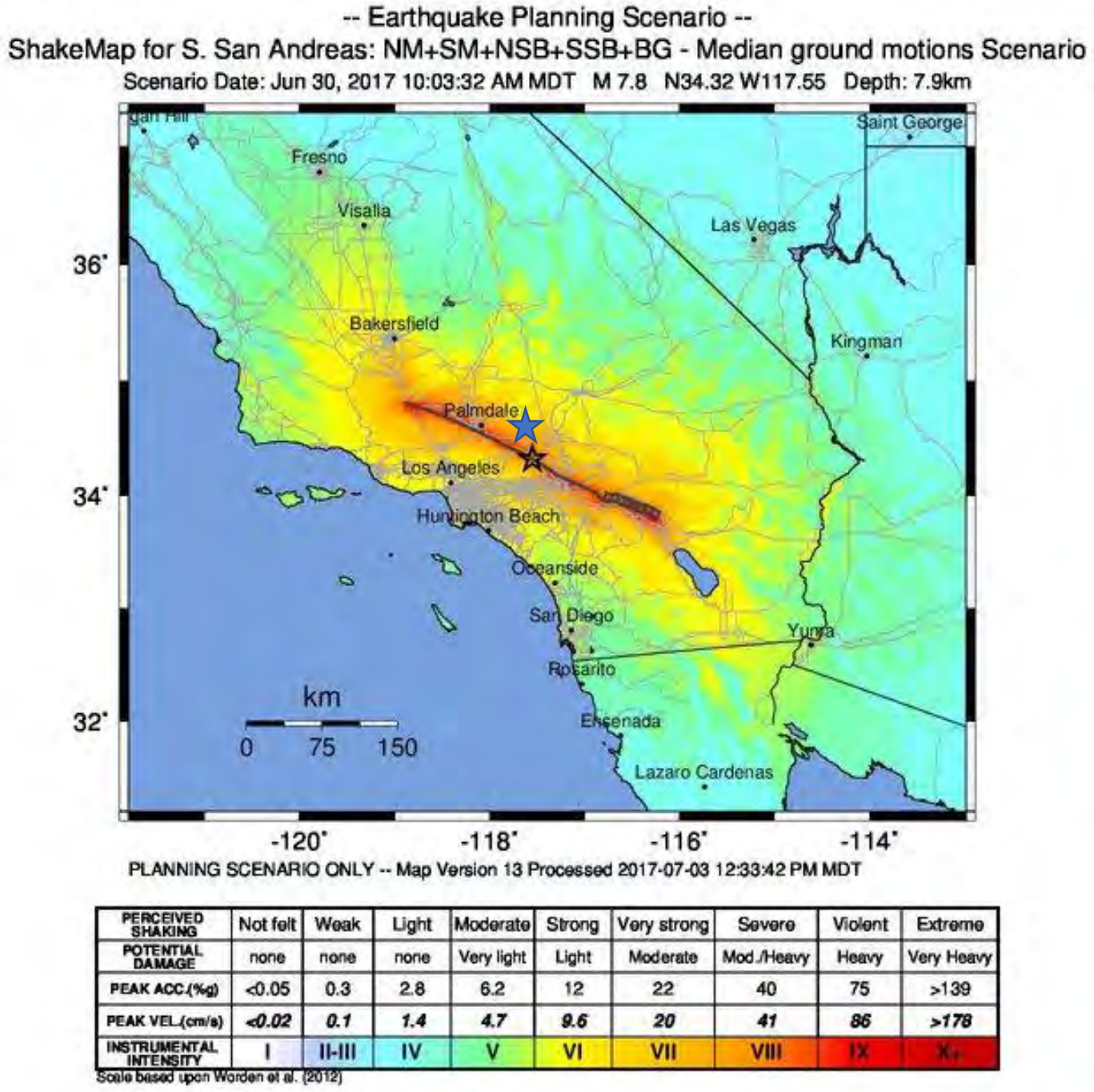
* Caused severe shaking in the planning area but no damage or deaths.

While smaller in magnitude than the potential San Andreas Fault earthquakes, the Helendale, North Frontal, Landers, and San Jacinto faults all may cause large, damaging earthquakes.

**Extent:**
Five (5) fault systems affect the Victorville Planning Area including the San Andreas, Helendale, North Frontal, Landers, and San Jacinto. The San Andreas Fault is located approximately twenty-four (24) miles south of the Planning Area and is considered most likely to produce a major earthquake within the planning period. The Helendale Fault, located approximately nine (9) miles

northeast of the Planning Area, could also be responsible for a moderate earthquake with a Richter magnitude of approximately 5.9. A third major fault system, the San Jacinto Fault, is located approximately twenty-six (26) miles south of the Planning Area and runs parallel to the San Andreas Fault. The North Frontal fault zone of the San Bernardino Mountains is located approximately five and one-half miles southeast of the Planning Area along the base of the Ord Mountains. This active fault has the potential to produce a moderate earthquake with a Richter magnitude of 6.2. The Landers fault is located approximately fifty (50) miles southeast of the Planning Area. The Landers Fault was discovered as a result of a 7.4 Richter magnitude sized earthquake on June 28, 1992. Although the epicenter (i.e. a surface point directly above the earthquake's focus) was approximately fifty (50) miles from the Planning Area, intense local ground shaking occurred. However, no substantial damage to buildings or facilities was reported.

**Figure 5-12** below provides a shakemap of a potential Southern San Andreas Fault 7.8M earthquake. The City's location is depicted by the blue star.




| PERCEIVED SHAKING | Not felt | Weak | Light | Moderate | Strong | Very strong | Severe | Violent | Extreme |
|---|---|---|---|---|---|---|---|---|---|
| POTENTIAL DAMAGE | none | none | none | Very light | Light | Moderate | Mod./Heavy | Heavy | Very Heavy |
| PEAK ACC.(%g) | <0.05 | 0.3 | 2.8 | 6.2 | 12 | 22 | 40 | 75 | >139 |
| PEAK VEL.(cm/s) | *<0.02* | *0.1* | *1.4* | *4.7* | *9.6* | *20* | *41* | *86* | *>178* |
| INSTRUMENTAL INTENSITY | I | II-III | IV | V | VI | VII | VIII | IX | X+ |

**Figure 5-12: Shakemap Southern San Andreas Fault**

Surface rupture is not anticipated to be a hazard since there are no known or suspected fault traces within the Planning Area. Although there are no known or suspected fault traces within the Victorville Planning Area, the aforementioned fault systems could produce earthquakes that

cause substantial ground motion that could result in serious injuries or deaths, as well as significant property damage.

The level of impact resulting from any seismic activity will depend on factors such as distance from epicenter, earthquake magnitude, soils characteristics, and subsurface geology. During moderate to strong earthquakes, unreinforced masonry construction may be hazardous to life and property as a result of partial or complete structure collapse. To mitigate this hazard, the City has adopted Chapter 15.38 of the Victorville Municipal Code, in compliance with State law (Government Code Section 8875) which promotes public safety and welfare by reducing the risk of death or injury that may result from such structural damage.

Parts of the City may be susceptible to liquefaction, especially areas along the Mojave River. Liquefaction is usually not considered a hazard if the groundwater table is greater than fifty (50) feet in depth. Detailed studies have not been prepared to indicate the precise location of areas prone to liquefaction. Therefore, the extent of potential impact cannot be stated conclusively at this time. In any case, geologic studies can detect liquefaction problems prior to the construction of any new building. If the City's Building Official determines there is a significant probability that a site is susceptible to liquefaction, a geotechnical investigation is required in accordance with the 2007 California Building Code, Section 1802.2.7.

**Regulatory Environment:**
The Alquist-Priolo Earthquake Fault Zoning Act was signed into California law on December 22, 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The act in its current form has three (3) main provisions:

1. It directs the state's California Geological Survey agency (then known as the California Division of Mines and Geology) to compile detailed maps of the surface traces of known active faults. These maps include both the best-known location where faults cut the surface and a buffer zone around the known trace(s);
2. It requires property owners (or their real estate agents) to formally and legally disclose that their property lies within the zones defined on those maps before selling the property;
3. It prohibits new construction of houses within these zones unless a comprehensive geologic investigation shows that the fault does not pose a hazard to the proposed structure.

The Act was one of several that changed building codes and practices to improve earthquake safety. These changes are intended to reduce the damage from future earthquakes. The State provides extensive regulations on earthquake related issues. A key area for regulation is the California Building Standards Commission (CBSC). It is authorized by California Building Standards Law to administer the development, adoption, approval, publication, and implementation of California's building codes.

The California Building Standards Code, Title 24 serves as the basis for the design and construction of buildings in California. Improved safety, sustainability, maintaining consistency,

new technology and construction methods, and reliability are paramount to the development of building codes. California's building codes are published in their entirety every three (3) years. Intervening Code Adoption Cycles produce supplement pages half-way (eighteen (18) months) into each triennial period. Amendments to California's building standards are subject to a lengthy and transparent public participation process throughout each code adoption cycle.

The California Seismic Safety Commission provides an array of regulatory and advisory information regarding seismic safety at: https://ssc.ca.gov/

**Probability of Future Occurrences:**
Recent predictions limit the possible maximum earthquake magnitude along the San Andreas fault system to an 8.0 magnitude earthquake with a seven percent (7%) probability estimate that such an event could occur in Southern California in the next thirty (30) years. Over the same period, there is a seventy-five percent (75%) chance of a magnitude 7.0 event.

### 5.4.6 Excessive Heat

**Description:**
Since the early 20th century, average surface temperatures worldwide have risen at an average rate of 0.15°F per decade (1.5°F per century). In the U.S. average surface temperatures have risen more quickly since the late 1970s (0.36 to 0.55°F per decade), with eight (8) of the top ten (10) warmest years on record since 1880. Scientists predict that over the next century, global temperatures will increase between 2.5°F and 10.4°F.

For the City, scientists expect average temperatures to increase between 3.2°F and 5.6°F as shown at http://v1.cal-adapt.org/temperature/decadal/. Along with changes to average annual temperature, climate change is expected to alter seasonal temperatures, where average July temperatures may increase by as much as seven degrees Fahrenheit (7°F).

Climate change, particularly extreme heat events, present serious health risks to California's most vulnerable populations. The effects of extreme heat (over eighty-four degrees Fahrenheit (84°F)) on human health are well documented. Increased temperature or extended periods of elevated temperatures can increase heat-related mortality, cardiovascular-related mortality, respiratory mortality, and heart attacks while increasing hospital admissions and emergency room visits. Extreme heat can also affect a person's ability to thermo-regulate, causing heat stress and sometimes leading to death.

A number of factors contribute to the vulnerability of an individual to extreme heat. Intrinsic factors that contribute to heat-related risk include age (over sixty-five (65) and infants and children), and medical conditions (e.g. cardiovascular disease, diabetes, and mental illness). Extrinsic factors, or those external to an individual, include neighborhoods with high levels of impervious surfaces and low tree cover, housing units that lack air conditioning, or household access to a vehicle. Along with these intrinsic and extrinsic factors such as race and ethnicity, education level, poverty,

immigration status, and profession (particularly individuals who work outside, such as farm and construction workers) may contribute to an individual's vulnerability to heat events.

**History:**
Since the 1950s, the high desert region has experienced a number of heat waves and reached extreme temperatures. Between 1981 and 2000, Los Angeles experienced, an average of six (6) days per year with temperatures above ninety-five degrees Fahrenheit (95°F).

Significant events include:

- According to the National Weather Service, the longest consecutive heat wave in Downtown Los Angeles lasted for eight (8) days, from August 31 to September 7 in 1955. Over the eight (8) days, temperatures exceeded 100°F on seven (7) of the eight (8) days, and reach a high temperature of 110°F;
- Burbank reached an all-time high of 113°F on Sept. 12, 1971. For nearly four (4) days between September 11 and 14, the average was about 105°F;
- In late June 2013, an intense heat wave struck the Southwestern United States. Various places in Southern California reached up to 122°F.

**Location:**
The National Weather Service (NWS) issues an Excessive Heat Warning/Advisory when an extreme heat event (a "heat wave") is expected within the next thirty-six (36) hours. These extreme heat events are influenced by weather patterns generally affecting an entire region, though they have varying impacts on different locations within a region depending on topography, proximity to coastal wind patterns, and the design of the surrounding environment.

**Extent:**
During the 2006 California heat wave, a greater increase in emergency room (ER) visits and hospitalizations for heat-related illnesses occurred in the normally cooler coastal counties (Knowlton et al., 2009; Gershunov et al., 2011). Apparent temperature, a combination of both temperature and humidity, was associated with ER visits during the warm season in California in a recent study (Basu et al., 2012). In addition, relative humidity was associated with ER visits for mental health complaints (Gershunov et al., 2011). While people may be able to acclimatize to warmer summers in general, rare extremes may be beyond their capacity. Additional risks can occur due to micro-environments in homes due to humidity and heat exposures (Basu and Samet, 2002).

Temperatures in most urban areas are significantly higher than in surrounding, less urbanized areas because pavement and building materials absorb sunlight and heat. This phenomenon is known as the urban heat island effect (Imhoff et al., 2010). Daytime temperatures in urban areas are on average one to six degrees Fahrenheit (1-6°F) higher than in rural areas, while nighttime temperatures can be as much as twenty-two degrees Fahrenheit (22°F) higher as the heat is gradually released from buildings and pavement (U.S. EPA, 2008).

Pavements cover a third of a typical U.S. city (Akbari et al., 2009), mostly with asphalt, which reflects only ten percent (10%) of the sunlight shining upon it. Building density, design and materials, heat from industrial operations, machinery, air conditioners and vehicles, road pavement, and lack of vegetation all contribute to the creation of heat islands.

**Impact of Climate Change:**
Cal-Adapt projects that urban and rural population centers throughout California will experience an average of forty (40) to fifty-three (53) extreme heat days by 2050 and an average of forty (40) to ninety-nine (99) days by 2099. This compares to a historical average of four (4) per year.

Populations in cooler areas in California may be at greater risk of heat-related illness because: 1) individuals are less acclimatized to heat, 2) people are less aware of the behaviors that can reduce exposure (e.g. reduce activity level or go to an air conditioned location) or reduce physiologic stress (e.g. appropriate hydration), and 3) the built environment is not designed for warmer conditions (e.g. homes, workplaces and institutions are less often equipped with air conditioning or it is inadequate for extreme or prolonged heat events). In addition, communities in these locations, inadequately aware of the risk, may not have plans or capacity for emergency mitigation measures.

**Regulatory Context:**
There are limited regulatory requirements for dealing specifically with occurrences of extreme heat. However, State Building Codes that facilitate the use of energy efficiency features, cool roofs, and porous materials can help to reduce the urban heat island effect which can further exacerbate extreme heat conditions and lead to heat-related public health emergencies.

**Probability of Future Occurrences:**
The City is likely to see a significant increase in the number of days when temperature exceeds the extreme heat threshold of eighty-four degrees Fahrenheit (84°F). Between 1950 and 2011, the average number of extreme heat days was four (4). Under the lower emissions scenario by 2050, the number of extreme heat days could increase to more than thirty (30) per year, and by the end of the century, the number of extreme heat days could exceed fifty (50) per year. Warmer days will also be accompanied by warmer nights, which could have a significant, negative effect on public health.

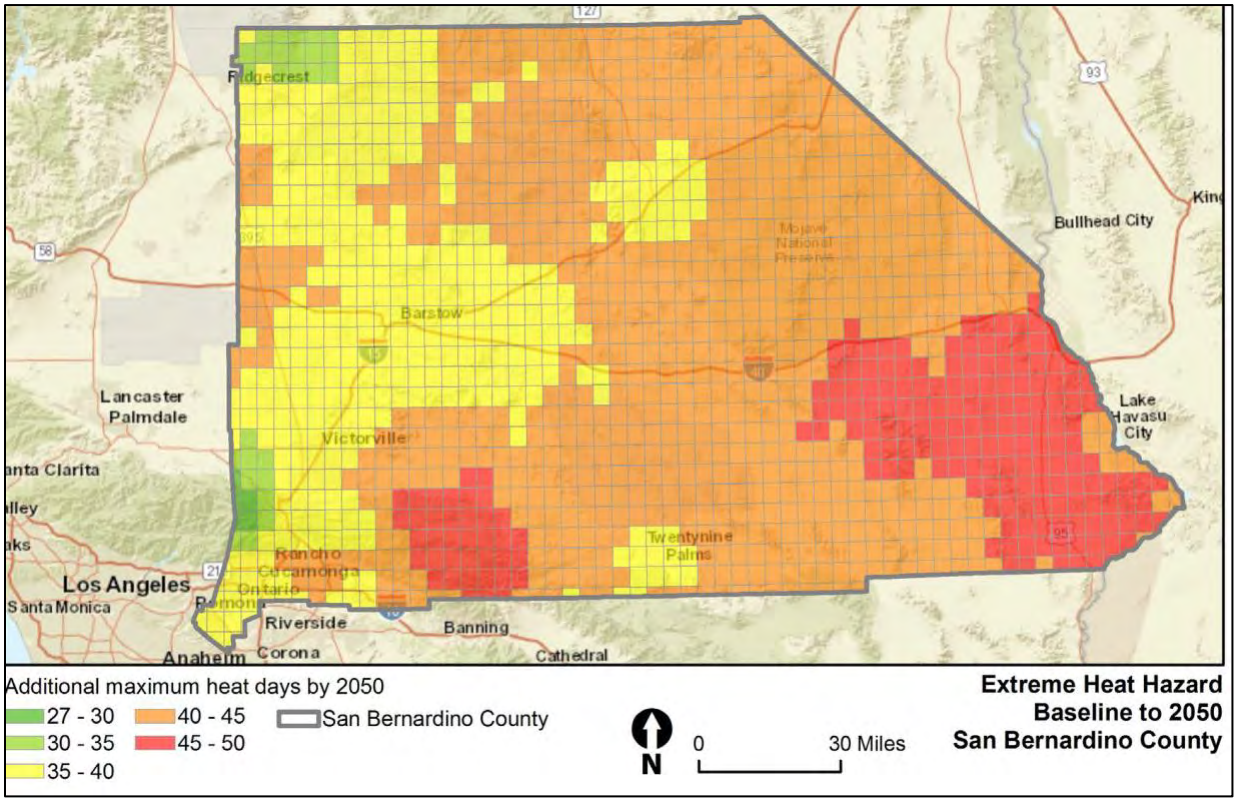



**Figure 5.13: San Bernardino County Heat Hazard Mapping**

### 5.4.7 Fire (Wildland Urban Interface)

**Description:**

As defined in the California Fire Protection (CAL FIRE) 2010 Strategic Fire Plan, a wildfire event is an unwanted wildland fire including unauthorized human-caused fires, escaped wildfire use events, escaped prescribed wildfire projects, and all other wildfires.

There are three (3) different classes of wild land or wildfires:

1) A surface fire is the most common type and burns along the floor of a forest, moving slowly and killing or damaging trees;
2) A ground fire is usually started by lightning and burns on or below the forest floor;
3) Crown fires spread rapidly by wind and move quickly by jumping along the tops of trees.

Wildfires are usually signaled by dense smoke that fills the area for miles around. Wildfires present a significant potential for disaster in the southwest, a region of relatively high temperatures, low humidity and low precipitation during the summer and spring and moderately strong daytime winds. Combine these severe burning conditions with people or lightning and the stage is set for the occurrence of large, destructive wildfires.

Wildfires are a necessary part of the natural ecosystem in Southern California, but they become a hazard when they extend out of control into developed areas, with the resultant of loss of

property, injuries or the loss of life. The wildfire risk in the United States has increased in the last few decades with the increasing encroachment of residences and other structures into the wild land environment and the increasingly larger number of people living and playing in wild land areas.

Dozens of small vegetation fires, typically less than one (1) acre in size, are reported in Victorville annually. There are a relatively small number of structure fires reported annually in Victorville, but depending on the size, age and occupancy of the structure, the economic and social losses can be substantial.

Past fires that have occurred in the Cajon Pass have impeded High Desert residents from going to work in population centers south of the Pass and have disrupted supplies goods shipments and commercial activity due to loss of this key transportation corridor. Impacts have generally been in the three (3) to five (5) day range (the recent Blue Cut Fire is an example).

**Location:**
The City is located in the lower Mojave section of the Southeastern Deserts Bioregion, an area characterized by isolated, steep-sided mountain ranges separated by broad alluvial basins. The predominate vegetation assemblages in this area include, desert shrub, creosote brush shrub and succulent shrub. Other important vegetation types include Joshua Trees, **Figure 5.14**, woodland, shad-scale scrub, black brush scrub and desert scrub-steppe. About one-third of the desert floor in the Mojave section is devoid of vegetation limiting amount of surface fuel loads available to burn.

**Figure 5.14: Joshua Tree Vegetation**

**History:**
San Bernardino County has experienced 148 days of wildland fires since June 2000[3] resulting in ten (10) deaths and 157 injuries. The City has had a single wildland fire. On October 1, 2003, a wildfire in the Mojave riverbed consumed ten (10) acres of brush before being contained.

**Extent:**
Fire Severity Zones are used in determining additional protective measures required when building new structures or remodeling older structures within the particular zone. Additional measures must be taken on the property around a structure in the higher ranked fire Severity Zones. **Figure 5.15** illustrates the areas at risk to a wildfire event. The area with the highest risk of wildfire is in the southern portion of the City.

[3] https://www.ncdc.noaa.gov/stormevents/listevents.jsp?eventType=%28Z%29+Wildfire&beginDate_mm=06&beginDate_dd=01&beginDate_yyyy=2000&endDate_mm=06&endDate_dd=30&endDate_yyyy=2020&county=SAN%2BBERNARDINO%3A71&hailfilter=0.00&tornfilter=0&windfilter=000&sort=DT&submitbutton=Search&statefips=6%2CCALIFORNIA#

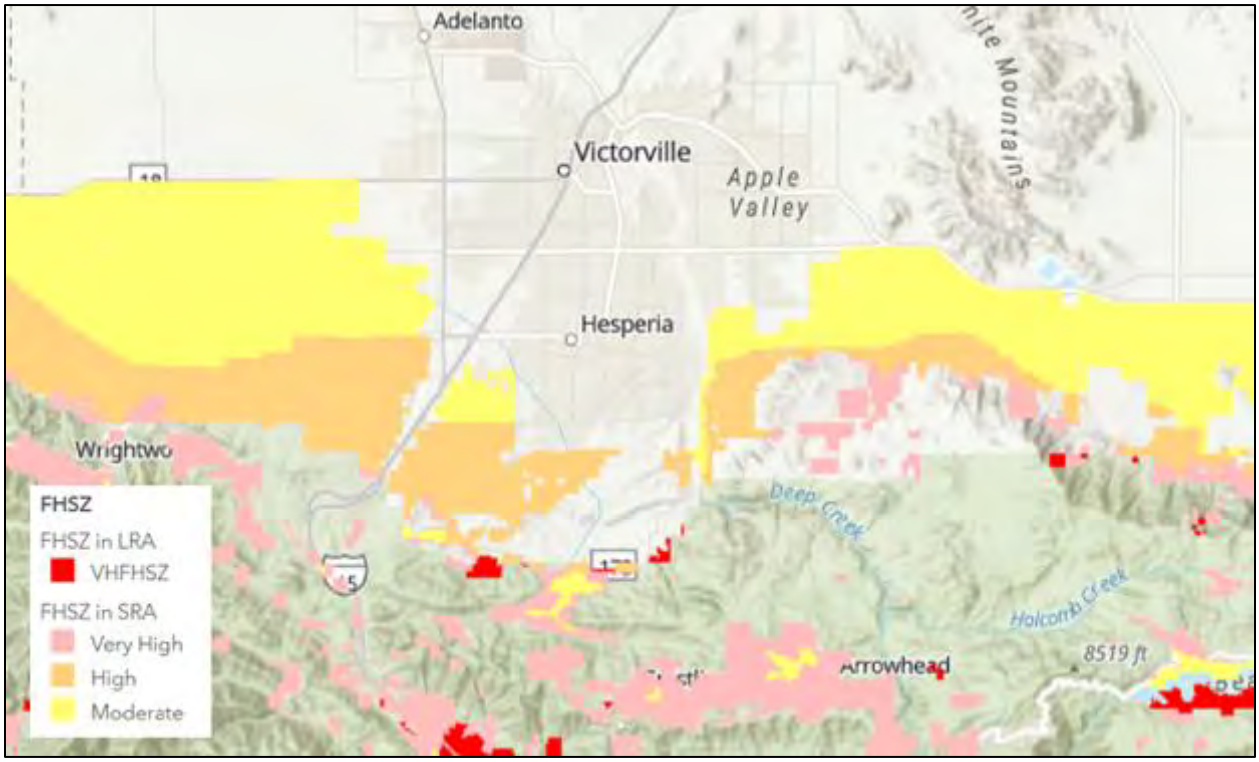



**Figure 5.15: Fire Hazard Severity Map**

Fire hazard mapping is a way to measure the physical fire behavior to predict the damage a fire is likely to cause. Fire hazard measurement includes vegetative fuels, probability of speed at which a wildfire moves the amount of heat the fire produces, and most importantly, the burning fire brands that the fire sends ahead of the flaming front.

The model used to develop the information in accounts for topography, especially the steepness of the slopes (i.e. fires burn faster as they burn up-slope). Weather (e.g. temperature, humidity, wind) also significantly influence fire behavior. The areas depicted as moderate and high in are of particular concern and potential fire risk in these areas are constantly increasing as human development, and the wildland urban interface areas expand.

Earthquakes can cause multiple ignitions distributed over a broad geographic area. Fires can be ignited by a variety of sources, including arcing downed electrical lines, sparks near ruptured gas pipelines, overturned electrical appliances, such as water heaters and spills of reactive chemicals. If the earthquake has also impaired the water distribution system, limiting the water available to fight these fires and fire personnel are busy conducting search and rescue operations, earthquake induced fires have the potential to be the worst-case fire-suppression scenarios for the City.

**Impact of Climate Change:**
Climate change will result in increased numbers of low humidity hot days when fire conditions may lead to ignitions.

**Probability of Future Events:**
Because of the low fuel loads in the City and adjacent areas, wildfires are not expected to occur within any year. The probability is less than ten percent (10%) annually.

### 5.4.8 Flood/Flash Flood

**Description:**
A flood occurs when the existing channel of a stream, river, canyon, or other watercourse cannot contain excess runoff from rainfall or snowmelt, resulting in overflow onto adjacent lands. A floodplain is the area adjacent to a watercourse or other body of water that is subject to recurring floods. Floodplains may change over time from natural processes, changes in the characteristics of a watershed, or human activity such as construction of bridges or channels. River channels change as water moves downstream, acting on the channel banks and on the channel bottom.

On the outside of a channel curve, the banks are subject to erosion as the water scours against them. On the inside of a channel curve, the banks receive deposits of sand and sediment transferred from the eroded sites. In areas where flow contains a high-sediment load, the course of a river or stream may shift dramatically during a single flood event. There are two (2) major types of flooding within the City: 1) Riverine flooding (also known as overbank flooding), and 2) localized drainage flooding.

- Riverine flooding occurs when downstream channels receive more rain or snowmelt from their watershed than normal or a channel is blocked by an ice jam or debris. Excess water overloads the channels and flows out onto the floodplain. When flooding occurs in steep, mountainous areas, it is usually confined, strikes with less warning time, and has a short duration. In comparison, larger rivers typically have longer, more-predictable flooding sequences and broad floodplains. Riverine floodplains range from narrow, confined channels in the steep valleys of mountainous and hilly regions to wide, flat areas in plains and coastal regions. The amount of water in the floodplain is a function of the size and topography of the contributing watershed, the regional and local climate, and land use characteristics.
- Localized flooding in the City is generally associated with urban flooding. Urban flooding results in the inundation of property in a built environment, particularly in more densely populated areas, caused by rain falling on increased amounts of impervious surfaces and overwhelming the capacity of drainage systems. Although sometimes triggered by events such as flash flooding or snowmelt, urban flooding is a condition, characterized by its repetitive and systemic impacts on communities, that can happen regardless of whether or not affected communities are located within designated floodplains or near any body of water. For this HMP, flash flooding is considered as a potential cause of localized flooding.

**Location:**
**Figure 5.16** depicts the NFIP flood hazard map for the City. Flooding may occur along the Mojave River watercourse. Past flooding events have inundated roadways near Turner Wash Trunk (north of Mojave Drive), Ossum Wash (north of Capistrano Street and south of Rancho Road), and along Eucalyptus Street (east of Cloverly Street).

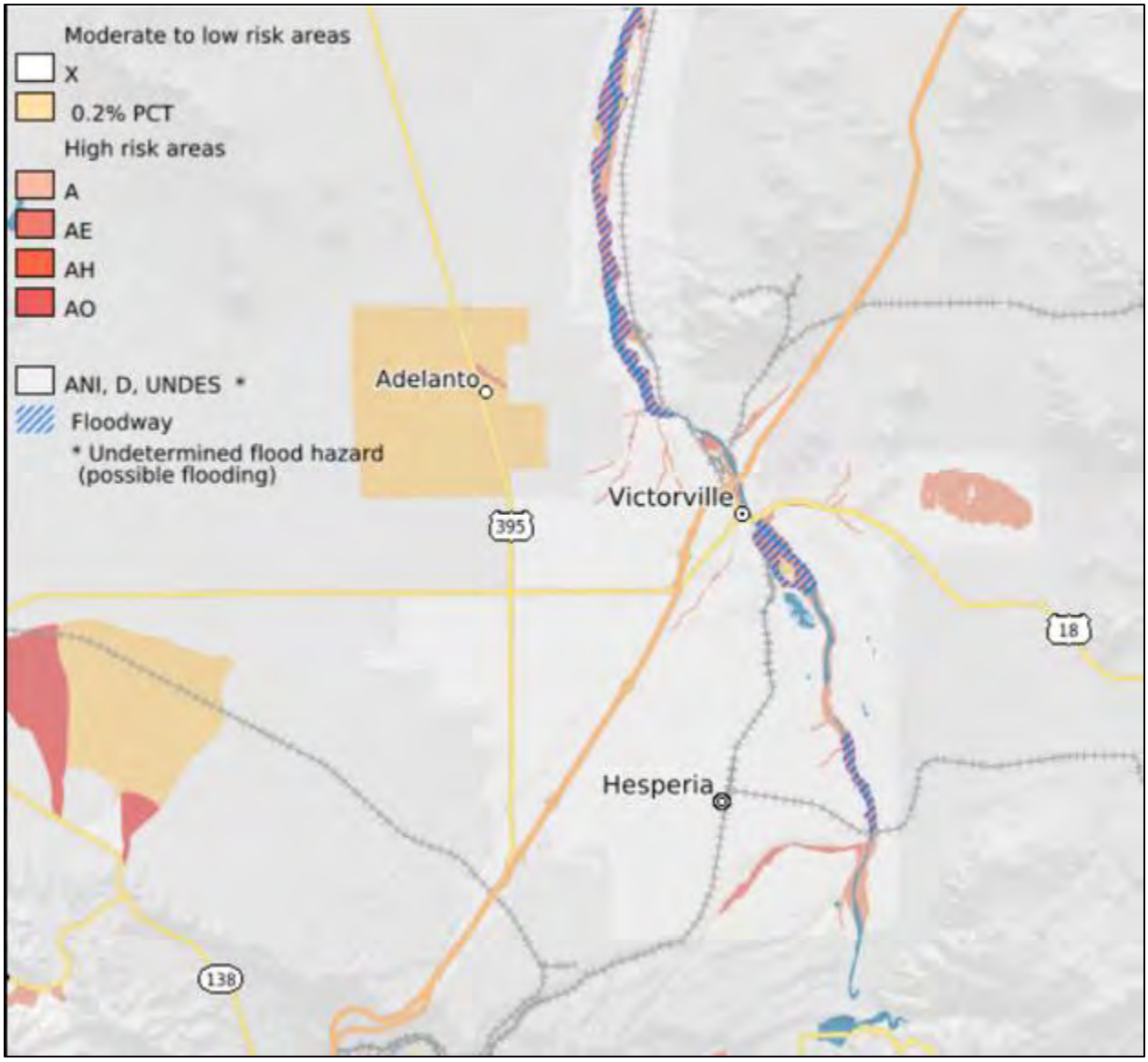



**Figure 5.16: Victorville Flood Hazard Overview Map**

**History:**
August 31, 1998 – Strong thunderstorms fed by intense heat and humidity under strong high pressure aloft developed as an upper-level low that was over southern Nevada and began drifting toward southern California. A few thunderstorms reached coastal areas, but most of the flooding and high winds remained farther inland. Flooding was widespread throughout the Victor Valley where one (1) to two (2) inches of rain was reported. In Hesperia, water was running half a foot deep over some roads, flooding homes and intersections.

July 7, 2001 – Heavy rains from thunderstorms caused significant flooding of area roadways near the City. Water was reported to be two (2) feet deep in places.

August 14, 2004 – Flash-flooding in eastern parts of the City and in the Spring Valley Lake vicinity trapped many vehicles in rapidly rising water. Flood waters eight (8) feet deep covered the BNSF railroad tracks and forced a halt to train traffic. The result was a sixty (60) train backup that extended well into the Cajon Pass.

August 26, 2010 – Moist and unstable monsoonal flow triggered scattered showers and thunderstorms across San Diego, San Bernardino, and Riverside Counties, a few of which reached severe status with large hail and damaging winds. Localized flash flooding was also reported in a few locations over the two (2) day event.

**Extent:**
The magnitude of flooding that is used as the standard for floodplain management in the U.S. is a flood with a probability of occurrence of one percent (1%) in any given year. This flood is also known as the 100-year flood or base flood. The most readily available source of information regarding the 100-year flood, as well as the 500-year flood (i.e. 0.2% probability of occurrence in any given year), is the system of Flood Insurance Rate Maps (FIRMs) prepared by FEMA. These maps are used to support the NFIP.

The USGS and other agencies refer to the percent chance of occurrence as an Annual Exceedance Probability (AEP). An AEP is always a fraction of one. A 0.2 AEP flood has a twenty percent (20%) chance of occurring in any given year, and this corresponds to a five (5) year recurrence-interval flood. Recurrence-interval terminology tends to be more understandable for flood intensity comparisons, but may be misleading due to the fact that a 100-year flood could occur two (2) years in a row. The 1938 flood was categorized as a fifty (50) year flood.

**Impacts:**
Flooding in Victorville typically results in flooded roadways. Flooded roadways frequently stand vehicles and cause utility interruptions. Previous events occurred in 2015, 2018 and 2019. In December 2018, a storm dropped more than an inch and a quarter of rain on the Victorville area and resulted in the city closing all or portions of 14 streets.

**Impact of Climate Change:**
Severe weather such as more powerful rainstorms are likely to occur as a result of climate change. Atmospheric rivers which can create flooding throughout California may occur more frequently due to warmer weather and more moisture in storm systems. Climate change has the potential to cause more frequent and more damaging flood incidents.

**Probability of Future Events:**
While major flooding is not likely to occur in Victorville, minor street flooding is possible during any severe storm, which can ensue on an annual basis.

### 5.4.9 High Winds/Tornados

**Description**

Several weather events may produce high winds. Wind strength depends on differences between the existing high- and low-pressure systems and the distances between them. A steeper pressure gradient resulting from a large pressure difference or short distance between systems causes higher winds.

A dominating factor in the weather of California is the semi-permanent high-pressure area of the northern Pacific Ocean, sometimes called the Pacific high. This pressure center moves northward in summer, holding storm tracks, originating on easterly winds, well to the north. As a result, California receives little or no precipitation during the summer and early autumn.

In the fall, the City may be subject to Santa Ana winds. These winds are strong, extremely dry down-slope winds that originate inland and affect coastal Southern California and northern Baja, California. Santa Ana winds are known especially for the hot, dry weather (often the hottest of the year) and are infamous for fanning regional wildfires.

The time period between October and April comprises the rainy season. During these months, storms may occur. Storms bring rain, occasional snow, lightening and high winds. This occurs as the Pacific high decreases in intensity in winter and moves further south, permitting storms to move into and across the state, producing widespread rain at low elevations and snow at high elevations. Occasionally the state's circulation pattern includes a series of storm centers that move into California from the southwest. These storms caused by atmospheric rivers or pineapple expresses can produce extremely large volumes of precipitation and last several days.

A tornado is a violently rotating column of air touching the ground, usually attached to the base of a thunderstorm.
Tornadoes are nature's most violent storms. Spawned from powerful thunderstorms, tornadoes can cause fatalities and devastate a neighborhood in seconds. Winds of a tornado may reach 300 miles per hour. Damage paths can be in excess of one mile wide and 50 miles long. Strong downburst (straight-line) winds may also occur due to the same thunderstorm. Hail is very commonly found very close to the tornadoes, as the strongest thunderstorms that spawn tornadoes are formed under the atmospheric conditions that are also highly likely to produce hail. Every state is at some risk from this hazard.

Some tornadoes are clearly visible, while rain or nearby low-hanging clouds obscure others. Tornadoes develop extremely rapidly, and may dissipate just a quickly. Most tornadoes are on the ground for less than 15 minutes.

**History**
Since June 2010, San Bernardino County coast has experienced 344 extreme weather events (e.g., high winds, thunderstorm winds, rain storms, and tornadoes), resulting in ten (10) severe injuries, and over $7.5 million USD in property damage[i]. Tornado activity has occurred near the City. There have been no tornadoes, high winds or rain storms that have resulted in deaths or

injuries in the City. Minor damage from vegetative debris from high winds is likely to occur in the City's parks or public spaces with trees and other landscaping.

High wind events can occur throughout the City. While tornadoes have occurred nearby, they have been F-0 events with one exception that occurred in Lucerne Valley. **Table 5-8** lists the history of tornadoes that have been sighted in nearby jurisdictions.

**Table 5-8: History of Tornadoes**

| Nearest City | Date | Time | Magnitude | Deaths | Injuries | Damage |
|---|---|---|---|---|---|---|
| Joshua Tree | 07/07/2001 | 12:45 | F0 | 0 | 0 | 10.00K |
| Yucca Valley | 08/14/2004 | 11:18 | F0 | 0 | 0 | 0.00K |
| Phelan | 08/14/2004 | 11:40 | F0 | 0 | 0 | 0.00K |
| Fontana | 03/04/2005 | 12:20 | F0 | 0 | 0 | 20.00K |
| Lucerne Valley Soggy Dry | 08/04/2008 | 13:00 | EF1 | 0 | 0 | 10.00K |
| Helendale | 08/18/2013 | 13:00 | EF0 | 0 | 0 | 0.00K |
| Landers | 07/19/2015 | 16:00 | EF0 | 0 | 0 | 0.00K |
| Adelanto | 05/07/2017 | 12:30 | EF0 | 0 | 0 | 0.00K |
| Spangler | 04/16/2019 | 15:05 | EF0 | 0 | 0 | 1.00K |
| **Totals:** | | | | **0** | **0** | **41.00K** |

**Location**

All of the City is vulnerable to the effects of high winds and tornados. Vegetation, debris, and electrical infrastructure knocked down or blown by severe weather has the potential to cause damage or additional hazards.

**Extent**

The Beaufort Scale is commonly used as a measure of expected damage from high winds. **Table 5-9** depicts the Beaufort Scale. The Fujita Scale provides descriptions of tornado wind velocities and the resulting potential damage to structures. **Table 5-10 contains the Fujita Scale.**

**Table 5-9: Beaufort Scale**

| Beaufort Wind Force Scale | | | | | | | |
|---|---|---|---|---|---|---|---|
| Number | Wind speed | | Description | Wave height | | Sea Conditions | Land Conditions |
| | mph | kts | | m | ft | | |
| 0 | <1 | <1 | Calm | 0 | 0 | Flat | Calm. Smoke rises vertically. |
| 1 | 1-3 | 1-2 | Light air | 0.1 | 0.33 | Ripples without crests. | Wind motion visible in smoke. |
| 2 | 3-7 | 3-6 | Light breeze | 0.2 | 0.66 | Small wavelets. Crests of glassy appearance, not breaking | Wind felt on exposed skin. Leaves rustle. |
| 3 | 8-12 | 7-10 | Gentle breeze | 0.6 | 2 | Large wavelets. Crests begin to break; scattered white caps | Leaves and smaller twigs in constant motion. |
| 4 | 13-17 | 11-15 | Moderate breeze | 1 | 3.3 | Small waves. | Dust and loose paper raised. Small branches begin to move. |
| 5 | 18-24 | 16-20 | Fresh breeze | 2 | 6.6 | Moderate (1.2 m) longer waves. Some foam and spray. | Branches of a moderate size move. Small trees begin to sway. |
| 6 | 25-30 | 21-26 | Strong breeze | 3 | 9.9 | Large waves with foam crests and some spray. | Large branches in motion. Whistling heard in overhead wires. Umbrella use becomes difficult. Empty plastic garbage cans tip over. |
| 7 | 31-38 | 27-33 | High wind, moderate gale, near gale | 4 | 13.1 | Sea heaps up and foam begins to be blown in streaks in wind direction. | Whole trees in motion. Effort needed to walk against the wind. Swaying of skyscrapers may be felt, especially by people on upper floors. |
| 8 | 39-46 | 34-40 | Fresh gale | 5.5 | 18 | Moderately high waves with breaking crests forming spindrift. Streaks of foam. | Twigs broken from trees. Cars veer on road. |
| 9 | 47-54 | 41-47 | Strong gale | 7 | 23 | High waves (6-7 m) with dense foam. Wave crests start to roll over. Considerable spray. | Larger branches break off trees, and some small trees blow over. Construction/temporary signs and barricades blow over. Damage to circus tents and canopies. |
| 10 | 55-63 | 48-55 | Whole gale, storm | 9 | 29.5 | Very high waves. Large patches of foam from wave crests give the sea a white appearance. Considerable tumbling of waves with heavy impact. Large amounts of airborne spray reduce visibility. | Trees are broken off or uprooted, saplings bent and deformed, poorly attached asphalt shingles and shingles in poor condition peel off roofs. |
| 11 | 64-72 | 56-63 | Violent storm | 11.5 | 37.7 | Exceptionally high waves. Very large patches of foam, driven before the wind, cover much of the sea surface. Very large amounts of airborne spray severely reduce visibility. | Widespread vegetation damage. More damage to most roofing surfaces, asphalt tiles that have curled up and/or fractured due to age may break away completely. |
| 12 | ≥73 | ≥64 | Hurricane force | ≥14 | ≥46 | Huge waves. Sea is completely white with foam and spray. Air is filled with driving spray, greatly reducing visibility. | Considerable and widespread damage to vegetation, a few windows broken, structural damage to mobile homes and poorly constructed sheds and barns. Debris may be hurled about. |

The Fujita Scale is used to categories tornados. **Table 5-10** lists Fujita scale values with associated affects.

**Table 5-10: Fujita Scale**

**Fujita Scale Values with Associated Affects**

| Damage f scale | | Little Damage | Minor Damage | Roof Gone | Walls Collapse | Blown Down | Blown Away |
|---|---|---|---|---|---|---|---|
| | | f0 | f1 | f2 | f3 | f4 | f5 |
| Windspeed F scale | | 17 m/s / 40 mph | 32 / 73 | 50 / 113 | 70 / 158 | 92 / 207 | 116 / 261 | 142 / 319 |
| | | F0 | F1 | F2 | F3 | F4 | F5 |
| | | To convert f scale into F scale, add the appropriate number | | | | | |
| Weak Outbuilding | -3 | f3 | f4 | f5 | f5 | f5 | f5 |
| Strong Outbuilding | -2 | f2 | f3 | f4 | f5 | f5 | f5 |
| Weak Framehouse | -1 | f1 | f2 | f3 | f4 | f5 | f5 |
| Strong Framehouse | 0 | F0 | F1 | F2 | F3 | F4 | F5 |
| Brick Structure | +1 | - | f0 | f1 | f2 | f3 | f4 |
| Concrete Building | +2 | - | - | f0 | f1 | f2 | f3 |

Fig. 2.4-1 The Fujita tornado scale (F scale) pegged to damage-causing windspeeds. The extent of damage expressed by the damage scale (f scale) varies with both windspeed and the strength of structures.

*Source NOAA*

**Impact of Climate Change**

Warming central Pacific Ocean water has the potential to produce more frequent and longer high winds associated with winter storms originating in the intertropical convergence zone (ITCZ). Pacific Northwest National Laboratory researchers concluded that the number of days on which atmospheric rivers (formed in the ITZC and a major cause of severe storms) reach the West Coast each year could increase by a third this century, if greenhouse gas pollution continues to rise sharply.

Currently, the West Coast is likely to receive rain or snow from atmospheric rivers between twenty-five (25) and forty (40) days each year, the analysis concluded. By century's end, that is expected to rise to between thirty-five (35) and fifty-five (55) days annually. Meanwhile, the number of days each year on which the atmospheric rivers bring "extreme" amounts of rain and snow to the region could increase by more than a quarter.

**Regulatory Environment**
There are very few formal regulations that pertain to severe weather events in general.

**Probability of Future Occurrences**
Based on history, high wind events including Santa Ana winds or microburst tornadic activity can be expected, annually, across widespread areas of San Bernardino County.

### 5.4.10 Public Health and Pandemic

**Description**
Human health hazards include transmittable diseases and environmental hazards such as adverse weather. The following sections describe commonly recognized human health hazards.

*Corona Viruses /SARS* - The current (2020) COVID-19 pandemic is spread by a corona virus. Corona viruses cause a large percentage of colds and upper respiratory infections. Severe acute respiratory syndrome (SARS) is a viral respiratory disease caused by a SARS-associated coronavirus. It was first identified at the end of February 2003 during an outbreak that emerged in China and spread to four other countries.

*Influenza* - Flu epidemics and pandemics occur routinely, typically in the fall and winter. Because flu seasons fluctuate in length and severity, a single estimate cannot be used to summarize influenza-associated deaths. The U.S. Centers for Disease Control and Prevention (CDC) estimates that from the 1976-1977 flu season to the 2006-2007 season, flu-associated deaths ranged from a low of about 3,000 to a high of about 49,000.

*Insect/Tick Borne Disease* - Insects such as mosquitos and ticks can transmit a variety of diseases. Diseases that can be contracted through a tick bite include:

- Colorado tick fever;
- Ehrlichiosis;
- Lyme disease;
- Rocky Mountain spotted fever;
- Tularemia.

Diseases that mosquitoes carry include:

- Eastern equine encephalitis;
- Malaria;
- West Nile virus;
- Zika virus.

*Plague* - Plague is caused by the bacteria Yersinia pestis, a zoonotic bacterium usually found in small mammals and their fleas. Plague is transmitted between animals and humans by the bite of infected fleas, direct contact with infected tissues, and inhalation of infected respiratory droplets. There are two (2) main clinical forms of plague infection: 1) bubonic and 2) pneumonic.

Bubonic plague is the most common form and is characterized by painful swollen lymph nodes or 'buboes.'
Plague can be a very severe disease in people, with a case-fatality ratio of thirty percent (30%) to sixty percent (60%) for the bubonic type and is always fatal for the pneumonic kind when left untreated.

*Anthrax* - Anthrax is a serious infectious disease caused by gram-positive, rod-shaped bacteria known as Bacillus anthracis. Although it is rare, people can get sick with anthrax if they come in contact with infected animals or contaminated animal products. Anthrax has the potential for, and has been used as, a biological weapon.

*Hemorrhagic Fevers* - Viral hemorrhagic fevers are a group of illnesses caused by several distinct families of viruses. In general, the term “viral hemorrhagic fever” is used to describe a severe multisystem syndrome. Characteristically, the overall vascular system is damaged and the body’s ability to regulate itself is impaired. These symptoms are often accompanied by hemorrhage (bleeding). However, the bleeding is itself rarely life-threatening. While some types of hemorrhagic fever viruses can cause relatively mild illnesses, many of these viruses cause severe, life-threatening disease. Hemorrhagic fevers include Ebola and Yellow Fever.

**History**
Pandemics have occurred throughout history. Some of the largest scale public health and pandemic incidents include:

- **2020-ongoing COVID-19:** Beginning in December 2019, in the region of Wuhan, China, a new (“novel”) coronavirus appeared and rapidly spread. COVID-19, a shortened form of “coronavirus disease of 2019” has affected every nation on the planet. It is the largest pandemic since the 1918-1919 Spanish Influenza.
- **1976-ongoing HIV/AIDS (Peak 2005-2012):** HIV/AIDs was first identified in the Democratic Republic of the Congo in 1976. HIV/AIDS is a global pandemic, having killed more than 36 million people since 1981. Currently there are between thirty-one (31) and thirty-five (35) million people living with HIV infections.
- **1968:** A category 2 Flu pandemic sometimes referred to as “the Hong Kong Flu,” the 1968 flu pandemic was caused by the H3N2 strain of the Influenza A virus. Within three (3) months, it had spread to the Philippines, India, Australia, Europe, and the U.S. While the 1968 pandemic had a comparatively low mortality rate (.5%), it still resulted in the deaths of more than a million people, including 500,000 residents of Hong Kong; approximately fifteen percent (15%) of its population at the time.
- **1956-1958:** The Asian Flu was a pandemic outbreak of Influenza A of the H2N2 subtype, that originated in China in 1956 and lasted until 1958. In its two (2) year infectious duration, it resulted in approximately two (2) million deaths worldwide and 69,800 in the US.
- **1918-1920:** A strain of H1N1 influenza resulted in a deadly outbreak that tore across the globe, infecting over a third of the world’s population and ending the lives of twenty (20) to fifty (50) million people. Of the 500 million people infected in the 1918 infection wave,

mortality rates were estimated at ten percent (10%) to twenty (20%), with up to twenty-five (25) million deaths in the first twenty-five (25) weeks alone.

- **1346 to 1353:** The Black Death was an outbreak of Bubonic Plague that ravaged Europe, Africa, and Asia, with an estimated death toll between seventy-five (75) and 200 million people. Thought to have originated in Asia, the pandemic most likely jumped continents via the fleas living on the rats found aboard merchant ships.

**Location**
Pandemics occur worldwide. Smaller scale public health incidents or epidemics may be localized such as Ebola outbreak in a region of Africa. All locations are susceptible to pandemics and local public health hazard incidents.

**Extent**
The World Health Organization currently uses the Pandemic Influenza Phases to characterize pandemics.

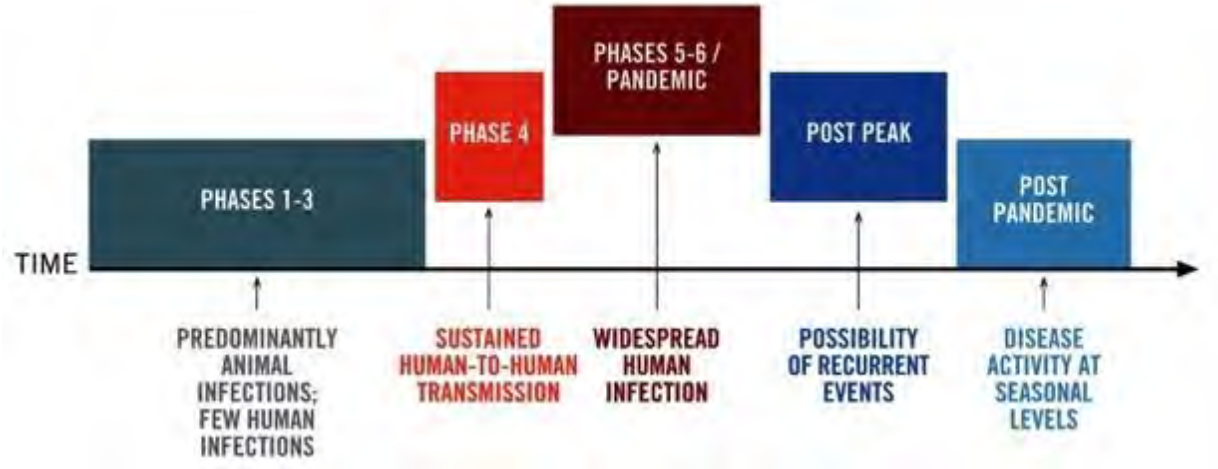



**Figure 5.17: WHO Pandemic Influenza Phases (2009)**

In nature, influenza viruses circulate continuously among animals, especially birds. Even though such viruses might theoretically develop into pandemic viruses, in **Phase 1** no viruses circulating among animals have been reported to cause infections in humans.

In **Phase 2**, an animal influenza virus circulating among domesticated or wild animals is known to have caused infection in humans and is, therefore, considered a potential pandemic threat.

In **Phase 3**, an animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks. Limited human-to-human transmission may occur under some circumstances, for example, when there is close contact between an infected person and an unprotected caregiver. However, limited transmission under such

restricted circumstances does not indicate that the virus has gained the level of transmissibility among humans necessary to cause a pandemic.

**Phase 4** is characterized by verified human-to-human transmission of an animal or human-animal influenza reassortant virus able to cause "community-level outbreaks." The ability to cause sustained disease outbreaks in a community marks a significant upwards shift in the risk for a pandemic. Any country that suspects, or has verified, such an event should urgently consult with WHO so that the situation can be jointly assessed, and a decision made by the affected country if implementation of a rapid pandemic containment operation is warranted. Phase **4 indicates a significant increase in risk of a pandemic but does not necessarily mean that** a pandemic is a forgone conclusion.

**Phase 5** is characterized by human-to-human spread of the virus into at least two countries in one WHO region. While most countries will not be affected at this stage, the declaration of **Phase 5** is a strong signal that a pandemic is imminent and that the time to finalize the organization, communication, and implementation of the planned mitigation measures is short.

**Phase 6**, the pandemic phase, is characterized by community level outbreaks in at least one other country in a different WHO region in addition to the criteria defined in **Phase 5**. Designation of this phase will indicate that a global pandemic is under way.

**Impact of Climate Change**
Climate Change may affect the occurrence or severity of pandemics by causing the geographic expansion of insect and tick-borne pathogens.

**Probability of Future Occurrence**
Although the timing of the outbreak of a pandemic or other public health emergency is difficult to predict, they will continue to occur on a continual basis and have a greater than one percent chance of occurring in any year.

### 5.4.11 Pipeline Failure/Transportation Accident/HazMat Release

**Description**
Although pipelines are the safest and most reliable way to transport natural gas, crude oil, liquid petroleum products, and chemical products, there is still an inherent risk due to the nature of the hazardous materials. Crude oil is a complex mixture of thousands of different hydrocarbons and varying amounts of other compounds containing sulfur, nitrogen, and oxygen as well as salts, trace metals, and water.

Crude oils can vary from a clear liquid, similar to gasoline, to a thick tar-like material needing to be heated to flow through a pipeline. A petroleum refinery's main job is to split crude oil into its many parts (or fractions) which are then reprocessed into useful products. The type, number, and size of process units required at a particular refinery depends on a variety of factors including the type of crude oil and the products required. The interconnected units making up a refinery are

tanks, furnaces, distillation towers (fractionating columns), reactors, heat exchangers, pumps, pipes, fittings, and valves. Products of crude oil refineries include:

- Fuels such as gasoline, diesel fuel, heating oil, kerosene, jet fuel, bunker fuel oil, and liquefied petroleum gas;
- Petroleum solvents including benzene, toluene, xylene, hexane, and heptane, which are used in paint thinners, dry-cleaning solvents, degreasers, and pesticide solvents;
- Lubricating oils produced for a variety of purposes, and insulating, hydraulic, and medicinal oils;
- Petroleum wax;
- Greases, which are primarily a mixture of various fillers;
- Asphalt.

These products can be hazardous not only in their final state but as they are being processed and refined. The principal hazards at refineries are fire and explosion. Refineries process a multitude of products with low flash points. Although systems and operating practices are designed to prevent such catastrophes, they can occur. In a refinery, hazardous chemicals can come from many sources and in many forms. In crude oil, there are not only the components sought for processing, but impurities such as sulfur, vanadium, and arsenic compounds. The oil is split into many component streams that are further altered and refined to produce the final product range. Most, if not all, of these component stream chemicals are inherently hazardous to humans, as are the other chemicals added during processing. Hazards include fire, explosion, toxicity, corrosiveness, and asphyxiation.

Hazardous material releases can occur from industrial facilities at fixed sites or along transportation corridors such as rail and roadways. Past hazardous material releases are contained in the history section. Hazards from releases cause include fire, explosion, toxicity, corrosiveness, and asphyxiation.

**History**

Although there have been no pipeline failure incidents that have affected communities in the City, several incidents have occurred in the region. Some of the more significant events include:

- **San Bruno, California:** September 9, 2010, a thirty (30) inch diameter segment of an intrastate natural gas transmission pipeline known as Line 132, owned and operated by PG&E ruptured in a residential area in San Bruno, California. The rupture occurred at the intersection of Earl Avenue and Glenview Drive. The rupture produced a crater about seventy-two (72) feet long by twenty-six (26) feet wide. PG&E estimated that 47.6 million standard cubic feet of natural gas was released. The released natural gas ignited, resulting in a fire that destroyed thirty-eight (38) homes and damaged seventy (70). Eight (8) people were killed, many were injured, and many more were evacuated from the area.
- **Refugio Beach, California:** May 19, 2015, a ruptured pipeline along the scenic California coastline leaked more than 100,000 gallons of crude oil, with at least 21,000 gallons dumped into the ocean, creating a nine (9) mile slick before it could be secured, Governor Jerry Brown declared a state of emergency in response to the environmental disaster. The

pipeline, owned by Plains All American Pipeline, was shut off about three (3) hours after the spill, but by then the slick stretched nine miles into the water.

- **The Aliso Canyon Gas Leak** (also called Porter Ranch gas leak and Porter Ranch gas blowout): A massive natural gas leak that was discovered by SoCalGas employees on October 23, 2015. Gas was escaping from a well within the Aliso Canyon's underground storage facility in the Santa Susana Mountains near Porter Ranch. On January 6, 2016, Governor Jerry Brown issued a state of emergency. On February 11, 2016, the gas company reported that it had the leak under control. On February 18, 2016, state officials announced that the leak was permanently plugged. An estimated 97,100 ton of methane and 7,300 tons of ethane were released into the atmosphere.

**Table 5-11: Major Hazardous Material Releases**

| Date | Site | Material | Report |
|---|---|---|---|
| 09/14/2015 | Road | Sewage | SPILL Report |
| 09/14/2015 | Dry Wash | Sewage | Cal OES-Update |
| 07/03/2018 | Residence | Natural Gas | SPILL Report |

**Location**

Pipelines owned and operated by Kinder Morgan run along the I-15 corridor through the City. Pipelines are primarily underground, which keeps them away from public contact and accidental damage. Despite safety and efficiency statistics, increases in energy consumption, and population growth near pipelines present the potential for a pipeline emergency incident.

While pipelines are generally the safest method of transporting hazardous chemicals, they are not failsafe. Pipeline product releases, whether in the form of a slow leak or violent rupture, are a risk in any community. **Figure 5.18** depicts nearby pipelines.

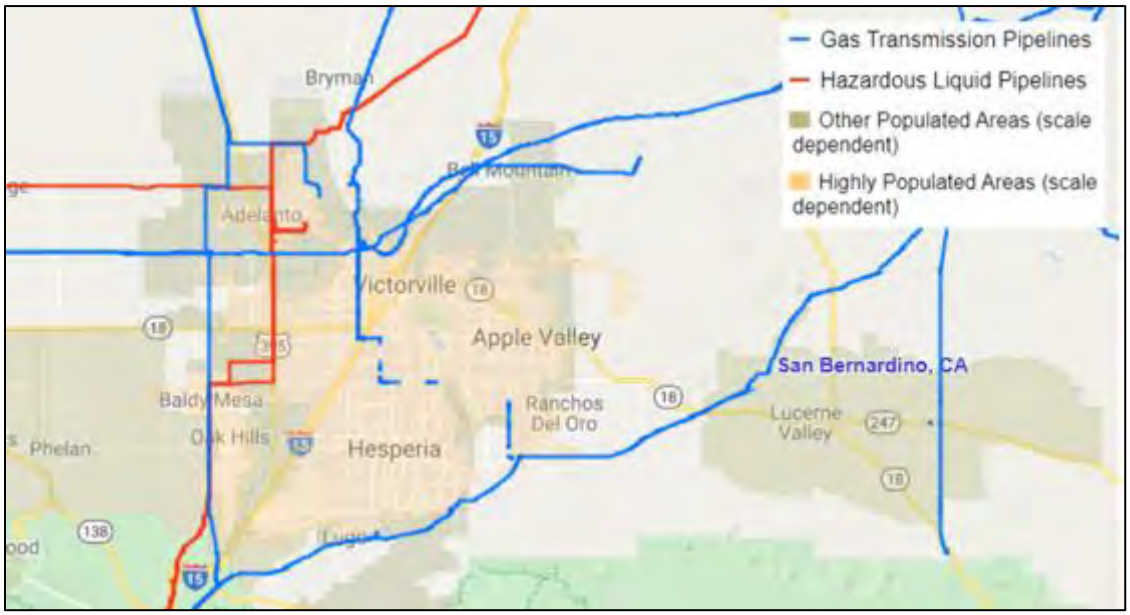



**Figure 5.18: Map of Pipelines**

**Extent**

Most fires, explosions, or pipeline spill incidents occurring at a refinery or on a pipeline are isolated to the site. Pipelines running through the City are unlikely to burst or combust. Jet fuel pipelines are filled with oxygen-free liquid, and without oxygen, combustion cannot occur. Pipelines are regulated by the Office of the State Fire Marshall Pipeline Safety Division. Pipelines are also monitored by a complex data web called Supervisory Control and Data Acquisition (SCADA) measuring the flow rate, temperature and pressure. The network transfers real-time data via satellite from the pipelines to a control center where the valves, pumps and motors are remotely operated. If any tampering with the pipeline occurs, an alarm sounds. The ensuing valve reaction is instantaneous, with the alarm system isolating any rupture and setting off a chain reaction that shuts down pipeline pumps and alerts pipeline operators within seconds.

Most jet fuel pipelines run underground, and in populated areas, must be over three feet below the asphalt. The pipes are at least one-inch-thick steel. If the pipe did rupture, valves would cut off and operators would receive an automatic alarm.

Oil spills are considered to be a significant impact along the railways for BSNF and Union Pacific. Small spills can be mitigated and are classified as less than significant. Large oil spills (greater than fifty (50) barrels) may not be completely contained and, therefore, would be considered significant impacts. Significant adverse impacts on biological resources would occur from a major oil spill.

All the industrial facilities have the potential to produce hazardous releases. The details of the type and extent of the potential releases are maintained by the plant operators and the State

Department of Toxic Substances Control (DTSC). The facilities are required to notify the County Hazardous Materials Incident Response Team when there is an incident. The County's Board of Supervisors have approved the Hazardous Materials Incident Notification Policy (PDF) detailing when and how this should be done.

**Regulatory Context**

- Specific regulatory requirements are defined by:
- Title 49 CFR Part 191: Transportation of Natural and Other Gas by Pipeline, Annual Reports, Incident Reports, and Safety-Related Condition Reports;
- Title 49 CFR Part 192: Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards;
- Title 49 CFR Part 193: Liquefied Natural Gas Facilities: Federal Safety Standards;
- General Order No. 58-A: Standards for Gas Service in the State of California;
- General Order No. 58-B: Heating Value Measurement Standard for Gaseous Fuels;
- General Order No. 112-F: State of California Rules Governing Design, Construction, Testing, Operation, and Maintenance of Gas Gathering, Transmission, and Distribution Piping Systems.

The California Public Utilities Commission (CPUC) ensures that intra-state natural gas and liquid petroleum gas (LPG) pipeline systems are designed, constructed, operated, and maintained according to safety standards set by the CPUC and the federal government. CPUC gas safety engineers are trained and qualified by the federal government. The CPUC enforces natural gas and LPG safety regulations; inspects construction, operation, and maintenance activities; and makes necessary amendments to regulations to protect and promote the safety of the public, the utility employees that work on the gas pipeline systems, and the environment.

The CPUC endorses the system safety approach embodied in the federal government's regulation of Pipeline and Hazardous Materials Safety Administration. State and federal regulators are tasked with ensuring that pipeline and hazardous materials operators have risk management programs in place, that those programs are designed in conformance with state and federal laws and regulations, that the programs are effective in enhancing public safety, the operator's employees' safety, environmental safety, and that the safety of the entire system and operation continues to improve.

The CPUC conducts operation and maintenance compliance inspections, accident investigations, reviews utilities' reports and records, conducts construction inspections, conducts special studies, and takes action in response to complaints and inquiries from the public on issues regarding gas pipeline safety.

The CPUC also conducts audits and inspections of gas facilities owned and operated by mobile home parks and conducts inspections of propane gas pipeline distributions systems.

Intra-state hazardous liquid pipelines are regulated by the Office of the State Fire Marshall (OSFM). Interstate pipelines are regulated by the Pipeline and Hazardous Materials Safety Administration (PHMSA).

**Probability of Future Events**
While safety programs aim to prevent hazardous material releases, accidents occur due to equipment failures or human error. Additionally, a large earthquake could rupture piping and other containment systems and derange controls, causing releases, fires and public health incidents.

### 5.4.12 Power Failure/PSPS

**Description**
A power outage is the loss of the electricity supply to an area. In addition to natural hazards, power failure can result from a defect in a power station, damage to a power line or other part of the distribution system, a short circuit, or the overloading of electricity mains.

A power outage may be referred to as a blackout if power is lost completely or as a brownout if some power supply is retained, but the voltage level is below the minimum level specified for the

system, and a short circuit indicates a loss of power for a short amount of time (usually seconds). Some brownouts, called voltage reductions, are made intentionally to prevent a full power outage.

Power failures may also be intentionally induced due to high power demand that exceeds supply or due to actions taken by utility companies to de-energize power lines when there is the possibility of energized power lines being downed during fire Red Flag warnings and causing fires.

**History**
Following devastating fires in California in 2017 and 2018, utility companies sought regulatory actions to allow them to de-energize power lines when conditions might result in downed lines causing wildfires. The California Public Utilities Commission developed guidelines for public safety power shutoffs (PSPS) that have affected numerous areas of the State for up to several days.

August 2020 saw the first California electricity providers instituted rolling blackouts since 2001. Hundreds of thousands of people experienced brief power outages through the several evenings, after the body that manages most of the state's electric utilities declared a Stage 3 emergency to help reduce stress on the larger grid. Electricity demand surged through the day as temperatures topped the triple digits in many parts of the state and people cranked up fans and air-conditioning units to try to stay cool. The emergency order was rescinded before midnight and power was fully restored to all affected households

The 2011 Southwest blackout, sometimes referred to as the Great Blackout of 2011 was a widespread power outage that affected the San Diego–Tijuana area, southern Orange County, the Imperial Valley, Mexicali Valley, and Coachella Valley, and parts of Arizona. It occurred on Thursday, September 8, 2011, beginning at about 3:38 pm PDT and was the largest power failure in California history.

The 2000-2001 California electricity crisis brought to light many critical issues surrounding the State's power generation and distribution system, including its dependency on out-of-state resources. Although California has implemented effective energy conservation programs, the State continues to experience both population growth and weather cycles that contribute to a heavy demand for power. The 2000 and 2001 blackouts occurred due to losses in transmission or generation and/or extremely severe temperatures that lead to heavy electric power consumption.

**Location**
Power outages can occur throughout the City and affect the entire region.

**Extent**
Power outages are typically measured by the number of customers without power. This number is two to three times lower than the number of people affected.

**Impact of Climate Change**
Climate change may affect the number and severity of power outages. The August 2020 rolling blackouts resulted from high energy usage during record setting heat throughout the state. As hotter conditions result in more and longer Red Flag warnings and concomitant PSPSs, more power outages will occur.

**Probability of Future Occurrence**
While the location, duration and number of people affected cannot be predicted, power outages in the City are likely to occur on a continual basis with the likelihood of an incident greater than ten percent (10%) in any year.

### 5.4.13 Terrorism

**Description**
The definition of terrorism by the U.S. Federal Bureau of Investigation (FBI) is "the unlawful use of force or violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives." The FBI defines cyberterrorism as the use of computer network tools to shut down critical national infrastructures (e.g. energy, transportation, government operations) or to coerce or intimidate a government or civilian population.

Terrorists may use one or more of the following types of weapons: chemical, biological, incendiary, radiological, vehicles, or explosives. In addition to large-scale attacks, a full range of assault styles must be considered, including simple bombings, active shooter, assassinations with small arms, major bombings, and others. Use of explosive devices remains the weapon of choice for terrorist activity. Related activities include bomb threats which disrupt the normal operations of transit systems, government, or corporate facilities. Primary locations likely to be targets include airports, mass transit targets, government facilities, and high population density locations, although so-called "soft targets" such as schools, local entertainment facilities, etc. are at risk. The potential for nuclear, biological, or chemical terrorism is also a concern. These types of emergencies would necessitate detailed contingency planning and preparation of emergency responders to protect their communities.

Weapons of mass destruction (WMD) typically used by terrorists are categorized by an acronym that lists the types of materials/weapons: CBRNE stands for chemical, biological, radiological, nuclear, and explosives; BNICE stands for biological, nuclear, incendiary, chemical, and explosives. The nature of each category of weapon is described briefly below:

*Chemical* - Chemical weapons include blood and choking agents, nerve agents, blister agents, and toxic industrial chemicals. Advantages of using chemical weapons for a terrorist include they are easy to make, readily available, inexpensive, have an immediate effect, and are easily spread. Disadvantages are they require significant quantities for a mass effect and the production and deployment are potentially hazardous to the terrorist. Some chemical agents are odorless and tasteless and are difficult to detect while others have distinct odors. They can have an immediate

effect (i.e. a few seconds to a few minutes) or a delayed effect (i.e. several hours to several days). Routes of exposure for chemical weapons are inhalation, ingestion, absorption, and injection. Unlike many of the biological weapons, first responders can take self-protective measures by wearing personal protective equipment. First aid measures and effective medical interventions are available. Chemical agent exposures can be decontaminated and agents neutralized.

*Biological* - Biological weapons are defined as bacteria, viruses, or toxins used to produce illness or death in people, animals, or plants. The advantages of biological weapons are they are easy to make, readily available, and relatively inexpensive. The disadvantages include delayed effects and potential deployment hazards to the terrorist. Routes of exposure for biological weapons are inhalation, ingestion, absorption, and injection. Biological agents can be dispersed as airborne particles or aerosols on food items or in water, or through an injection. Terrorists may use biological weapons because the agents are odorless, tasteless, and extremely difficult to detect.

*Radiological/Nuclear* - Radioactive or nuclear weapons are typically in the form of a traditional fission device such as an atom bomb, a radiological dispersal device (often called a dirty bomb), or a conventional explosion at a nuclear facility. Advantages of radiological or nuclear weapons are that the materials are available, cause devastating effects, and cause a great psychological impact on the population. Disadvantages include delayed effects, deployment is hazardous to the terrorists, and they are extremely expensive – in the millions of dollars for a nuclear weapon. Radiation cannot be detected by human senses. Consequences may include death, severe health risks to the public, damage to the environment, and extraordinary loss of, or damage to, property. Health effects of radiological or nuclear materials include radiation burns, fragmentation wounds, acute radiological poisoning, and long-term effects, such as cancers and birth defects.

*Explosives* - Explosive weapons are most terrorist's weapon of choice. Eighty-six percent (86%) of domestic terrorist incidents involve the use of explosives. Explosives are readily available and have dramatic results, are low risk, require few skills to build and use, are easy to execute, allow for remote attacks, and do not require many people to execute. There are low explosives and high explosives. The effects include blast pressure, both positive and negative, fragmentation, and thermal. There are pipe bombs or bombs that can be easily concealed into a backpack, box, vehicles, or virtually any type of container, with numerous trigger mechanisms to set off the bomb. Bombings account for up to fifty percent (50%) of worldwide terrorist attack patterns.

*Cyberterrorism* - According to the FBI, cyberterrorism is any "premeditated, politically motivated attack against information, computer systems, computer programs, and data which results in violence against non-combatant targets by sub-national groups or clandestine agents." As nations and critical infrastructure become more dependent on computer networks for their operations, new vulnerabilities are created. A cyberterrorist attack is designed to cause physical violence or extreme financial harm. Possible cyberterrorist targets include the banking industry, military installations, power plants, air traffic control centers, and water systems but could be against any facility that relies on computers, computer systems, and programs for their operations.

*Active shooter* - The U.S. Department of Homeland Security defines the active shooter as "an individual actively engaged in killing or attempting to kill people in a confined and populated area; in most cases, active shooters use firearms, and there is no pattern or method to their selection of victims." Active shooters may also use explosive devices during assaults to increase the likelihood of casualties or to commit suicide. Most incidents occur at locations in which the killers find little impediment in pressing their attack. Locations are generally described as soft targets that have limited security measures to protect members of the public. In most instances, shooters commit suicide, are shot by police, or surrender when confrontation with responding law enforcement becomes unavoidable.

**History**

No data exists to show that the City experienced acts of terrorism. The history of terrorism on U.S. soil includes the large-scale attacks of September 11, 2001 on the World Trade Center in New York and the Pentagon in Washington, DC, and the ensuing anthrax attacks, the 1995 bombing of the Alfred P. Murrah Federal Building in Oklahoma City, and the earlier bombing of the World Trade Center in 1993. There have been numerous smaller scale shootings, bombings, and fires that have been labeled as terrorist incidents.

A terrorist attack, consisting of a mass shooting and an attempted bombing, occurred at the Inland Regional Center in San Bernardino, California, on December 2, 2015. The perpetrators targeted a San Bernardino County Department of Public Health training event and Christmas party of about eighty (80) employees in a rented banquet room. Fourteen (14) people were killed and twenty-two (22) others were seriously injured.

On April 10, 2017, a shooting occurred inside a North Park Elementary School special education classroom in San Bernardino, California. The shooting was an apparent murder–suicide and an act of domestic violence. Three (3) people - the gunman, his wife (who taught at the school), and a student standing behind her - died from their wounds. Another student was wounded.

**Location**

The form and locations of many natural hazards are identifiable and, even in some cases, predictable. However, there is no defined geographic boundary for terrorism. Based on previous events, it is presumed that critical facilities and services and large gatherings of people are at higher risk. Public transportation facilities have been a repeated target of terrorists. This is due to the open nature of the facilities, the large numbers of people that use them and the paralyzing affects that terrorist attacks have on communities' ability to provide transportation for daily life. Terrorist attacks on transportation systems thus have an impact that is much greater than to loss of human life and injuries and the damage done to infrastructure. By shutting down vital services and requiring increased security, they have a disproportionate economic cost.

**Extent**

The damage caused by a terror attack is dependent on the method of attack. Large bomb attacks could destroy major infrastructure, kill many people, and disrupt regional functioning for a

significant time. Cyberterrorism would cause very different types of damage, possibly severely hampering local government operations and local business with no direct injuries or loss of life. In addition to direct physical damage, terrorist attacks breed fear. Even an unsuccessful attempt to attack the region would seriously impact the comfort level of residents and could affect local business.

**Regulatory Environment**

There are numerous laws and regulations that relate to terrorism both at the state and federal levels. Key laws that are particularly applicable to the City are:

- 18 United States Code Title 113B Section 2323f which describes prohibitions for bombings of places of public use, government facilities, public transportation systems and infrastructure facilities;
- The Critical Infrastructure Information Act of 2002 (CII Act) facilitates greater sharing of critical infrastructure information among the owners and operators of the critical infrastructures and government entities with infrastructure protection responsibilities, thereby reducing the nation's vulnerability to terrorism.

**Probability of Future Occurrences**

The time and place of individual terrorist acts cannot be forecast with great accuracy. However, anti-terrorist organizations such as local law enforcement, the Northern California Regional Intelligence Center and federal agencies work collaboratively to detect, deter, and disrupt potential terrorist activity. Terrorists can strike not just large cities, but in any community of any size. While no amount of planning and mitigation can remove 100 percent (100%) of the risk from terrorism, hazard mitigation and preparedness can help reduce the risk. Given the lack of information on observed historical damages, frequency of occurrence, intensity and damage parameters, no estimate is available for the probability of a future occurrence of a terrorist event.

It is not possible to estimate the probability of a terrorist attack. The approach experts use to prioritize mitigation and preparedness efforts is to identify critical sites and assess the vulnerability of these sites to terrorist attack. Vulnerability of these sites is determined subjectively by considering factors such as visibility (e.g. does the public know this facility exists in this location?), accessibility (e.g. is it easy for the public to access this site?) and occupancy (e.g. is there a potential for mass casualties at this site?).

## 5.5 Vulnerability and Risk Assessment

This section of the HMP meets requirements for hazard profiles and a risk assessment, as provided in the Code of Federal Regulations.

**FEMA REGULATION CHECKLIST: RISK ASSESSMENT**

**Hazard Identification**

**44 CFR § 201.6(c)(2)(i):** The risk assessment shall include a description of the type of all natural hazards that can affect the jurisdiction.

**Elements**

**B1.** Does the Plan include a description of the type, location, and extent of all natural hazards that can affect the jurisdiction? Requirement § 201.6(c)(2)(i).
**B2.** Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for the jurisdiction? See 44 CFR § 201.6(c)(2)(i).
**B3.** Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? Requirement § 201.6(c)(2)(ii).
**B4.** Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? Requirement § 201.6(c)(2)(ii).

Source: FEMA, *Local Mitigation Planning Handbook Review Tool,* March 2013.

**Populations and Values at Risk**

Residential population data for the City was obtained from the State of California Department of Finance E-1 Population Estimates for Cities, Counties, and the State — January 1, 2019/2020. The population is estimated to be 126,432. The 2019 Southern California Association of Governments (SCAG) Regional Council reported the building inventory in Victorville included 38,135 residential units.

### 5.5.1 Identification of Critical Facilities and Assets

The location and operations of high-risk facilities such as critical infrastructures and key assets in or near Victorville are a significant concern with respect to a disaster. The planning team used FEMA's "Public Assistance Guide" (FEMA 322) that defines critical facilities 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 this list: critical facilities such as City operations and public safety; high potential loss facilities such as businesses, churches, schools, and facilities with hazardous materials; and critical infrastructure such as streets and bridges, airports, and oil refineries. **Table 5-12** lists the critical facilities for the 2021 HMP.

**Table 5-12: City Critical Facilities**

| Facility Name | Category | Site Purpose |
|---|---|---|
| City Hall | City Operations | Seat of Government |
| City Hall and Various | City Operations | IT Servers and Equipment |
| City EOC (in City Hall) | City Operations | Emergency Operations Center |
| Southern California Logistics Airport Fire Station 319 | Public Safety | Fire Response |
| Fire Station 311 | Public Safety | Fire Response |
| Fire Station 312 | Public Safety | Fire Response |
| Fire Station 313 | Public Safety | Fire Response |
| Fire Station 314 | Public Safety | Fire Response |
| Fire Station 315 | Public Safety | Fire Response |
| Desert Valley Hospital | Public Health | Hospital |

| | | |
|---|---|---|
| Victor Valley Comm Hospital | Public Health | Hospital |
| San Bernardino County Sheriff - Victorville City Station | Public Safety | Law Enforcement |
| San Bernardino County Sheriff - Victor Valley Station and Courthouse | Public Safety | Law Enforcement/Civil Government |
| Public Works Yard | City Operations | City Property Maintenance |
| Victorville Activities Center | Community Center | Potential Shelter Site |
| Hook Park Community Center | Community Center | Potential Shelter Site |
| Sunset Ridge Park Community Center | Community Center | Potential Shelter Site |
| Westwind Sports Center | Community Center | Potential Shelter Site |
| Victorville Water District Office | Utility | Water Treatment and Distribution |
| Victorville Water District Arsenic Treatment Facility La Mesa Road | Utility | Water Treatment and Distribution |
| Victorville Water District Arsenic Treatment Facility Elevado Road | Utility | Water Treatment and Distribution |
| Victorville Water District Arsenic Treatment Facility Balsam Road | Utility | Water Treatment and Distribution |
| Water Reservoir | Utility | |
| Waste Water Treatment Plan | Utility | |
| Waste Water Lift Station | Utility | |
| Southern California Logistics Airport | Critical Transportation | |
| Well # 102 | Utility | Water Source |
| Well # 105 | Utility | Water Source |
| Well # 119 | Utility | Water Source |
| Well # 123 | Utility | Water Source |
| Well #126 | Utility | Water Source |
| Well # 137 | Utility | Water Source |
| Well # 138 | Utility | Water Source |
| Well # 140 | Utility | Water Source |
| Well # 141 | Utility | Water Source |
| Well # 143 | Utility | Water Source |
| Well # 144 | Utility | Water Source |
| Well F | Utility | Water Source |
| Well G | Utility | Water Source |
| Well H | Utility | Water Source |
| Well K | Utility | Water Source |
| Well # 129 | Utility | Water Source |
| Well # 201 | Utility | Water Source |
| Well # 203 | Utility | Water Source |
| Well # 204 | Utility | Water Source |

| | | |
|---|---|---|
| Well # 205 | Utility | Water Source |
| Well # 206 | Utility | Water Source |
| Well # 207 | Utility | Water Source |
| Well # 208 | Utility | Water Source |
| Well # 209 | Utility | Water Source |
| Well # 212 | Utility | Water Source |
| Well # 102 | Utility | Water Source |
| Adelanto Sheppard School | School | Education/Potential Shelter |
| Aspen Christian | School | Education/Potential Shelter |
| Brentwood Christian | School | Education/Potential Shelter |
| Brentwood Elementary School | School | Education/Potential Shelter |
| Challenger Scholl | School | Education/Potential Shelter |
| Cobalt Middle School | School | Education/Potential Shelter |
| Del Rey Elementary School | School | Education/Potential Shelter |
| Discovery School of the Arts | School | Education/Potential Shelter |
| District Office | School | Education/Potential Shelter |
| District Office | School | Education/Potential Shelter |
| District Yard | School | Education/Potential Shelter |
| Eagle Ranch Elementary School | School | Education/Potential Shelter |
| Endeavour School of Exploration | School | Education/Potential Shelter |
| Faith Community Christian | School | Education/Potential Shelter |
| Galileo Academy 101 | School | Education/Potential Shelter |
| Goodwill High School | School | Education/Potential Shelter |
| Green Tree East Elementary | School | Education/Potential Shelter |
| Green Tree Special Education | School | Education/Potential Shelter |
| Hollyvale School | School | Education/Potential Shelter |
| Hook Junior High School | School | Education/Potential Shelter |
| Irwin Elementary School | School | Education/Potential Shelter |
| Kids Discovery World, LLC | School | Education/Potential Shelter |
| Lakeside Academy | School | Education/Potential Shelter |
| Lakeview Junior High School | School | Education/Potential Shelter |
| Liberty Elementary School | School | Education/Potential Shelter |
| Lomitas Elementary School | School | Education/Potential Shelter |
| Maintenance Department | School | Education/Potential Shelter |
| Mesa Linda Middle School | School | Education/Potential Shelter |
| Mojave Vista Elementary School | School | Education/Potential Shelter |
| Morgan Kincaid School | School | Education/Potential Shelter |
| Nutrition Services | School | Education/Potential Shelter |
| Performance Academy | School | Education/Potential Shelter |

| | | |
|---|---|---|
| Puesta Del Dol Elementary | School | Education/Potential Shelter |
| Red Cross Building | School | Education/Potential Shelter |
| Silverado High School | School | Education/Potential Shelter |
| Susie Mathews Academy | School | Education/Potential Shelter |
| Transportation Department | School | Education/Potential Shelter |
| University Preparatory | School | Education/Potential Shelter |
| Victor Primary School | School | Education/Potential Shelter |
| Victor Valley Christian Elementary | School | Education/Potential Shelter |
| Victor Valley Christian High School | School | Education/Potential Shelter |
| Victor Valley Desert Christian | School | Education/Potential Shelter |
| Victor Valley High School | School | Education/Potential Shelter |
| Victor Valley Junior High School | School | Education/Potential Shelter |
| Victor Valley SDA | School | Education/Potential Shelter |
| Village Elementary School | School | Education/Potential Shelter |
| Vista Verde Elementary School | School | Education/Potential Shelter |
| West Creek Elementary School | School | Education/Potential Shelter |
| Air Expressway 0.2 miles west of National Trails Highway | Critical Transportation | Bridge |
| Bear Valley Rd. BNSF Railroad | Critical Transportation | Bridge |
| Bear Valley Rd. Mojave River | Critical Transportation | Bridge |
| Green Tree Blvd. BNSF Railroad | Critical Transportation | Bridge |
| Mineral Rd. BNSF Railroad | Critical Transportation | Bridge |
| National Trails Highway Mojave River | Critical Transportation | Bridge |
| National Trails Highway 0.2 miles north of Air Expressway | Critical Transportation | Bridge |
| Yucca Loma Rd. Mojave River | Critical Transportation | Bridge |
| I-15 Bear Valley Rd. | Critical Transportation | Bridge |
| I-15 La Mesa Rd. / Nisqualli Rd. | Critical Transportation | Bridge |
| I-15 Palmdale Rd. (SR-18) | Critical Transportation | Bridge |
| I-15 Roy Rogers Dr. | Critical Transportation | Bridge |
| I-15 Mojave Dr. | Critical Transportation | Bridge |
| I-15 BNSF Railroad (between D St. (SR-18) and E St.) | Critical Transportation | Bridge |
| I-15 Mojave River | Critical Transportation | Bridge |
| I-15 Stoddard Wells Rd. | Critical Transportation | Bridge |
| D St. (SR-18) Mojave River & BNSF Railroad | Critical Transportation | Bridge |
| US-395 Aqueduct | Critical Transportation | Bridge |

The City Development Department maintains an extensive list of childcare facilities, churches, elder care facilities and facilities containing hazardous materials.

### 5.5.2 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 Historic Preservation Committee. The Historic Preservation Committee maintains a current list. There are many current local designated Historic Points of Interest in Old Town such as the Chantry House, the Old Victor School and the Barrel House.

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.

Several endangered or threatened plant and wildlife species reside within the City. They include:

- California red-legged frog (Rana draytonii) - Status: Threatened (F);
- Desert tortoise (Gopherus agassizii) - Status: Threatened (S, F);
- Least Bell's vireo (Vireo bellii pusillus): - Status: Endangered (S, F);
- Mohave Tui chub (Gila bicolor mohavensis) - Status: Endangered (S, F);
- Mohave ground squirrel (Xerospermophilus mohavensis) - Status: Endangered (S);
- Southwestern Willow flycatcher (Empidonax traillii extimus) - Status: Endangered (S, F);
- Western yellow-billed cuckoo (Coccyzus americanus occidentalis) - Status: Endangered (S).

(S = State, F = Federal)

### 5.5.3 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 5-12** provides an analysis of City's critical infrastructure.

## Table 5-12: Hazard Susceptibility of City Owned Facilities

| Critical Facilities | Impacting Hazards | | | | | | | | | | | | | Value | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Aircraft Accident 10% | Climate Change 5% | Dam Inundation 50% | Drought 10% | Earthquake/Seismic 25% | Excess Heat 5% | Fire/ Wildland Fire 5% | Flood / Flash Flood 10% | High winds/Tornado/Storm 5% | Public Health/Pandemic* | Pipeline/Transportation/HazMat 5% | Power Failure/PSPS* | Terrorism 5% | Facility | Contents | Total Value |
| City Hall | | X | | | X | | X | | X | | X | X | X | 32,274,714 | 5,023,403 | 37,440,911 |
| Fire Station 311 | | X | | | X | | X | | X | | X | X | X | 1,722,017 | 394,316 | 2,116,333 |
| Fire Station 312 | | X | | | X | | X | | X | | X | X | X | 2,471,575 | 332,017 | 2,803,592 |
| Fire Station 313 | | X | | | X | | X | | X | | X | X | X | 787,207 | 85,388 | 872,595 |
| Fire Station 314 | | X | | | X | | X | | X | | X | X | X | 984,011 | 103,392 | 1,087,403 |
| Fire Station 315 | | X | | | X | | X | | X | | X | X | X | 2,300,949 | | 2,300,949 |
| Police Station | | X | | | X | | X | | X | | X | X | X | 3,831,249 | 414,996 | 4,246,245 |
| Public Works Facilities Yard/Office | | X | | | X | | X | | X | | X | X | X | 973,768 | 194,983 | 1,168,751 |
| Community Center 15615 Eighth St. | | X | | | X | X | X | | X | | X | X | X | 2,069,673 | 23,662 | 2,093,335 |
| Victorville Activities Center | | X | | | X | | X | | X | | X | X | X | 4,003,215 | 106,520 | 4,129,735 |
| Hook Park Community Center | | X | | | X | X | X | | X | | X | X | X | 5,412,054 | 377,851 | 5,889,905 |
| Avalon Park Restrooms/ Storage | | X | | | X | | X | | X | | X | X | | 190,268 | | 190,268 |
| Doris Davies Park Racquetball Office | | X | | | X | | X | | X | | X | X | X | 984,011 | 70,064 | 1,054,075 |
| Doris Davies Park Restroom | | X | | | X | | X | | X | | X | X | | 168,982 | | 168,982 |
| Doris Davies Park Bad News Bears Den #1 | | X | | | X | | X | | X | | X | X | X | 269,839 | 42,544 | 312,383 |
| Doris Davies Park Bad News Bears Den #2 | | X | | | X | | X | | X | | X | X | X | 220,744 | 42,544 | 263,288 |
| Doris Davies Park Storage | | X | | | X | | X | | X | | X | X | X | 91,830 | | 91,830 |
| Doris Davis Park Rental Duplexes | | X | | | X | | X | | X | | X | X | X | 274,626 | | 274,626 |
| Grady Trammel Park Restroom Storage | | X | | | X | | X | | X | | X | X | X | 135,885 | | 135,885 |
| La Haciendas Park Restroom and Canopy | | X | | | X | | X | | X | | X | X | X | 327,905 | | 327,905 |
| Mesa Linda Park Concession Stand | | X | | | X | | X | | X | | X | X | X | 291,398 | | 291,398 |
| Mesa Linda Park Maintenance Building | | X | | | X | | X | | X | | X | X | X | 126,981 | | 126,981 |

| Critical Facilities | Impacting Hazards | | | | | | | | | | | | | Value | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Aircraft Accident 10% | Climate Change 5% | Dam Inundation 50% | Drought 10% | Earthquake/Seismic 25% | Excess Heat 5% | Fire/ Wildland Fire 5% | Flood / Flash Flood 10% | High winds/Tornado/Storm 5% | Public Health/Pandemic* | Pipeline/Transportation/HazMat 5% | Power Failure/PSPS* | Terrorism 5% | Facility | Contents | Total Value |
| Mojave Vista Park Concession Stand | | X | | | X | | X | | X | | X | X | X | 291,398 | | 291,398 |
| Mojave Vista Park Maintenance Building | | X | | | X | | X | | X | | X | X | X | 126,981 | | 126,981 |
| City Sign | | X | | | X | | X | | X | | X | X | X | 236,099 | | 236,099 |
| Sunset Ridge Park Maintenance Building | | X | | | X | | X | | X | | X | X | X | 296,088 | | 296,088 |
| Sunset Ridge Park Community Center | | X | | | X | X | X | | X | | X | X | X | 588,803 | | 588,803 |
| Sunset Ridge Park Concessions and Restrooms | | X | | | X | | X | | X | | X | X | X | 331,947 | | 331,947 |
| Sunset Ridge Park Shade Pavilion | | X | | | X | | X | | X | | X | X | | 197,954 | | 197,954 |
| Westwind Sports Center | | X | | | X | | X | | X | | X | X | X | 4,176,483 | | 4,176,483 |
| Westwind Sports Center and Golf Course Maintenance Buildings (2) | | X | | | X | | X | | X | | X | X | X | 80,400 | | 80,400 |
| Schmidt Park Restroom and Picnic Pavilion | | X | | | X | | X | | X | | X | X | X | 265,847 | | 265,847 |
| Maintenance Building 999 | | X | | | X | | X | | X | | X | X | X | 352,367 | | 352,367 |
| Greentree Golf Course Clubhouse | | X | | | X | | X | | X | | X | X | X | 10,009,927 | 482,189 | 10,492,116 |
| Greentree Golf Course Maintenance Bldg. | | X | | | X | | X | | X | | X | X | X | 710,222 | | 710,222 |
| Greentree Golf Course Maintenance Bldg. #2 | | X | | | X | | X | | X | | X | X | X | 226,302 | 358,982 | 585,284 |
| Greentree Golf Course Pump House 1, 2 and 3 | | X | | | X | | X | | X | | X | X | X | 374,886 | 650,946 | 1,025,724 |
| Greentree Golf Course Restrooms 1 and 2 | | X | | | X | | X | | X | | X | X | X | 259,286 | | 259,286 |
| Eva Dell Park Restrooms Storage | | X | | | X | | X | | X | | X | X | X | 411,158 | | 411,158 |
| Center Street Park Restrooms Concession Stand | | X | | | X | | X | | X | | X | X | X | 206,137 | 14,465 | 220,602 |
| Liberty Park Restrooms Concession Stand | | X | | | X | | X | | X | | X | X | X | 586,511 | 70,907 | 657,418 |
| Nature Center Restrooms | | X | | | X | | X | | X | | X | X | X | 21,739 | 14,655 | 36,394 |
| Nature Center | | X | | | X | X | X | | X | | X | X | X | 296,221 | 14,706 | $310,927 |

| Critical Facilities | Impacting Hazards | | | | | | | | | | | | | Value | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Aircraft Accident 10% | Climate Change 5% | Dam Inundation 50% | Drought 10% | Earthquake/Seismic 25% | Excess Heat 5% | Fire/ Wildland Fire 5% | Flood / Flash Flood 10% | High winds/Tornado/Storm 5% | Public Health/Pandemic* | Pipeline/Transportation/HazMat 5% | Power Failure/PSPS* | Terrorism 5% | Facility | Contents | Total Value |
| Nature Center Gazebo | | X | | | X | | X | | X | | X | X | X | 84,682 | | 84,682 |
| Nature Center Observation Shelter | | X | | | X | | X | | X | | X | X | X | 48,522 | | 48,522 |
| VMUS Center | | X | | | X | | X | | X | | X | X | X | 341,503 | | 341,503 |
| Old Victor School (Office) | | X | | | X | | X | | X | | X | X | X | 2,140,092 | | 2,140,092 |
| Library | | X | | | X | | X | | X | | X | X | X | 2,119,494 | 121,497 | 2,240,991 |
| Library Books | | X | | | X | | X | | X | | X | X | X | | 4,716,230 | 4,716,230 |
| Town Arch | | X | | | X | | X | | X | | X | X | X | 90,185 | | 90,185 |
| Victor Valley Transportation Center | | X | | | X | | X | | X | | X | X | X | 1,871,787 | | 1,921,787 |
| CNG Fueling Station | | X | | | X | | X | | X | | X | X | X | 449,792 | | 449,792 |
| Victorville Water Admin Building | | X | | | X | | X | | X | | X | X | X | 889,151 | | 889,151 |
| Victorville Water District Arsenic Treatment Facility Avenal | | X | | X | X | | X | | X | | X | X | X | 744,347 | | 744,347 |
| Arsenic Booster Station Elevado | | X | | X | X | | X | | X | | X | X | X | 154,754 | | 154,754 |
| Victorville Water District Arsenic Treatment Facility Balsam Road | | X | | X | X | | X | | X | | X | X | X | 1,588,827 | 3,561,183 | 5,150,010 |
| Victorville Water District Arsenic Treatment Facility La Mesa Road | | X | | X | X | | X | | X | | X | X | X | | 3,380,549 | 3,380,549 |
| Victorville Water District Arsenic Treatment Facility Elevado Road | | X | | X | X | | X | | X | | X | X | X | 1,906,634 | 5,177,092 | 7,083,726 |
| Victorville Water Pump and Pipeline Deluge System | | X | | X | X | | X | | X | | X | X | X | 2,521,570 | | 2,521,570 |
| Victorville Water Warehouse 6th St. | | X | | X | X | | X | | X | | X | X | X | 239,503 | | 239,503 |
| Victorville Water Warehouse Hesperia Rd. | | X | | X | X | | X | | X | | X | X | X | 54,012 | 17,490 | 71,502 |
| Victorville Water Modular Unit Hesperia Rd. | | X | | X | X | | X | | X | | X | X | X | | 91,044 | 91,044 |
| Victorville Water Wastewater Treatment Plan Helendale Rd. | | X | | X | X | | X | X | X | | X | X | X | 1,109,520 | 2,224,402 | 3,333,922 |

| Critical Facilities | Impacting Hazards | | | | | | | | | | | | | Value | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Aircraft Accident 10% | Climate Change 5% | Dam Inundation 50% | Drought 10% | Earthquake/Seismic 25% | Excess Heat 5% | Fire/ Wildland Fire 5% | Flood / Flash Flood 10% | High winds/Tornado/Storm 5% | Public Health/Pandemic* | Pipeline/Transportation/HazMat 5% | Power Failure/PSPS* | Terrorism 5% | Facility | Contents | Total Value |
| Victorville Water Well 109 | | X | X | X | X | | X | X | X | | X | X | X | | 66,222 | 66,222 |
| Victorville Water Well 116 | | X | X | X | X | | X | X | X | | X | X | X | | 44,474 | 44,474 |
| Victorville Water Well 118 | | X | X | X | X | | X | X | X | | X | X | X | | 33,132 | 33,132 |
| Victorville Water Well 119 | | X | X | X | X | | X | X | X | | X | X | X | | 32,143 | 32,143 |
| Victorville Water Well 120 | | X | X | X | X | | X | X | X | | X | X | X | | 56,451 | 56,451 |
| Victorville Water Well 121 | | X | X | X | X | | X | X | X | | X | X | X | | 59,142 | 59,142 |
| Victorville Water Well 122 | | X | X | X | X | | X | X | X | | X | X | X | | 72,710 | 72,710 |
| Victorville Water Well 123 | | X | X | X | X | | X | X | X | | X | X | X | | 88,387 | 88,397 |
| Victorville Water Well 126 | | X | X | X | X | | X | X | X | | X | X | X | | 71,734 | 71,734 |
| Victorville Water Well 127 | | X | X | X | X | | X | X | X | | X | X | X | | 41,768 | 41,768 |
| Victorville Water Well 128 | | X | X | X | X | | X | X | X | | X | X | X | | 75,353 | 75,353 |
| Victorville Water Well 129 | | X | X | X | X | | X | X | X | | X | X | X | | 74.734 | 74,734 |
| Victorville Water Well 130 | | X | X | X | X | | X | X | X | | X | X | X | | 83,184 | 83,184 |
| Victorville Water Well 131 | | X | X | X | X | | X | X | X | | X | X | X | | 63,573 | 63,573 |
| Victorville Water Well 132 | | X | X | X | X | | X | X | X | | X | X | X | | 74,328 | 74,328 |
| Victorville Water Well 133 | | X | X | X | X | | X | X | X | | X | X | X | | 67,494 | 67,494 |
| Victorville Water Well 134 | | X | X | X | X | | X | X | X | | X | X | X | | 70,904 | 70,904 |
| Victorville Water Well135 | | X | X | X | X | | X | X | X | | X | X | X | | 59,941 | 59,941 |
| Victorville Water Well136 | | X | X | X | X | | X | X | X | | X | X | X | | 70,643 | 70,643 |
| Victorville Water Well137 | | X | X | X | X | | X | X | X | | X | X | X | | 59,222 | 59,222 |
| Victorville Water Well138 | | X | X | X | X | | X | X | X | | X | X | X | | 720,470 | 720,470 |
| Victorville Water Well139 | | X | X | X | X | | X | X | X | | X | X | X | | 926,465 | 926,465 |
| Victorville Water Well140 | | X | X | X | X | | X | X | X | | X | X | X | | 943.708 | 943.708 |
| Victorville Water Well 141 | | X | X | X | X | | X | X | X | | X | X | X | | 818,336 | 818,336 |
| Victorville Water Well 201 | | X | X | X | X | | X | X | X | | X | X | X | | 243.563 | 243l563 |
| Victorville Water Well 203 | | X | X | X | X | | X | X | X | | X | X | X | | 253,914 | 253,914 |
| Victorville Water Well 204 | | X | X | X | X | | X | X | X | | X | X | X | | 648,406 | 648,406 |
| Victorville Water Well 205 | | X | X | X | X | | X | X | X | | X | X | X | | 153,844 | 153,844 |
| Victorville Water Well 206 | | X | X | X | X | | X | X | X | | X | X | X | | 196,834 | 196,834 |
| Victorville Water Well 207 | | X | X | X | X | | X | X | X | | X | X | X | | 158,273 | 158,273 |

| Critical Facilities | Impacting Hazards | | | | | | | | | | | | | Value | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Aircraft Accident 10% | Climate Change 5% | Dam Inundation 50% | Drought 10% | Earthquake/Seismic 25% | Excess Heat 5% | Fire/ Wildland Fire 5% | Flood / Flash Flood 10% | High winds/Tornado/Storm 5% | Public Health/Pandemic* | Pipeline/Transportation/HazMat 5% | Power Failure/PSPS* | Terrorism 5% | Facility | Contents | Total Value |
| Victorville Water Well 208 | | X | X | X | X | | X | X | X | | X | X | X | | 543.609 | 543,609 |
| Victorville Water Well 209 | | X | X | X | X | | X | X | X | | X | X | X | | 836,504 | 836,504 |
| Victorville Water Well 212 | | X | X | X | X | | X | X | X | | X | X | X | | 1,452,004 | 1,452,004 |
| Victorville Water Well Grady Trammel | | X | X | X | X | | X | X | X | | X | X | X | | 22,930 | 22,930 |
| Stoddard Wells Sewer Lift Station | | X | X | X | X | | X | X | X | | X | X | X | 1,787,433 | | 1,787,433 |
| Ground Water Production Well Peral St. | | X | X | X | X | | X | X | X | | X | X | X | | 1,507,500 | 1,507,500 |
| IT Equipment at multiple locations | | X | | | X | | X | | X | | X | X | X | 5,878,890 | | 5,878,890 |

* Public health/pandemic and power failures/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.

### 5.5.4 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 5-13** 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 5-13: Potential Losses**

| Hazard Type | # of Critical Facilities | Percent Damage | Replacement Value | Content Value | Estimated Replacement Loss | Estimated Content Loss | Total Estimated Loss |
|---|---|---|---|---|---|---|---|
| 1. Aircraft Accident | 100 | 5 | $103,980,355 | $36,601,791 | $5,199,018 | $1,830,090 | $7,029,107 |
| 2. Climate Change | 100 | 5 | $103,980,355 | $36,601,791 | $5,199,018 | $1,830,090 | $7,029,107 |
| 3. Dam Inundation | 36 | 50 | $1,787,433 | $8,888,090 | $893,717 | $4,444,045 | $5,337,762 |
| 4. Drought | 46 | 10 | $10,106,600 | $23,339,850 | $1,010,660 | $2,333,985 | $3,344,645 |
| 5. Earthquake/ Seismic | 100 | 25 | $103,980,355 | $36,601,791 | $25,995,089 | $9,150,448 | $35,145,537 |
| 6. Excessive Heat | 4 | 5 | $8,366,751 | $416,219 | $418,338 | $20,811 | $439,149 |
| 7. Fire/Wildfire | 100 | 5 | $103,980,355 | $36,601,791 | $5,199,018 | $1,830,090 | $7,029,107 |
| 8. Flood/ Flashflood | 37 | 10 | 2,896,953 | $11,112,493 | $289,695 | $1,111,249.26 | $1,400,945 |
| 9. High Winds/ Tornado | 100 | 5 | $103,980,355 | $36,601,791 | $5,199,018 | $1,830,090 | $7,029,107 |
| 10. Pandemic* | | | | | | | |
| 11. Pipeline Rupture HAZMAT Release | 100 | 5 | $103,980,355 | $36,601,791 | $5,199,018 | $1,830,090 | $7,029,107 |
| 12. Power Failure/ PSPS* | 100 | | $103,980,355 | $36,601,791 | | | |
| 13. Terrorism | 100 | 5 | $103,980,355 | $36,601,791 | $5,199,018 | $1,830,090 | $7,029,107 |

*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 measures, emergency response, lost revenue and human loss of life and injury.

Vulnerability Analysis of the Southern California Logistics Airport

A separate vulnerability analysis of the SCLA was conducted. This was done because the SCLA is a joint powers authority (JPA) with its own charter. It is a single facility with multiple structures located closely together. It is not affected by some of the hazards that may impact the City.

Structures at the SCLA include the runways and taxiways, aprons, hangers, maintenance buildings, navigation equipment, offices, fire station, fuel tanks and pipelines, storage and others. A large part of the former Air Force Base housing, conference center and personnel support buildings are also included. Most are designated for demolition.

While a separate CPRI was not prepared for the SCLA, a list of applicable hazards was developed and potential losses were calculated based on the total value of the property. Applicable hazards are:

1. Aircraft Accident
2. Earthquake/ Seismic Hazard
3. Fire/ Wildland Fire
4. Flood

5. High Winds/ Tornado
6. Pipeline Failure/ Transportation Accident
7. Power Failure /PSPS
8. Terrorism

**Table 5-14** shows the predicted loss analysis for each of the above hazards affecting the SCLA. 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 5-14: Predicted Losses**

| Hazard Type | # of Critical Facilities | Percent Damage | Replacement Value | Content Value | Estimated Replacement Loss | Estimated Content Loss | Total Estimated Loss |
|---|---|---|---|---|---|---|---|
| 1. Aircraft Accident | N/A | 10 | $187,810,435 | $6,740,0000 | $18,781,044 | $674,000 | $19,455,044 |
| 2. Earthquake/ Seismic Hazard | N/A | 25 | $187,810,435 | $6,740,0000 | $46,902,610 | $1,675,000 | $48,577,610 |
| 3. Fire/ Wildland Fire | N/A | 10 | $187,810,435 | $6,740,0000 | $18,781,044 | $674,000 | $19,455,044 |
| 4. Flood | N/A | 10 | $187,810,435 | $6,740,0000 | $9,390,522 | $335.000 | $9,725.522 |
| 5. High Winds/ Tornado | N/A | 5 | $187,810,435 | $6,740,0000 | $9,390,522 | $335,000 | $19,455,044 |
| 6. Pipeline Failure/ Transportation Accident | N/A | 10 | $187,810,435 | $6,740,0000 | $18,781,044 | $674,000 | $19,455,044 |
| 7. Power Failure/PSPS | N/A | | $187,810,435 | $6,740,0000 | | | |
| 8. Terrorism | N/A | 20 | $187,810,435 | $6,740,0000 | $37,562,088 | $1,348,000 | $38,910,088 |

# SECTION 6: MITIGATION STRATEGY

## 6.1 Hazard Mitigation Statement

The 2021 HMP represents the City's commitment to create a safer, more resilient community by taking actions to reduce risk and by committing resources to lessen the effects of hazards on the people and property of the City.

## 6.2 Hazard Mitigation Goals and Objectives

Mitigation goals are guidelines that represent what the community wants to accomplish through the mitigation plan. Goals are broad statements that represent a long-term, community-wide vision. The planning team reviewed example goals and objectives from the previous HMP, and determined which goals best met the City's objectives for mitigation. The 2021 HMP created a new streamline set of hazard mitigation goals. In addition to the overarching hazard mitigation goals, the City worked with City Planning to develop the strategies in alignment with the City General Plan Safety Element. The goals align with the hazards in the 2008 General Plan and will be further included with the current General Plan Update (2021-22). They reflect input provided by stakeholders and the public. **Table 6-1** lists the goals for the 2021 HMP.

**Table 6-1: Hazard Mitigation Goals**

| 2021 Goals |
|---|
| Goal 1: Protect life, property, and reduce potential injuries from natural, technological, and human-caused hazards, including the catastrophic threats posed by the DWR owned Cedar Springs Dam and the USACE owned Mohave Forks Dam which are high hazard dams, and a major earthquake. |
| Goal 2: Improve public understanding, support of and the need for hazard mitigation measures. |
| Goal 3: Promote disaster resistance for Victorville's natural, existing, and future built environment. |
| Goal 4: Strengthen partnerships and collaboration to implement hazard mitigation activities. |
| Goal 5: Enhance the City's ability to effectively and immediately respond to disasters. |

## 6.3 Mitigation Actions/Projects and Implementation Strategy

Mitigation actions are specific activities or projects that serve to meet the goals that the community has identified. Mitigation actions and projects are more specific than goals or objectives, and often include a mechanism, such as an assigned timeframe, to measure the success and ensure the actions are accomplished. The planning team conducted a review of the mitigation actions and strategies from the 2012 HMP. With information from the risk analysis, capability assessment, and status of the actions implemented since the 2012 HMP, the planning team integrated outstanding action items with other City planning efforts to develop new mitigation actions and projects to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure. Current mitigation projects identified by the City are included in **Table 6-2**.

The requirements for prioritization of mitigation actions, as provided in the federal regulations implementing the Stafford Act as amended by DMA 2000, are described below.

**FEMA REGULATION CHECKLIST: MITIGATION STRATEGY; PLAN REVIEW AND REVISION**

**Implementation of Mitigation Actions**

44 CFR § 201.6(c)(3)(iii): The mitigation strategy section shall include "an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction.

Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs."

**Element**

**C5.** Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost-benefit review), implemented, and administered by the jurisdiction? 44 CFR § 201.6(c)(3)(iii)

**Plan Review and Revision**

**44 CFR § 201.6(d)(3):** "A local jurisdiction must review and revise its plan to reflect…changes in priorities…"

Based on these criteria, the City prioritized potential mitigation projects and included them in the action plan discussed below in **Table 6-2**. The mitigation action plan developed by the planning team includes the action items that the City intends to implement during the next five (5) years, assuming funding availability. The action plan includes the implementing department, an estimate of the timeline for implementation, and potential funding sources.

### 6.3.1 Previous Mitigation Actions/Projects Assessment

FEMA REGULATION CHECKLIST: PLAN REVIEW AND REVISION

Progress in Local Mitigation Efforts

**44 CFR § 201.6(c)(d)(3):** "A local jurisdiction must review and revise its plan to reflect . . . progress in local mitigation efforts . . .."

Element

**D2.** Was the Plan revised to reflect progress in local mitigation efforts? 44 CFR § 201.6(d)(3).

*Source: FEMA, Local Mitigation Plan Review Tool, March 2013.*

The 2012 HMP contained thirty (30) mitigations actions. Many of the mitigation actions were completed or carried out to some degree or are considered ongoing. Some of the mitigation actions were duplicative, others were better categorized as emergency preparedness or recovery

activities, and others were either not addressed during the time period or were not feasible to accomplish. **Table 6-2** provides the status of mitigation actions from the 2012 HMP.

**Table 6-2: Mitigation Actions 2012**

| Table 6-2: Mitigation Actions 2012 Status | | |
|---|---|---|
| **Number** | **Activity** | **Status** |
| 1. | Continue to use development, building and fire codes to dictate building placement, water supply, fire protection and construction requirements. Fire prevention enforces fuel reduction and defensible space requirements. | Ongoing. Include in 2021 HMP. |
| 2. | Seek grant funding to perform a study of city vulnerability. | Ongoing. Include in 2021 HMP. |
| 3. | Continue updating city building codes as new technology and data becomes available. | Ongoing. Include in 2021 HMP. |
| 4. | Implement a defensible space public education program. | Ongoing. Include in 2021 HMP. |
| 5. | Designate Floodway and Floodplain areas as identified by FEMA on Flood Insurance Maps and Flood Boundary Maps as Floodway on Land Use Maps and Floodplain Overlays within the City's GIS. | The 2012 HMP has twenty (20) (Numbers 5-25) activities that address flooding and drainage related issues. These activities do not address specific projects but are regulatory or directive in nature. While many are ongoing, some overlap or are redundant. Those that are ongoing will be consolidated in the 2021 HMP. |
| 6. | Designated floodway areas shall be preserved for nonstructural uses through restrictions of the FW land use district. | Completed. |
| 7. | Require that all new development, including filling, grading and construction, proposed within designated floodplains have a submission of a written assessment prepared by a qualified hydrologist or engineer, in accordance with the latest "San Bernardino County Hydrology Manual" and the various detention basin policies to determine whether the development will significantly increase flood hazard and to show that all new structures will be adequately protected. Development shall be conditioned on receiving approval of this assessment by the City Engineer. | Ongoing. |
| 8. | Require that all new construction in the Floodplain Overlay areas be flood-proofed and, located and designed to allow unrestricted flow of floodwaters. | Ongoing. |
| 9. | Apply the Land Use Compatibility Chart and Master Plan of Drainage for the 100-Year Flood Plains when reviewing all discretionary and ministerial actions in the designated floodplain. | Ongoing. |
| 10. | As new overflow studies and mapping are completed and approved by either the City Engineer or the San | Ongoing. |

| | | |
|---|---|---|
| | Bernardino County Flood Control District, they shall supplement the FEMA mapping and shall be incorporated into Flood Hazard Overlay mapping. | |
| 11. | Timely application for FEMA mapping changes shall be initiated to reflect any additions to or alterations in identified Floodways or Floodplains by the City's Floodplain Management Administrator. | Ongoing and consolidate. |
| 12. | All City areas shall be continuously evaluated through the application of development conditions in the pre-construction flood hazard inspection process. | Ongoing and consolidate. |
| 13. | Site studies shall be performed in areas where development is proposed which have been tentatively identified as subject to flooding | Ongoing and consolidate. |
| 14. | Construction shall take place in compliance with study recommendations as described in site study required under action item #4 above | Action item #4 is not related to this activity. |
| 15. | Continue to identify natural drainage courses and designate City of Victorville Drainage Easements as a means to preserve natural drainage flow paths and/or constructed drainage facilities. | Ongoing. |
| 16. | Require identification, improvement and upgrading of critical facilities in flood hazard areas. | Ongoing and consolidate. |
| 17. | Require implementation of flood protection measures when any additions to the original structure are proposed. | Ongoing and consolidate. |
| 18. | Establish funding mechanisms when flood control facilities are warranted. | Ongoing and consolidate. |
| 19. | Surface run-off from new development shall be controlled by on-site measures including but not limited to the following:<br>a. Structural controls;<br>b. Good housekeeping will be the best management practice for construction site storm water runoff;<br>c. Restrictions regarding changes in topography, removal of vegetation, creation of impervious surfaces, and periods of construction such that the need for off-site flood and drainage control improvements is minimized and such that run-off from the development will not result in downstream flood hazards. | Ongoing and consolidate. |
| 20. | Establish a public information system through the Office of Emergency Services outlining emergency operations plans and measures to reduce personal losses in the event of a flood. | Complete. |
| 21. | Develop a flood warning system, where possible, through the County Flood Control District. | Complete. |
| | Develop flood plain inundation evacuation plans through the County Office of Emergency Services. | Ongoing. Include in 2021 HMP. Include for other hazards. |

| | | |
|---|---|---|
| 22. | Continue the development of intergovernmental coordination with cities, adjacent counties, the Army Corps of Engineers, and other agencies which have an interest in flood control projects that cross-jurisdictional boundaries. | Ongoing. Include in 2021 HMP. |
| 23. | Coordinate land use and flood control planning through staff contacts between the County Flood Control District, Special Districts and cities within the County, and through the annual review of the Capital Improvements Program. | Ongoing. Include in 2021 HMP. |
| 24. | Coordinate with the County in the preparation of local area drainage plans and establish funding mechanisms to provide the backbone drainage system for watershed areas within and affecting the City. | Ongoing and consolidate. |
| 25. | Turner Wash Trunk at Turner Wash north of Mojave Dr. Flooding at this location has required repair twice in 2010: January and December. Storm waters wash away cover for a stretch of sewer pipe adjacent. City Engineering states this location requires permanent repair by realigning the channel as shown on original plans for sewer. This realignment is referred to as the "future channel." This realignment was originally to be financed by private developers but has ceased due to the economic downturn. Closest estimate by the city is $800K USD. Some costs would be incurred by obtaining permits from US Corp of Army Engineers and other environmental agencies.<br>This project is the City's top priority. Should the sewer trunk fail due to erosion by flood waters 2000+ homes would be affected, raw sewage would be discharged into the Wash and several domestic wells could be contaminated. | Not complete. Include in 2021 HMP. Include detailed project description and cost. |
| 26. | Mitigate damage to the access road running along the Ossum Wash north of Capistrano Street and South of Rancho Road. FEMA funding has only allowed funds to restore the road to its original design. Seven (7) feet of the channel bottom has eroded since the channel was constructed in 2006. This makes FEMA funded repairs only a temporary fix, and leaves the site vulnerable to future damage.<br>Failure of the slopes will damage an existing levee and possibly the railbed for the future rail line. During the storm of December 2010, a fiber optic line and sewer main were exposed. | Not complete. Include in 2021 HMP. Include detailed project description and cost. |
| 27. | Resolve flooding on Bear Valley Road between Petaluma/Pecoima. Location experiences flooding during storms. | Complete |
| 28. | Mitigate wash-out problem at Eucalyptus, east of Cloverly. Location experiences flooding during storms. | Partially complete. Include in 2021 HMP. Include detailed project description and cost. |

### 6.3.2 New Mitigation Actions

Mitigation actions are specific activities or projects that serve to meet the goals that the community has identified. Mitigation actions and projects are more specific than goals or objectives, and often include a mechanism, such as an assigned time period, to measure the success and ensure the actions are accomplished. The planning team conducted a review of the mitigation actions and strategies from the 2009 HMP. With information from the risk assessment, capability assessment, and status of the actions implemented since the 2009 HMP, the planning team developed thirty-one (31) new mitigation actions and projects to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure.

**Table 6-3** lists the potential mitigation actions developed by the planning team. For each mitigation action, the following information is listed: mitigation goal, mitigation action description; mitigation type; hazard(s) addressed; and potential implementing City organization/s.

**Table 6-3: New Mitigation Activities**

| Table 6-3: New Mitigation Activities | | | | | |
|---|---|---|---|---|---|
| Goal | Action Item # | Action Description | Mitigation Type | Related Hazards | Implementing Organizations |
| **Goal 1: Protect life, property, and reduce potential injuries from natural caused hazards.** | 1.1 | Encourage private property owners of un-reinforced masonry structures to complete seismic retrofits. | Prevention | Seismic | Building Department |
| | 1.2 | Encourage seismic strength evaluations of critical facilities in the City to identify building integrity. | Prevention | Seismic | Building Department |
| | 1.3 | Evaluate City and non-City facilities identified as potential shelter sites for structural integrity. | Prevention | All Hazards | Building, Fire and, Planning Departments |
| | 1.4 | Identify and pursue funding opportunities to develop and implement local mitigation activities. | Emergency Services | All Hazards | Fire Department |
| | 1.5 | Acquire the latest Emergency Action Plan for the DWR owned Cedar Springs Dam and the USACE owned Mohave Forks Dam Continue to participate in annual training on dam emergencies. | Emergency Services | Dam Inundation | Fire Department |
| | 1.6 | Conduct storm drain improvements at Rodeo | | Flooding | Engineering Department |

| Table 6-3: New Mitigation Activities | | | | | |
|---|---|---|---|---|---|
| Goal | Action Item # | Action Description | Mitigation Type | Related Hazards | Implementing Organizations |
| | | & Pebble Beach to prevent flooding | | | |
| | 1.7 | Conduct analysis, then acquire and deploy new generators for pre-planned critical facilities | Preparedness | All | Public Works and Engineering Departments |
| | 2.1 | Develop a public outreach and awareness program about the hazards in the City and mitigation actions community members can do in their homes. | Public Education | All Hazards | Fire Department, Public Information Division |
| **Goal 2: Improve public understanding, support and need for hazard mitigation measures.** | 2.2 | Increase public awareness of the natural, human-caused, and technological hazards to businesses as a means to reduce the potential damage from each hazard through educational and outreach. Maintain a resource center in the City Hall and display racks. Provide information on the City websites and social media accounts. | Public Education | All Hazards | Fire Department, Public Information Division |
| | 2.3 | Provide information on tools, partnership opportunities, and funding resources for business and philanthropical organizations to assist in implementing mitigation activities. | Emergency Services | All Hazards | Fire and Planning Departments |
| | 2.4 | Place more stress on the risks associated with natural and manmade hazards at public awareness campaigns conducted by various City departments. | Public Education | All Hazards | All |
| | 2.5 | Partner with local insurance agencies to hold workshops for | Public Education | Earthquake Flood | Economic Development Fire and |

| Table 6-3: New Mitigation Activities | | | | | |
|---|---|---|---|---|---|
| Goal | Action Item # | Action Description | Mitigation Type | Related Hazards | Implementing Organizations |
| | | property owners to educate about the Flood and Earthquake Insurance Programs and its requirements. | | | Building Departments |
| | 2.6 | Increase public awareness of dam failure hazards and mitigation measures to address them. | Public Education | Dam Inundation | Fire Department |
| **Goal 3: Promote disaster resistance for Victorville's natural, existing, and future built environment.** | 3.1 | Improve hazard assessment information to make recommendations for avoiding new development in high hazard areas and encouraging preventative measures for existing development in areas vulnerable to natural, man-made, and technological hazards. | Property Protection | All Hazards | Building and Planning Departments |
| | 3.2 | Seek to implement codes, standards, and policies that will protect life and property from the impacts of hazards. | Regulatory | All Hazards | Building and Planning Departments |
| | 3.3 | Encourage purchase of earthquake hazard insurance. | Public Education | Earthquake | Economic Development Building and Planning Departments |
| | 3.4 | Integrate appropriate items from the HMP into the Safety Element of the General Plan and other regulatory documents as appropriate. | Regulatory | All Hazards | Planning Department |
| | 3.5 | Identify water resources management and conservation opportunities. | Prevention | Climate Change Drought | Victorville Water District |
| | 3.6 | Develop a disaster debris management plan. | Preparedness | Dam Inundation, Earthquake, | Public Works and Fire Department |

| Table 6-3: New Mitigation Activities | | | | | |
|---|---|---|---|---|---|
| Goal | Action Item # | Action Description | Mitigation Type | Related Hazards | Implementing Organizations |
| | | | | Flood, High Winds and Tornados | |
| | 4.1 | Budget for maintenance and replacement of City owned fire and police stations. | Prevention | All Hazards | Public Works and Building Departments |
| | 4.2 | Continue to develop mutual aid agreements and memorandum of understanding with agencies to serve emergency and disaster purposes. | Regulatory | All Hazards | City Manager's Office and Fire Department |
| **Goal 5: Enhance the City's ability to effectively and immediately respond to disasters.** | 5.1 | Maintain cloud storage for vital records and data to allow access, if City servers are disrupted. | Technology | All Hazards | Technology Division |
| | 5.2 | Continue to coordinate with the utility companies and vendors to strengthen, safeguard, or take other appropriate measures such as providing supplemental services, to protect and secure high-voltage lines, water, sewer, natural gas and petroleum pipelines, and trunk electrical and telephone conduits from hazards.<br>Continue to exchange information on critical infrastructure status and operations. | Prevention | All Hazards | Public Works Department |
| | 5.3 | Build a cadre of committed, trained, volunteers to augment disaster response and recovery efforts in compliance with the California Disaster Service Worker program guidance (e.g. shelter | Preparedness | All Hazards | Fire Department |

| Table 6-3: New Mitigation Activities | | | | | |
|---|---|---|---|---|---|
| Goal | Action Item # | Action Description | Mitigation Type | Related Hazards | Implementing Organizations |
| | | workers, animal rescue and care, communications staff, medical and health, and human services) during and after a disaster. | | | |
| | 5.4 | Develop and implement a plan to create Community Emergency Response Teams (CERT). | Preparedness | All Hazards | Fire Department |
| | 5.5 | Develop and implement a plan to create a City emergency communications system (ECS). | Preparedness | All Hazards | Fire Department |
| | 5.6 | Install “Turn Around Don’t Drown” signs at flood crossings throughout the City. | Prevention | Flooding | Engineering Department |
| | 5.7 | Implement public notification system via low-power AM radio to augment reverse 911 capabilities during emergencies. | Preparedness | All | Technology and Public Information Divisions; Fire Department |
| | 5.8 | Acquire pandemic support resources to expand capacity to provide field technical support (FTS), alternative care sites (ACS), mass care, and hospital surge support. | Response | Pandemic | Fire Department |

### 6.3.3 Mitigation Action Plan

The mitigation action plan developed by the planning team includes the action items that the City intends to implement during the next five (5) years, assuming funding availability. The action plan, shown in **Table 6-4** includes the implementing department, an estimate of the timeline for implementation, and potential funding sources. The individual mitigation activities in the Action Plan include the new mitigation actions listed in **Table 6-3** and fourteen (14) mitigation actions from the 2015 HMP that are ongoing or not completed that are still applicable.

The new mitigation actions include a broad range of approaches to hazard mitigation such as retrofitting, code enforcement, development of new regulations, public education, development of

redundant facilities, and others. Measures are included to mitigate risks to existing buildings and infrastructure, as well as new buildings and infrastructure. The mitigation action plan assigns primary responsibility for each of the action items to an implementing department. The implementing department is the controlling department that will assign funding and oversee activity implementation, monitoring, and evaluation.

The planning team does not presume the expertise to prescribe which projects will be implemented. The prioritization of projects in the HMP is a means to provide a basis for implementing the mitigation strategies, but all new mitigation actions and projects will be formally prioritized and selected by the implementing department. This will accommodate the project funding, schedule of the department, staff requirements, and ability to integrate the new project into existing and ongoing projects. Departments will take into account the funding source, the cost effectiveness of the project, alternative projects, the compatibility of the new project with ongoing projects, the extent to which the project addresses the risks assessed in Section 4, and the potential of economic and social damage.

**Prioritization**

To assist with implementing the mitigation action plan, the planning team used the following ranking process to provide a method to prioritize the projects for the Action Plan. Designations of High, Medium, and Low priority have been assigned to each action using the following criteria:

| | |
|---|---|
| Does the action: | • Solve the problem?<br>• Address vulnerability assessment?<br>• Reduce the exposure or vulnerability to the highest priority hazard?<br>• Address multiple hazards?<br>• Offer benefits that equal or exceed costs?<br>• Implement a goal, policy, or project identified in the General Plan or Capital Improvement Plan? |
| Can the action: | • Be implemented with existing funds?<br>• Be implemented by existing state or federal grant programs?<br>• Be completed within the five (5) year life cycle of the HMP? |
| Will the action: | • Be implemented with currently available technologies?<br>• Be accepted by the community?<br>• Be supported by community leaders?<br>• Adversely affect segments of the population or neighborhoods?<br>• Require a change in local ordinances or zoning laws?<br>• Result in positive or neutral impact on the environment?<br>• Comply with all local, state, and federal environmental laws and regulations? |
| Is there: | • Sufficient staffing to undertake the project?<br>• Existing authority to undertake the project? |

Each positive response is equal to one point. Answers to the criteria above determined the priority according to the following scale:

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

Using the criteria above, the planning team employed the STAPLEE method to rank actions in the mitigation action plan. The results are contained in **Appendix D**.

**Benefit-Cost Analysis**

FEMA provides detailed guidance for analyzing the economic feasibility of mitigation activities. Benefit-Cost Analysis (BCA) is the method by which the future benefits of a hazard mitigation project are determined and compared to its costs. The end result is a Benefit-Cost Ratio (BCR), which is calculated by a project's total benefits divided by its total costs. The BCR is a numerical expression of the "cost-effectiveness" of a project. A project is considered to be cost effective when the BCR is 1.0 or greater, indicating the benefits of a prospective hazard mitigation project are sufficient to justify the costs.

FEMA requires a BCA to validate cost effectiveness of proposed hazard mitigation projects prior to funding. There are two (2) drivers behind this requirement: 1) the Office of Management and Budget's (OMB) Circular A-94 Revised, "Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs" and 2) the Stafford Act.

Conducting BCA for a mitigation activity can assist the City in determining whether a project is worth undertaking now, in order to avoid disaster related damages later. Cost-effectiveness analysis evaluates how to best spend a given amount of money to achieve a specific goal. Determining the economic feasibility of mitigating hazards can provide decision makers with an understanding of the potential benefits and costs of an activity, as well as a basis for comparing alternative projects. Additional information on BCA is available at: https://www.fema.gov/benefit-cost-analysis.

**Funding**

The funds required to implement the mitigation action plan will come from a variety of sources including: Federal Hazard Mitigation Grants, City budget, bonds, fees and assessments, and others. Some projects are (or will be) included in capital improvement budgets, while some, especially ongoing projects, are included in department operating budgets.

Prior to beginning a project or when federal funding is involved, the implementing department will use a FEMA approved benefit/cost analysis approach to identify the actual costs and benefits of implementing these mitigation actions. For non-structural projects, implementing departments will use other appropriate methods to weigh the costs and benefits of each action item, and then develop a prioritized list.

**Implementation**

Mitigation projects were assigned one of three categories as a tentative schedule for implementation, short-range, mid-range, and long-range. Projects that are currently being implemented by various departments are assigned to the ongoing category. Implementation of short-range projects will typically begin within the next three (3) years. Mid-range projects will require some planning and likely require funding beyond what is currently allocated to the various departments in the City's general fund. Projects in the mid-range category will generally begin implementation in the next three (3) to five (5) years. Long range projects will require great planning and funding and will generally begin implementation within five (5) years and beyond.

**Table 6-4: Mitigation Action Plan**

| Table 6-4 Mitigation Action Plan | | | | | | |
|---|---|---|---|---|---|---|
| Action Item # | Priority | Action Description | Timeline | Funding Source | Estimated Cost | Implementing Department |
| 1.1 | High | Encourage private property owners of un-reinforced masonry structures to complete seismic retrofits. | Ongoing | Private property owners | Requires study | Building Department |
| 1.2 | High | Encourage seismic strength evaluations of critical facilities in the City to identify building integrity. | Ongoing | General Fund | Requires study | Building Department |
| 1.3 | High | Evaluate City and non-City facilities identified as potential shelter sites for structural integrity. | Ongoing | General Fund | Requires study | Building, Fire and, Planning Departments |
| 1.4 | High | Identify and pursue funding opportunities to develop and implement local mitigation activities. | Ongoing | CDBG, HMG BRIK FMA | N/A | Fire Department |
| 1.5 | High | Acquire the latest Emergency Action Plan for the DWR owned Cedar Springs Dam and the USACE owned Mohave Forks Dam. Continue to participate in annual training on dam emergencies. | 1 year | N/A | N/A | Fire Department |
| 1.6 | High | Continue to identify natural drainage courses and designate City drainage easements as a means to preserve natural drainage flow paths and/or constructed drainage facilities. * | Ongoing | General Fund, FMA, Enterprise Funds | $25K/Year | Engineering Department |
| 1.7 | High | Conduct repair and flood mitigation to sewer at Turner Wash Trunk, north of Mojave Drive, to include realignment of the sewer line.* | 1-3 years | General Fund, FMA, Enterprise Funds | Requires design study | Public Works and Engineering Departments |
| 1.8 | High | Repair damage and mitigate further flood risk to access road running along the Ossum Wash, north of Capistrano | 1-3 years | General Fund, | Requires design study | Public Works and Engineering Departments |

| Table 6-4 Mitigation Action Plan | | | | | | |
|---|---|---|---|---|---|---|
| Action Item # | Priority | Action Description | Timeline | Funding Source | Estimated Cost | Implementing Department |
| | | Street and south of Rancho Road.* | | FMA, Enterprise Funds | | |
| 1.9 | High | Mitigate wash-out problems caused by flooding events at Eucalyptus Street, east of Cloverly Street.* | 1-3 years | General Fund, FMA, Enterprise Funds | Requires design study | Public Works and Engineering Departments |
| 1.10 | High | Conduct storm drain improvements at Rodeo and Pebble Beach to prevent flooding. | 1-3 years | General Fund, FMA, Enterprise Funds | Need design study | Engineering Department |
| 1.11 | Medium | Conduct analysis and then acquire and deploy new generators for pre-planned critical facilities | 1-3 years | General Fund, BRIC Grant, Enterprise Funds | Requires design study. Will need Air District permit | Public Works and Engineering Departments |
| 2.1 | High | Develop a public outreach and awareness program about the hazards in the City and mitigation actions community members can do in their homes. | Ongoing | General Fund | $10K/Year | Fire Department, Public Information Division |
| 2.2 | High | Increase public awareness of the natural, human-caused, and technological hazards to businesses as a means to reduce the potential damage from each hazard through educational and outreach. Maintain a resource center in the City Hall and display racks. Provide information on the City websites and social media accounts. | Ongoing | General Fund | $20K/Year | Fire Department, Public Information Division |
| 2.3 | High | Provide information on tools, partnership opportunities, and funding resources for business and | Ongoing | General Fund | N/A | Fire and Planning Departments |

| Table 6-4 Mitigation Action Plan | | | | | | |
|---|---|---|---|---|---|---|
| Action Item # | Priority | Action Description | Timeline | Funding Source | Estimated Cost | Implementing Department |
| | | philanthropical organizations to assist in implementing mitigation activities. | | | | |
| 2.4 | High | Place more stress on the risks associated with natural and manmade hazards at public awareness campaigns conducted by various City departments. | Ongoing | General Fund | $10K/Year BRIC | All |
| 2.5 | High | Partner with local insurance agencies to hold workshops for property owners to educate about the Flood and Earthquake Insurance Programs and its requirements. | Ongoing | N/A | N/A | Economic Development Fire and Building Departments |
| 2.6 | High | Increase public awareness of dam failure hazards and mitigation measures to address them. | Ongoing | General Fund | $10K/Year | Fire Department |
| 2.7 | High | Implement a defensible space public education program.* | 1 year | General Fund | $10K/Year | Fire Department |
| 3.1 | Medium | Improve hazard assessment information to make recommendations for avoiding new development in high hazard areas and encouraging preventative measures for existing development in areas vulnerable to natural, man-made, and technological hazards. | Ongoing | General Fund | $40K/ Year | Building and Planning Departments |
| 3.2 | High | Seek to implement codes, standards, and policies that will protect life and property from the impacts of hazards. | Ongoing | General Fund | $20K/ Year | Building and Planning Departments |
| 3.3 | High | Encourage purchase of earthquake hazard insurance. | Ongoing | General Fund | $10K/ Year | Economic Development Building and |

| Table 6-4 Mitigation Action Plan | | | | | | |
|---|---|---|---|---|---|---|
| Action Item # | Priority | Action Description | Timeline | Funding Source | Estimated Cost | Implementing Department |
| | | | | | | Planning Departments |
| 3.4 | High | Integrate appropriate items from the HMP into the Safety Element of the General Plan and other regulatory documents as appropriate. | 1 year Under contract | Funded | $72,500 | Planning Department |
| 3.5 | High | Identify water resources management and conservation opportunities. | Ongoing | Enterprise Fund | $50K/ Year | Victorville Water District |
| 3.6 | High | Develop a disaster debris management plan. | 1-3 years | General Fund, BRIC | $60K | Public Works and Fire Departments |
| 3.7 | High | Continue to use development regulations with building and fire codes to set building placement, water supply, fire protection/prevention, and construction requirements (including fuel reduction and defensible space).* | Ongoing | General Fund | $10K/ Year | Planning Department |
| 3.8 | High | Update building codes as new technology and data becomes avail.* | Ongoing | General Fund | $10K/ Year | Building and Planning Departments |
| 3.9 | High | Seek grant funding to perform a study of City vulnerability.* | 1-3 years | BRIC | $75K | Fire Department |
| 3.10 | High | Work with County to prepare/maintain local area drainage plans and establish funding mechanisms to support the backbone draining system for watershed areas affecting the City and to create flood control facilities where warranted.* | Ongoing | General Fund | $50K/ Year | Public Works and Engineering Departments |
| 3.11 | High | Maintain and regularly update the integration of FEMA floodplain and | Ongoing | General Fund | $50K/ Year | Planning Division |

| Table 6-4 Mitigation Action Plan | | | | | | |
|---|---|---|---|---|---|---|
| Action Item # | Priority | Action Description | Timeline | Funding Source | Estimated Cost | Implementing Department |
| | | flood insurance map data with City land-use planning maps, drainage maps, and GIS systems. Supplement data with overflow studies and maps approved by the City Engineer or the San Bernardino County Flood Control District. Apply these resources to regularly assess City flood risk and inform both discretionary and ministerial actions in designated floodplain areas.* | | | | |
| 3.12 | High | Implement and maintain development regulations, permitting requirements, and building code specifications that promote flood risk identification, assessment, and mitigation actions to include:<br>Site studies/written assessments to identify flood risk to proposed developments/renovations and downstream flooding effects;<br>Conditional permitting for new construction and renovations, especially at critical facilities, that requires flood mitigation measures as indicated by appropriate assessment methods;<br>Best management practices for surface run-off control;<br>Restrictions to terrain, soil, vegetation, and topography changes that affect down-stream flood hazards. * | Ongoing | General Fund | $10K/ Year | Planning Division |

| Table 6-4 Mitigation Action Plan | | | | | | |
|---|---|---|---|---|---|---|
| Action Item # | Priority | Action Description | Timeline | Funding Source | Estimated Cost | Implementing Department |
| 4.1 | High | Budget for maintenance and replacement of City-owned fire and police stations. | Ongoing | General Fund | $200K/ Year | Public Works and Building Dividison |
| 4.2 | High | Continue to develop mutual aid agreements and memorandum of understanding with agencies to serve emergency and disaster purposes. | Ongoing | N/A | N/A | City Manager's Office and Fire Department |
| 4.3 | High | Continue the development. of intergovernmental coordination with cities, adjacent counties, the Army Corps of Engineers, and other agencies which have an interest in flood control projects that cross-jurisdictional boundaries. * | Ongoing | N/A | N/A | Fire Department, Planning Division |
| 4.4 | High | Coordinate land use and flood control planning through staff contacts between the County Flood Control District, Special Districts and cities within the County and through the annual review of the Capital Improvements Program. * | Ongoing | N/A | N/A | Public Works and Engineering Departments Planning Division |
| 5.1 | High | Maintain cloud storage for vital records and data to allow access if City servers are disrupted. | Ongoing | General Fund | $200K/ Year | Technology Division |
| 5.2 | High | Continue to coordinate with the utility companies and vendors to strengthen, safeguard, or take other appropriate measures such as providing supplemental services, to protect and secure high-voltage lines, water, sewer, natural gas and petroleum pipelines, and trunk electrical and | Ongoing | N/A | N/A | Public Works Department |

| Table 6-4 Mitigation Action Plan | | | | | | |
|---|---|---|---|---|---|---|
| Action Item # | Priority | Action Description | Timeline | Funding Source | Estimated Cost | Implementing Department |
| | | telephone conduits from hazards.<br>Continue to exchange information on critical infrastructure status and operations. | | | | |
| 5.3 | High | Build a cadre of committed, trained volunteers to augment disaster response and recovery efforts in compliance with the California Disaster Service Worker program guidance (e.g. shelter workers, animal rescue and care, communications staff, medical and health, and human services), during and after a disaster. | Ongoing | General Fund | $40K/Year | Fire Department |
| 5.4 | High | Develop and implement a plan to create Community Emergency Response Teams (CERT). | 1-3 years | General Fund, BRIC | $200K initially and $50K/year | Fire Department |
| 5.5 | High | Develop and implement a plan to create a City emergency communications system (ECS). | 1-3 years | General Fund, BRIC | $80K initially and $20K/year | Fire Department |
| 5.6 | High | Develop flood plain inundation evacuation plans through the County Office of Emergency Services.* | 1-3 years | General Fund, FMA, EMPG | $95K | Engineering Department |
| 5.7 | High | Install “Turn Around Don’t Drown” signs at flood crossings throughout the City. | 1 year | General Fund, FMA Grant | Need bids | Technology and Public Information Divisions; Fire Department |
| 5.8 | High | Implement public notification system via low-power AM radio to augment reverse 911 capabilities during emergencies. | 1-3 years | General Fund BRIC Grant | Need design study | Fire Department |

| Table 6-4 Mitigation Action Plan | | | | | | |
|---|---|---|---|---|---|---|
| Action Item # | Priority | Action Description | Timeline | Funding Source | Estimated Cost | Implementing Department |
| 5.9 | High | Acquire pandemic support resources to expand capacity to provide field technical support (FTS), alternative care sites (ACS), mass care, and hospital surge support. | 1 year | HHS Grant<br>CDPH Grant<br>County DPH | | Fire Department |

*Action from 2015 HMP

# SECTION 7: PLAN MAINTENANCE PROCEDURES

**FEMA REGULATION CHECKLIST: PLANNING PROCESS**

**Documentation of the Planning Process**

**44 CFR § 201.6(c)(1)**: The plan shall include documentation of the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

**Elements**

**A5.** Is there discussion on how the community will continue public participation in the plan maintenance process? 44 CFR 201.6(c)(4)(iii)

**A6.** Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? 44 CFR 201.6(c)(4)(i)

Source: FEMA, *Local Mitigation Planning Handbook Review Tool,* March 2013.

Implementation and maintenance of the HMP is critical to the overall success of hazard mitigation planning. This section details the process that the City will use to monitor, update, and evaluate the plan within the five (5) year cycle of the plan's revision to ensure the HMP remains an active and relevant document. The format of the plan aligns with the regulation checklist and is divided into sections of information. When it is time to maintain or revise the HMP, data can be easily located and incorporated, resulting in an easy method to keep the plan current and relevant.

The planning team represents City staff from each department and other stakeholders that contributed to the development of the 2021 HMP. The planning team oversaw the development of the HMP, and made recommendations on key elements of the HMP, including the maintenance strategy.

It was important to the City that each department be represented in the planning team and given the opportunity to provide input during the HMP development. This philosophy will be continued for future HMP revisions through evaluations, maintenance, and updates of data, processes, and programs. The planning team will convene annually to perform annual reviews of the HMP and its implementation. The planning team will include representation from residents, citizen groups, and stakeholders within the planning area.

If planning team members can no longer serve on the planning team, the Department Director will assign another staff person to be on the planning team so that every City department is represented.

## 7.1 Monitoring and Evaluation

The HMP includes a range of action items to reduce losses from hazard events. Together, the action items provide a framework for activities that the City can choose to implement over the next five (5) years. The effectiveness of the HMP depends on the incorporation of the action items into existing City plans, policies, and programs. Although the City Manager's Office and their

designees will have primary department responsibility for the HMP's continual review, coordination, and promotion, plan implementation and evaluation will be a shared responsibility among all departments and agencies that contributed to the HMP.

The City Manager, or designee, and Department Directors will be jointly responsible for the HMP's implementation and maintenance through existing City programs. Department Managers will be responsible for implementing mitigation strategies and actions specific to their department operations. The Emergency Preparedness Coordinator will assume the lead responsibility for facilitating plan maintenance and coordinating the planning team.

Each February, the planning team will begin the process of reviewing the HMP and the implementation of mitigation actions to develop an annual progress report. This process can also assist the budget review process by providing information on mitigation projects and activities that have been completed or implemented. The annual progress report process will serve to align annual reviews of the hazard mitigation plan to incorporate information. As updates to the HMP are completed, the public will be made aware of the changes to the HMP and make recommendations or comments.

The planning team will monitor the hazard mitigation strategies during the year and at a meeting held in January of each year, team members will provide information for the evaluation of the progress of the 2021 HMP. This evaluation will include:

- A summary of any hazard events that occurred during the prior year and their impact on the planning area;
- A review of successful mitigation initiatives identified in the 2021 HMP;
- A brief discussion about the targeted strategies that were not completed;
- A re-evaluation of the action plan to determine if the timeline for identified projects needs to be amended, and the reason for the amendment (e.g. funding issues);
- Any recommendations for new projects;
- Any changes in or potential for new funding options (e.g. grant opportunities);
- Any impacts of other planning programs or initiatives in the City that involve hazard mitigation.

The planning team will write a progress report that will be provided to the City's budget planning team for review and incorporation in the budget process as mitigation projects are completed or implemented. The HMP progress report will also be posted on the City website on the page dedicated to the HMP, provided to the local media through a press release, and presented in the form of a report to the City Council. The planning team will strive to complete the progress report process by March of each year.

## 7.2 Plan Update

Section 201.6.d.3 of 44CFR requires that local hazard mitigation plans be reviewed, revised as appropriate, and resubmitted for approval in order to remain eligible for benefits awarded under

the Disaster Mitigation Act. The City intends to update its hazard mitigation plan on a five (5) year cycle. Based on needs identified by the planning team, the update will, at a minimum, include the following elements:

- The hazard risk assessment will be reviewed and updated using the most recent information and technologies;
- The action plan will be reviewed and revised to account for any initiatives completed, dropped, or changed and to account for changes in the risk assessment;
- Any new City policies identified under other planning mechanisms, as appropriate;
- The draft HMP update will be sent to appropriate agencies and organizations for comment;
- The public will be given an opportunity to comment on the updated version prior to adoption;
- The City Council will adopt the updated HMP.

At a minimum of six (6) months prior to the expiration date of the 2021 HMP, the planning team will implement a plan revision schedule to formally update the 2021 HMP. The HMP will be revised using the latest FEMA hazard mitigation guidance documents, such as the Mitigation Planning Tool and Regulation Checklist to ensure compliance with current hazard mitigation planning regulations.

## 7.3 Continued Public Involvement

The overall success of the HMP is through implementation of the HMP's hazard mitigation strategy and activities to reduce the effects of hazards, protect people and property, and improve the City's efforts to respond to and recover from disasters. Members of the public and the City will ultimately benefit from the implementation of the HMP and must be given the opportunity to provide input to the continuous cycle of HMP planning.

The City will strive to keep the public aware of hazard mitigation projects that take place as a result of the HMP. Public information will be released through press releases, City website announcements, public hearings, council and commission meetings, and the City e-news blast to subscribers.

Projects that mitigate hazards are included in the City's annual budget planning process. City workshops are held and meetings are convened, and the public is made aware of the planning through City Council meetings, open workshop sessions, and press releases during this time. The budget planning process will serve as an annual opportunity to conduct outreach to the public on updates to the hazard mitigation planning process.

A survey can be developed to gather input on how the community feels about the progress being made on HMP activities. The City will also provide press releases and information about hazard mitigation projects to the public on a regular basis, but at a minimum, the public will be engaged to learn about current HMP activities, and given the opportunity to provide comments and information on an annual basis to update and maintain the HMP. The Emergency Management

Coordinator will be responsible to ensure the public is included and involved in the annual public plan update and outreach.

When the time comes to begin revising the 2021 HMP, the plan update process will be implemented, which will include continued public involvement and input through attendance at designated public meetings, web postings, through press releases to local media, community fairs and events, and surveys. As part of this effort, a series of public meetings will be held and public comments will be solicited on the revisions to the HMP according to the five (5) year cycle. **Table 7-1** summarizes successful public involvement efforts previously conducted by the City, and proposed activities for public involvement and dissemination of information that shall be pursued whenever possible and appropriate.

**Table 7-1: Past and Proposed Continued Public Involvement Identified by the City**

| Department | Past | Proposed |
|---|---|---|
| Development | HMP Survey conducted online. | Conduct annual surveys online and at the annual Public Safety Event. |
| All | | Place more emphasis on the risks associated with natural and manmade hazards at public awareness campaigns conducted by various City departments. Consider developing and distributing public education materials for natural hazards. |
| All | City agencies, such as Law Enforcement and Human Resources, and federal and congressional officials have conducted training events such as first aid and CPR, active shooter, school lockdown drills, emergency alert notification, American Red Cross training and smoke alarm distribution, as ways to educate the public and community leaders in responding to circumstances and situations. | Increase public awareness of the natural, human-caused, and technological hazards to businesses as a means to reduce the potential damage from each hazard through educational and outreach. |
| Fire Department | | Develop and implement a plan to create Community Emergency Response Teams (CERT) |

# SECTION 8: PLAN APPROVAL AND ADOPTION

**FEMA REGULATION CHECKLIST: PLAN ADOPTION**

**Adoption by the Local Governing Body**

**44 CFR § 201.6(c)(5):** The local hazard mitigation plan shall include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan. 44 CFR §201.6(c)(5)

**Element**

**E1.** Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval?

Source: FEMA, *Local Mitigation Planning Handbook Review Tool,* March 2013.

Per 44 CFR 201.6(d)(1), the City's HMP must be submitted to the State Hazard Mitigation Officer (SHMO) for review. The State will then send the plan to the appropriate FEMA Regional Office for formal review and approval. The State will coordinate between the City and FEMA, once the plan is sent to FEMA for the final review and approval. FEMA has the authority to conduct the final review and approve the HMP pending adoption by the City Council.

The 2021 HMP meets all requirements on the regulation checklist and was adopted by City Council of the City Council on December 21, 2021. A scanned copy of the resolution is included on the following page. Accordingly, the City of Victorville meets the requirements of the Stafford Act, as amended, and 44 CFR § 201.6(c)(5).

**RESOLUTION NO. 21-112**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF VICTORVILLE ADOPTING THE LOCAL HAZARD MITIGATION PLAN (LHMP).**

**WHEREAS**, the Federal Disaster Mitigation Act of 2000 (Public Law 106-390) requires local governments to prepare, adopt, and maintain a Local Hazard Mitigation Plan (LHMP) as a condition for receiving certain types of grants, including funding from Federal Emergency Management Agency (FEMA) Hazard Mitigation Assistance grant programs; and

**WHEREAS**, a Local Hazard Mitigation Plan provides analysis on threats, hazards, and risks specific to a community and identifies potential hazards to human life and property within the City and will identify mitigation measures to reduce the risks associated with such hazards; and

**WHEREAS**, the City Office of Emergency Services has coordinated the preparation of the City's own Local Hazard Mitigation Plan (LHMP) in cooperation with City departments, community stakeholders partner agencies, and members of the public and present the accumulated information in a unified framework to ensure a comprehensive and coordinated plan covering the entire City; and

**WHEREAS**, the result of the organizational effort will be a FEMA and California Office of Emergency Services (CalOES) approved single-jurisdiction, multi-hazard mitigation plan; and

**WHEREAS**, the plan is considered a living document such that, as awareness of additional hazards develop and new strategies and projects are conceived to offset or prevent losses due to natural disasters, the Local Hazard Mitigation Plan will be evaluated and revised on a continual 5-year time frame; and

**WHEREAS**, once the hazard mitigation plan is adopted by the City Council and approved by FEMA, the City be eligible to apply for hazard mitigation project funding from both the Pre-Disaster MitigationGrant Program (PDM) and the Hazard Mitigation Grant Program (HMGP).

**NOW THEREFORE**, THE CITY COUNCIL OF THE CITY OF VICTORVILLE DOES HEREBY RESOLVE AS FOLLOWS:

**SECTION 1**. That the City Council does hereby approve the FY2021 Local Hazard Mitigation Plan (LHMP).

**SECTION 2**. That the FEMA approved Local Hazard Mitigation Plan is adopted into the safety element of the City of Victorville's General Plan in compliance with AB 2140.

Resolution No. 21-112

PASSED, APPROVED, AND ADOPTED this 21st day of DECEMBER 2021.

Debra Jones, Mayor

Attest:

City Clerk

Approved as to form:

City Attorney

I, JENNIFER THOMPSON, City Clerk of the City of Victorville and ex-officio Clerk to the City Council of said City, do hereby certify that the foregoing is a true and correct copy of Resolution No. 21-112 which was adopted at a regular meeting held on the 21st day of December 2021, by the following roll call vote, to wit:

| | |
|---|---|
| AYES: | Mayor Jones, Councilmember Becerra, Councilmember Gomez, and Councilmember Irving |
| NOES: | None |
| ABSENT: | None |
| ABSTAIN: | None |

# APPENDIX A – LOCAL MITIGATION PLAN REVIEW TOOL

**U.S. Department of Homeland Security**
FEMA Region 9
1111 Broadway, Suite 1200
Oakland, CA 94607

FEMA

March 2, 2022

Dana Wellborn
Emergency Management Coordinator
Victorville Fire Department
14343 Civic Drive
Victorville, CA 92392

Dear Mr. Wellborn:

The *City of Victorville Local Hazard Mitigation Plan 2021* was officially adopted by the City of Victorville on December 21, 2021 and submitted for review and approval to the Federal Emergency Management Agency (FEMA). The review is complete, and FEMA finds the plan to be in conformance with the Code of Federal Regulations, Title 44, Part 201, Section 6 (44 C.F.R. 201.6).

This plan approval ensures the City of Victorville continued eligibility for funding under FEMA's Hazard Mitigation Assistance programs, including the Hazard Mitigation Grant Program (HMGP), the Building Resilient Infrastructure and Communities program (BRIC), and the Flood Mitigation Assistance (FMA) program. All requests for funding are evaluated individually according to eligibility and other program requirements. Approved hazard mitigation plans may also be eligible for points under the National Flood Insurance Program's Community Rating System (CRS).

FEMA's approval is for a period of five years, effective starting the date of this letter. Prior to **March 2, 2027**, the City of Victorville must review, revise, and submit their plan to FEMA for approval to maintain eligibility for grant funding. The enclosed plan review tool provides additional recommendations to incorporate into future plan updates.

If you have any questions regarding the planning or review processes, please contact the FEMA Region 9 Hazard Mitigation Planning Team at fema-r9-mitigation-planning@fema.dhs.gov.

Sincerely,

Kathryn Lipiecki
Director, Mitigation Division
FEMA Region 9

www.fema.gov

# REGION IX LOCAL HAZARD MITIGATION PLAN REVIEW TOOL

Updated 12/4/2019

The *Local Hazard Mitigation Plan Review Tool* demonstrates how the Local Hazard Mitigation Plan meets the regulation in 44 CFR §201.6 and offers State and FEMA Mitigation Planners an opportunity to provide feedback to the community.

- The **Regulation Checklist** provides a summary of FEMA's evaluation of whether the plan has addressed all requirements.
- The **Plan Assessment** identifies the plan's strengths as well as documents areas for future improvement. This section also includes a list of resources for implementation of the plan.
- The **Multi-Jurisdiction Summary Sheet** is a mandatory worksheet for multi-jurisdictional plans that is used to document which jurisdictions are eligible to adopt the plan.
- The **Hazard Identification and Risk Assessment Matrix** is a tool for plan reviewers to identify if all components of Element B are met.

| **Jurisdiction:** Victorville, City of | **Title of Plan:** City of Victorville, Local Hazard Mitigation Plan 2021 | **Date of Plan:** March 2021 (Draft V3) |
|---|---|---|
| **Local Point of Contact:** Dana Wellborn | **Address:** City of Victorville 14343 Civic Drive Victorville, CA 92392 | |
| **Title:** Emergency Management Coordinator | | |
| **Agency:** Victorville Fire Department | | |
| **Phone Number:** 760-243-6344 | **E-Mail:** DWellborn@victorvilleca.gov | |

| **State Reviewer:** Ana Miscolta | **Title:** Emergency Services Coordinator | **Date:** 4/23/2021 |
|---|---|---|
| **Date Received at State Agency** | 3/22/2021, 4/22/2021 | |
| **Date Sent to FEMA** | 4/26/2021 | |

| **FEMA Reviewer:** Xing Liu | **Title:** Sr. Community Planner | **Date:** 5/13/2021 |
|---|---|---|
| **Date Received in FEMA Region IX** | 4/26/2021 | |
| **Date Not Approved** | | |
| **Date Approvable Pending Adoption** | 5/13/2021 | |
| **Date Approved** | | |

## SECTION 1:
## REGULATION CHECKLIST

**INSTRUCTIONS:** The Regulation Checklist must be completed by FEMA. The purpose of the Checklist is to identify the location of relevant or applicable content in the plan by element/sub-element and to determine if each requirement has been 'Met' or 'Not Met.' The 'Required Revisions' summary at the bottom of each element must be completed by FEMA to provide a clear explanation of the revisions that are required for plan approval. Required revisions must be explained for each plan sub-element that is 'Not Met.' Sub-elements should be referenced in each summary by using the appropriate numbers (A1, B3, etc.), where applicable. Requirements for each Element and sub-element are described in detail in the *Local Plan Review Guide* in Section 4, Regulation Checklist.

| **1. REGULATION CHECKLIST**<br>**Regulation** (44 CFR 201.6 Local Mitigation Plans) | | **Location in Plan** (section and/or page number) | **Met** | **Not Met** |
|---|---|---|---|---|
| **ELEMENT A. PLANNING PROCESS** | | | | |
| A1. Does the plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1)) | a. Does the plan provide documentation of how the plan was prepared? This **documentation** must include the schedule or timeframe and activities that made up the plan's development as well as who was involved. | Section 2: 2.3, 2.4, 2.4.1, -- Table 2-1, 2-2, 2-3 -- Appendix B, C | X | |
| | b. Does the plan list the jurisdiction(s) participating in the plan that are seeking approval? | Section 1 | X | |
| | c. Does the plan identify who represented each jurisdiction? (At a minimum, it must identify the jurisdiction represented and the person's position or title and agency within the jurisdiction.) | Section 2.4 -- Table 2-1 | X | |
| A2. Does the plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2)) | a. Does the plan document an opportunity for neighboring communities, local, and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development, as well as other interested parties to be involved in the planning process? | Section 2.4.2, 2.5 -- Table 2-3 -- Appendix B | X | |

| 1. REGULATION CHECKLIST<br>**Regulation** (44 CFR 201.6 Local Mitigation Plans) | | Location in Plan (section and/or page number) | Met | Not Met |
|---|---|---|---|---|
| | b. Does the plan identify how the stakeholders were invited to participate in the process? | Section 2.4.2, 2.5 -- Appendix C | X | |
| A3. Does the plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1)) | a. Does the plan document how the public was given the opportunity to be involved in the planning process? | Section 2.5 -- Appendix C | X | |
| | b. Does the plan document how the public's feedback was incorporated into the plan? | Section 2.5 -- Table 5-5 -- Appendix C | X | |
| A4. Does the plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3)) | | Section 2.7 -- Table 2-4 | X | |
| A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii)) | | Section 7.3 -- Table 7-1 | X | |
| A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i)) | a. Does the plan identify how, when, and by whom the plan will be **monitored** (how will implementation be tracked) over time? | Section 7.1 | X | |
| | b. Does the plan identify how, when, and by whom the plan will be **evaluated** (assessing the effectiveness of the plan at achieving stated purpose and goals) over time? | Section 7.1 | X | |
| | c. Does the plan identify how, when, and by whom the plan will be **updated** during the 5-year cycle? | Section 7.2 | X | |
| **ELEMENT A: REQUIRED REVISIONS** | | | | |
| **ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSMENT**<br>(Reviewer: See Section 4 for assistance with Element B) | | | | |
| B1. Does the plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i)) | a. Does the plan include a general description of all natural hazards that can affect each jurisdiction? | Sec. 5.4.2, 5.4.3, 5.4.4, 5.4.5, 5.4.8, 5.4.9 | X | |
| | b. Does the plan provide rationale for the omission of any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area? | Sec 5.3, Tables 5.3, 5.4 and 5.5 | X | |

| 1. REGULATION CHECKLIST<br>**Regulation** (44 CFR 201.6 Local Mitigation Plans) | | Location in Plan (section and/or page number) | Met | Not Met |
|---|---|---|---|---|
| | c. Does the plan include a description of the **type** of all natural hazards that can affect each jurisdiction? | Sec. 5.4.2, 5.4.3, 5.4.4, 5.4.5, 5.4.8, 5.4.9 | X | |
| | d. Does the plan include a description of the **location** for all natural hazards that can affect each jurisdiction? | Sec 5.4.3, Figure 5.4 and Figure 5.5, Sec. 5.4.5, Figure 5.11., Figure 5.15, Sec. 5.4.8, Sec. 5.4.9 | X | |
| | e. Does the plan include a description of the **extent** for all natural hazards that can affect each jurisdiction? | Sec 5.4.2, Figure 5.1, Figure 5.2, Figures 5.8, 5.9, 5.10, Table 5.6, Sec. 5.4.5, Figure 5.15, Sec. 5.4.8, Table 5.9, Table 5.10 | X | |
| B2. Does the plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i)) | a. Does the plan include information on **previous occurrences** of hazard events for each jurisdiction? | Sec 5.4.2, Figure 5.1, Figure 5.2, Sec 5.4.3, Sec. 5.4.5, Sec. 5.4.8, Sec. 5.4.9, Table 5.8 | X | |
| | b. Does the plan include information on the **probability** of future hazard events for each jurisdiction? | Tables 5.3 and 5.5, Sec 5.4.2, Sec 5.4.3, Sec 5.4.4, Sec. 5.4.5 | X | |
| B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's | a. Is there a description of each hazard's **impacts** on each jurisdiction (what happens to structures, infrastructure, people, environment, etc.)? | Sec. 5.4.2, 5.4.3, 5.4.4, 5.4.5, 5.4.8, 5.4.9 | X | |

| 1. REGULATION CHECKLIST<br>**Regulation** (44 CFR 201.6 Local Mitigation Plans) | | Location in Plan (section and/or page number) | Met | Not Met |
|---|---|---|---|---|
| vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii)) | b. Is there a description of each identified hazard's overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? | Sec 5.5.3, Table 5.12, Table 5.13, Table 14 | X | |
| B4. Does the plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii)) | | Sec 1.5.2 | X | |
| **ELEMENT B: REQUIRED REVISIONS** | | | | |
| **ELEMENT C. MITIGATION STRATEGY** | | | | |
| C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3)) | a. Does the plan document each jurisdiction's existing authorities, policies, programs and resources? | Sec 4.1.1, Table 4.1, Sec 4.1.2, Table 4.2, Sec 4.1.3, Table 4.3, Sec 4.1.4, Table 4.4 | X | |
| | b. Does the plan document each jurisdiction's ability to expand on and improve these existing policies and programs? | Sec 4.1.1, Table 4.1, Sec 4.1.2, Table 4.2, Sec 4.1.3, Table 4.3, Sec 4.1.4, Table 4.4 | X | |
| C2. Does the plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii)) | | Table 4.5 | X | |
| C3. Does the plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i)) | | Table 6.1 | X | |
| C4. Does the plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii)) | a. Does the plan identify and analyze a comprehensive range of specific mitigation actions and projects to reduce the impacts from hazards? | Sec 6.3.2, Table 6.3 | X | |
| | b. Does the plan identify mitigation actions for every hazard posing a threat to each participating jurisdiction? | Sec 6.3.2, Table 6.3 | X | |

| 1. REGULATION CHECKLIST<br>**Regulation** (44 CFR 201.6 Local Mitigation Plans) | | Location in Plan (section and/or page number) | Met | Not Met |
|---|---|---|---|---|
| | c. Do the identified mitigation actions and projects have an emphasis on new and existing buildings and infrastructure? | Sec 6.3.2, Table 6.3 | X | |
| C5. Does the plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii)) | a. Does the plan explain how the mitigation actions will be prioritized (including cost benefit review)? | Sec 6.3.3 | X | |
| | b. Does the plan identify the position, office, department, or agency responsible for implementing and administering the action, potential funding sources and expected timeframes for completion? | Table 6.4 | X | |
| C6. Does the plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii)) | a. Does the plan identify the local planning mechanisms where hazard mitigation information and/or actions may be incorporated? | Sec 2.6 | X | |
| | b. Does the plan describe each community's process to integrate the data, information, and hazard mitigation goals and actions into other planning mechanisms? | Sec 2.6` | X | |
| | c. The updated plan must explain how the jurisdiction(s) incorporated the mitigation plan, when appropriate, into other planning mechanisms as a demonstration of progress in local hazard mitigation efforts. | Sec 4.1, Table 6.2, | X | |
| **ELEMENT C: REQUIRED REVISIONS** | | | | |
| **ELEMENT D. PLAN REVIEW, EVALUATION, AND IMPLEMENTATION**<br>(Applicable to plan updates only) | | | | |
| D1. Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3)) | | Sec 3.10 | X | |
| D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3)) | | Table 6.2 | X | |
| D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3)) | | Sec 6.2 6.3.2 | X | |
| **ELEMENT D: REQUIRED REVISIONS** | | | | |
| **ELEMENT E. PLAN ADOPTION** | | | | |

| 1. REGULATION CHECKLIST<br>**Regulation** (44 CFR 201.6 Local Mitigation Plans) | Location in Plan (section and/or page number) | Met | Not Met |
|---|---|---|---|
| E1. Does the plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5)) | Pending APA status by FEMA | | X |
| E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5)) | N/A | | |
| **ELEMENT E: REQUIRED REVISIONS**<br>FEMA will issue formal approval letter once adoption documentation has been received. | | | |

| **OPTIONAL: HIGH HAZARD POTENTIAL DAM RISKS** (Applicable to jurisdictions interested in becoming sub applicants to FEMA's Rehabilitation of High Hazard Potential Dams (HHPD) Grant Program only) | | | |
|---|---|---|---|
| HHPD1. Did Element A4 (planning process) describe the incorporation of existing plans, studies, reports, and technical information for high hazard potential dams? | Table 2.4 | X | |
| HHPD2. Did Element B3 (risk assessment) address HHPDs? | Sec 5.4.3 | X | |
| HHPD3. Did Element C3 (mitigation goals) include mitigation goals to reduce long-term vulnerabilities from high hazard potential dams that pose an unacceptable risk to the public? | Table 6.1 | X | |
| HHPD4. Did Element C4-C5 (mitigation actions) address HHPDs prioritize mitigation actions to reduce vulnerabilities from high hazard potential dams that pose an unacceptable risk to the public? | Table 6.3 | X | |
| **REQUIRED REVISIONS** | | | |

| **ELEMENT F. ADDITIONAL STATE REQUIREMENTS**<br>(Optional for State Reviewers only; not to be completed by FEMA) | | | |
|---|---|---|---|
| F1. | | | |
| F2. | | | |
| **ELEMENT F: REQUIRED REVISIONS** | | | |

## SECTION 2:
## PLAN ASSESSMENT

### A. Plan Strengths and Opportunities for Improvement

This section provides a discussion of the strengths of the plan document and identifies areas where these could be improved beyond minimum requirements.

### Element A: Planning Process

Strengths:

1) The planning committee was comprised of a diverse group of stakeholders and included a member of the Planning Department, which will hopefully contribute to further integration of the various plans that guide the city's growth.
2) The use of a survey to solicit public input during the process – as opposed to after the plan is complete – is extremely valuable, and demonstrates a meaningful commitment to public involvement in hazard mitigation planning.
3) The plan utilized a great deal of existing plans and resources to inform its content, which help ensure consistency, integration, and shared goals across plans.

Opportunities for improvement:

1) The plan mentions that no substantive comments were received from the public about the plan/planning process. Does the committee have a plan to bolster community interest and engagement for the development of future plans?

### Element B: Hazard Identification and Risk Assessment

Strengths:

1) The plan gives a comprehensive overview of hazard risk in the community, providing sufficient detail on the causes and effects of natural hazards, and communicating scientific and technical information in a way that is accessible to members of the public.
2) I encourage future plans to develop problem statements for its vulnerability section, where the community identifies specific conditions or circumstances in the planning area that makes the community more vulnerable to hazards. These problem statements can then be directly tied to mitigation actions. Using this strategy demonstrates a relationship between identified vulnerabilities and actions to be taken to reduce vulnerability.

Opportunities for improvement:

1) One idea for future public engagement is to ask the public about their personal experiences with profiled hazards, and including this information in the previous occurrences section.

### Element C: Mitigation Strategy

Strengths:

1) The plan includes a thorough account of the outcome of proposed mitigation actions from the previous plan.
2) The plan identifies a wide range of mitigation actions for prioritized hazards and involve many different City stakeholders.
3) The plan does a good job of capturing the numerous other local planning mechanisms to which information from the LHMP may be embedded. We look forward to seeing an update on the actual integration effort on your next plan update!

Opportunities for Improvement:

1) As mentioned in my comment above, the inclusion of problem statements in future plans can help make sense of why you chose specific mitigation actions.

### Element D: Plan Update, Evaluation, and Implementation (*Plan Updates Only*)

Strengths:

1) The plan gave a great overview of development trends in the region, and I appreciated the level of detail provided.

### B. Resources for Implementing and Updating Your Approved Plan

This resource section is organized into three categories:

1) Guidance and Resources
2) Training Topics and Courses
3) Funding Sources

**Guidance and Resources**

Local Mitigation Planning Handbook
https://www.fema.gov/media-library/assets/documents/31598
Beyond the Basics
http://mitigationguide.org/
Mitigation Ideas
https://www.fema.gov/media-library/assets/documents/30627
Plan Integration: Linking Local Planning Efforts
https://www.fema.gov/media-library/assets/documents/108893
Integrating Disaster Data into Hazard Mitigation Planning
https://www.fema.gov/media-library/assets/documents/103486
Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning
https://www.fema.gov/ar/media-library/assets/documents/4317

Website: https://www.fema.gov/hazard-mitigation-grant-program

Pre-Disaster Mitigation Grant Program

POC: FEMA Region IX and State Hazard Mitigation Officer

Website: https://www.fema.gov/pre-disaster-mitigation-grant-program

Flood Mitigation Assistance Grant Program

POC: FEMA Region IX and State Hazard Mitigation Officer

Website: https://www.fema.gov/flood-mitigation-assistance-grant-program

Emergency Management Performance Grant Program

POC: FEMA Region IX

Website: https://www.fema.gov/emergency-management-performance-grant-program

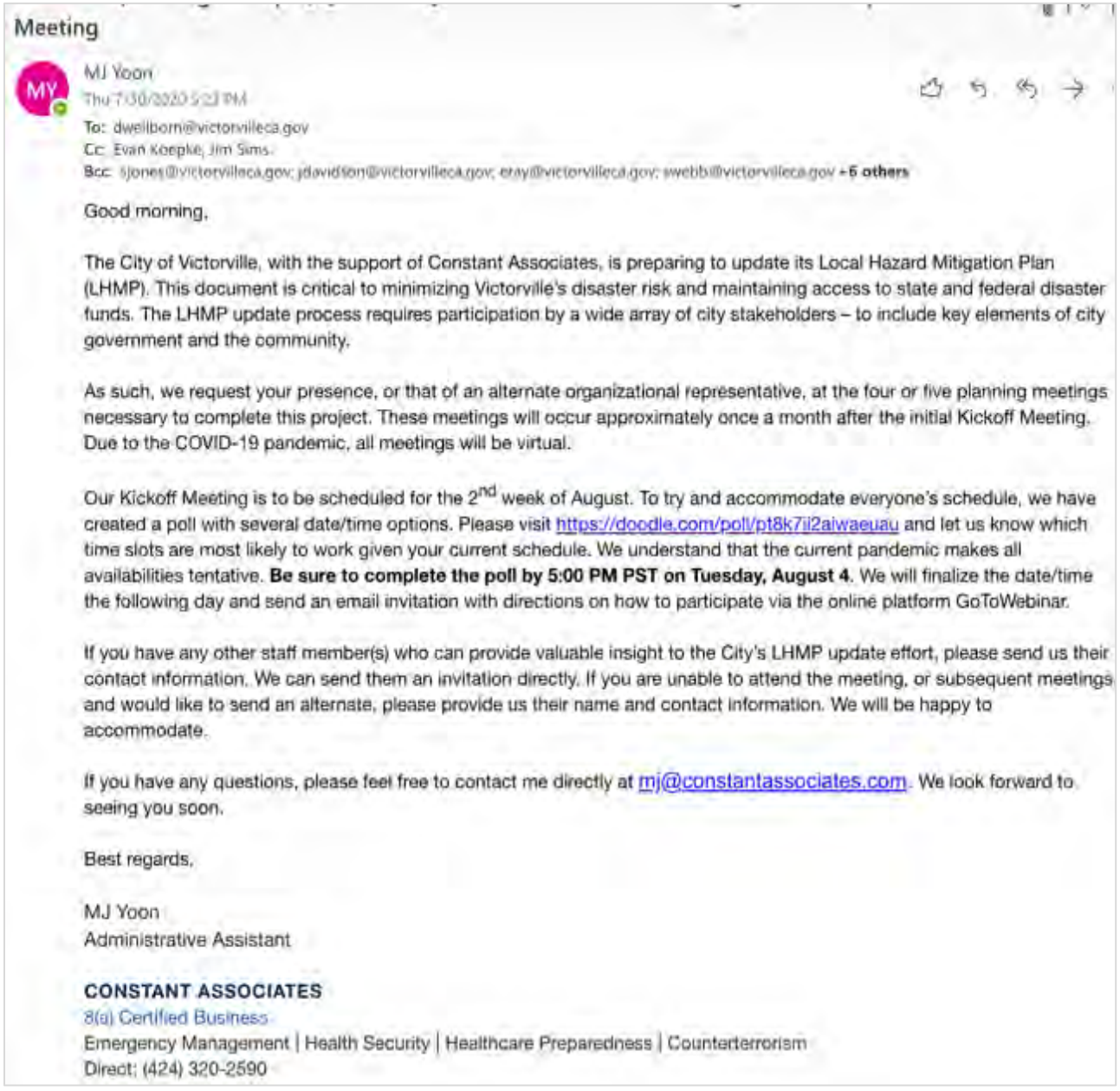
# APPENDIX B – PLANNING TEAM MEETING DOCUMENTATION

Appendix B contains documentation of the planning process for the HMP planning team, including meetings, presentations, emails, etc.

| Meeting Date | Meeting Title | Meeting Handouts, Presentation Included in HMP |
|---|---|---|
| August 12, 2020 | Project Kickoff Meeting | - Invitation to stakeholders<br>- Meeting agenda<br>- Sign-in sheet<br>- Presentation (cover only)<br>- Meeting minutes |
| September 23, 2020 | Planning Team Meeting #1 | - Invitation to stakeholders<br>- Meeting agenda<br>- Sign-in sheet<br>- Presentation (cover only)<br>- Meeting minutes |
| November 10, 2020 | Planning Team Meeting #2 | - Invitation to stakeholders<br>- Meeting agenda<br>- Sign-in sheet<br>- Presentation (cover only)<br>- Meeting minutes |
| December 1, 2020 | Planning Team Meeting #3 | - Invitation to stakeholders<br>- Meeting agenda<br>- Sign-in sheet<br>- Presentation (cover only)<br>- Meeting minutes |
| December 17, 2020 | Review Guide Brief and Mitigation Workshop | - Invitation to stakeholders<br>- Sign-in sheet<br>- Presentation (cover only)<br>- Meeting minutes |

## Project Kickoff Meeting

**Invitations:**



Meeting

MJ Yoon
Thu 7/30/2020 5:23 PM

To: dweilborn@victorvilleca.gov
Cc: Evan Koepke; Jim Sims
Bcc: sjones@victorvilleca.gov; jdavidson@victorvilleca.gov; eray@victorvilleca.gov; swebb@victorvilleca.gov +6 others

Good morning,

The City of Victorville, with the support of Constant Associates, is preparing to update its Local Hazard Mitigation Plan (LHMP). This document is critical to minimizing Victorville's disaster risk and maintaining access to state and federal disaster funds. The LHMP update process requires participation by a wide array of city stakeholders – to include key elements of city government and the community.

As such, we request your presence, or that of an alternate organizational representative, at the four or five planning meetings necessary to complete this project. These meetings will occur approximately once a month after the initial Kickoff Meeting. Due to the COVID-19 pandemic, all meetings will be virtual.

Our Kickoff Meeting is to be scheduled for the 2nd week of August. To try and accommodate everyone's schedule, we have created a poll with several date/time options. Please visit https://doodle.com/poll/pt8k7ii2aiwaeuau and let us know which time slots are most likely to work given your current schedule. We understand that the current pandemic makes all availabilities tentative. **Be sure to complete the poll by 5:00 PM PST on Tuesday, August 4**. We will finalize the date/time the following day and send an email invitation with directions on how to participate via the online platform GoToWebinar.

If you have any other staff member(s) who can provide valuable insight to the City's LHMP update effort, please send us their contact information. We can send them an invitation directly. If you are unable to attend the meeting, or subsequent meetings and would like to send an alternate, please provide us their name and contact information. We will be happy to accommodate.

If you have any questions, please feel free to contact me directly at mj@constantassociates.com. We look forward to seeing you soon.

Best regards,

MJ Yoon
Administrative Assistant

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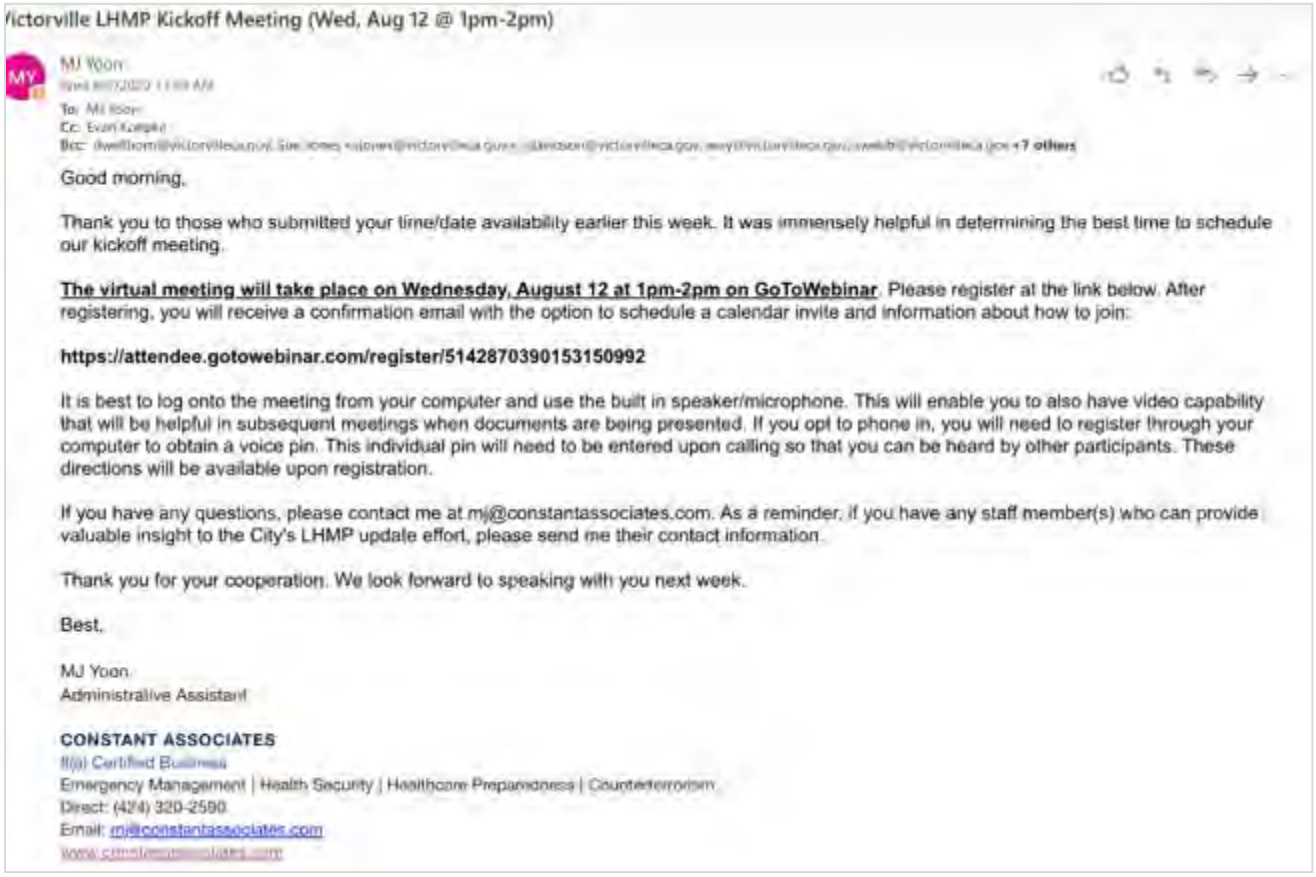
Direct: (424) 320-2590



Victorville LHMP Kickoff Meeting (Wed, Aug 12 @ 1pm-2pm)

MJ Yoon
Wed 8/7/2020 11:09 AM
To: MJ Yoon
Cc: Evan Kaspar
Bcc: [redacted] +7 others

Good morning,

Thank you to those who submitted your time/date availability earlier this week. It was immensely helpful in determining the best time to schedule our kickoff meeting.

**The virtual meeting will take place on Wednesday, August 12 at 1pm-2pm on GoToWebinar**. Please register at the link below. After registering, you will receive a confirmation email with the option to schedule a calendar invite and information about how to join:

**https://attendee.gotowebinar.com/register/5142870390153150992**

It is best to log onto the meeting from your computer and use the built in speaker/microphone. This will enable you to also have video capability that will be helpful in subsequent meetings when documents are being presented. If you opt to phone in, you will need to register through your computer to obtain a voice pin. This individual pin will need to be entered upon calling so that you can be heard by other participants. These directions will be available upon registration.

If you have any questions, please contact me at mj@constantassociates.com. As a reminder, if you have any staff member(s) who can provide valuable insight to the City's LHMP update effort, please send me their contact information.

Thank you for your cooperation. We look forward to speaking with you next week.

Best,

MJ Yoon
Administrative Assistant

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**Meeting Agenda:**

City of Victorville
Local Hazard Mitigation Plan Update Project 2020
Project Kickoff Meeting - Agenda

# Meeting Agenda

## Project Kickoff Meeting

Location: Virtual Meeting on GoToWebinar
Date: Wednesday, August 12, 2020
Time: 1pm-2pm PDT
Dial-In: GoToWebinar
Participant Pin: Received upon registration
Webinar Link: https://attendee.gotowebinar.com/register/5142870390153150992

I. Welcome & Agenda
   a. Meeting Purpose
   b. Administration
   c. Introductions
   d. Agenda
II. Local Hazard Mitigation Plan (LHMP) Overview
   a. Introduction
   b. Plan Content
   c. Update Process
III. Project Plan
   a. Schedule
   b. Roles and Responsibilities
   c. Planning Team Meetings
IV. Data Collection for Planning Team Meeting 1
V. Action Items & Next Steps
VI. Questions & Discussion
VII. Adjourn

CONSTANT ASSOCIATES

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## Sign-in Sheet:

City of Victorville
Local Hazard Mitigation Plan Update Project 2020
Project Kickoff Meeting – Sign-In Sheet

# Sign-In Sheet

### Project Kickoff Meeting

Location: Virtual Meeting on GoToWebinar
Date: Wednesday, August 12, 2020
Time: 1pm-2pm PDT
Dial-In: GoToWebinar
Participant Pin: Received upon registration
Webinar Link: https://attendee.gotowebinar.com/register/5142870390153150992

| # | Name | Organization/ Department | Telephone | Email | Attendance |
|---|---|---|---|---|---|
| 1. | Dana Wellborn | Emergency Management Coordinator | 760-243-6344 | dwellborn@victorvilleca.gov | Present |
| 2. | Sue Jones | Public Information Officer (PIO) | | sjones@victorvilleca.gov | Present |
| 3. | Jenele Davidson | Deputy City Manager | | jdavidson@victorvilleca.gov | Present |
| 4. | Eric Ray | Director, Airport | | eray@victorvilleca.gov | Present |
| 5. | James Murawski | Manager, Airport | | jmurawski@victorvilleca.gov | Present |
| 6. | Brian Gengler | Director, Engineering | | bgengler@victorvilleca.gov | Present |

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| | | | | |
|---|---|---|---|---|
| l Sohm | Project Coordinator, Parks | | eschm@victorvilleca.gov | Present |
| chael Szarzynski | Senior City Planner | | mszarzynski@victorvilleca.gov | Present |
| n Sims | Constant Associates | 424-320-2586 | jim@constantassociates.com | Present |
| an Koepke | Constant Associates | 424-320-2011 | evan@constantassociates.com | Present |
| an Dufour | Constant Associates | 424-320-2588 | ryan@constantassociates.com | Present |
| J Yoon | Constant Associates | 424-226-0170 | mj@constantassociates.com | Present |

**Presentation (Cover Only):**

**Meeting Minutes:**

City of Victorville
**2020 Local Hazard Mitigation Plan Update Project**
Project Kickoff Meeting - Minutes

# Meeting Minutes

## Project Kickoff Meeting

**Location:** Virtual Meeting on GoToWebinar
**Date:** Wednesday, August 12, 2020
**Time:** 1pm-2pm PDT
**Dial-In:** GoToWebinar
**Participant Pin:** Received upon registration
**Webinar Link:** https://attendee.gotowebinar.com/register/5142870390153150992

Table 1: Action Items

| # | Item | Due Date | Responsibility |
|---|---|---|---|
| 1. | Provide the Planning Team with Project Kickoff Meeting minutes | 8/19/2020 | Constant |
| 2. | Disseminate data collection tools to Planning Team | 8/17/2020 | Constant |
| 3. | Provide the Planning Team members with the existing Victorville LHMO | 8/21/2202 | Dana Wellborn |
| 4. | Provide the Planning Team members with another City's LHMP as reference | 8/21/2020 | Dana Wellborn/ Constant |
| 5. | Complete and submit data collection tools to Constant per directions provided | 9/02/2020 | Planning Team |
| 6. | Provide the Planning Team with the first draft of the LHMP for review | September TBD | Constant |
| 7. | Disseminate Doodle poll to determine the best date/time for Planning Team Meeting #1 | 8/17/2020 | Constant |
| 8. | Submit answers to scheduling Doodle poll | 8/21/2020 | Planning Team |
| 9. | Schedule Planning Team Meeting #1 for mid- to late September | 8/24/2020 | Constant |

* Note: Page numbers refer to those on the Victorville LHMP KO Meeting PowerPoint presentation.

I. General Information (before the formal start of the meeting)
   a. Evan reviewed the purpose of the meeting and addressed meeting administration.
   b. Evan stated that the handouts are available for download (i.e. meeting agenda and PPT) via GoToWebinar and/or by direct email request from MJ.

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c. Evan stated that the meeting minutes will be available via email approximately 5-7 days after the meeting.

II. Welcome & Introductions

a. Constant team introduced themselves to the Planning Team.

b. The Planning Team members introduced themselves.

III. LHMP Overview

a. Evan provided a general introduction to what an LHMP is, their basic specifications, and the importance of the City having one (page 4).

b. Evan provided a general overview on the LHMP plan content (page 5).

i. The first part of the plan covers community hazards, capabilities, and risk – featuring a community capabilities assessment and community risk assessment.

ii. The second part of the plan focuses on mitigation strategies, including mitigation goals, actions, and an action plan.

c. Evan described the LHMP Update Process (page 6).

i. A key aspect of the planning preparation phase is the creation of a public engagement strategy and, for this project, deployment of a hazard mitigation survey with the help of city staff.

ii. Threat and Hazard Analysis will occur in tandem with data collection by planning team members, and conclude with a risk assessment – the results of which will be integrated in an initial draft of the LHMP for review by the Planning Team prior to, and during, Planning Team Meeting 1.

iii. The Mitigation Planning phase will involve the review of prior hazard mitigation goals/efforts and updating them. It also includes an analysis of actions that will help with prioritization. Review of the goals and finalization of the new mitigation action plan will be the focus of Planning Team Meetings 2 and 3.

iv. In the final phase, Plan Development, Review, and Adoption, Constant will create a preliminary draft of the LHMP for the Planning Team to review after Planning Team Meeting 3. There will be an opportunity for several iterations of review and revision before it is published for public feedback. Once the feedback period is over, Constant will update the LHMP, create a final opportunity for planning team review, and then send the document to CalOES/FEMA for review and approval. The Planning Team will be notified of major developments and if specific information is needed support approval. Lastly, Constant will help the City adopt the finalized LHMP.

IV. Project Plan

a. Evan provided an overview of the Project Plan Schedule (page 7).

i. City's updated LHMP must be completed by March 2021 to meet grant deadlines.

ii. Project completion could conceivably be done in four (4) to five (5) months. However, this is contingent on the Planning Team providing necessary information and reviewing draft documents in a timely manner.

iii. By November 2020, the Planning Team will have the opportunity to review at least one full draft of the LHMP.

iv. The first draft would be provided to the Planning Team for review, the second draft will be provided for public review, and final version will be submitted to FEMA.

v. During November/December, it may be more difficult to get public feedback due to the holidays, but the Planning Team members can provide input on how to proceed.

b. Evan provided an overview of Roles and Responsibilities (page 8).

i. He reviewed the role of CONSTANT staff, the Project Team, and the public - identifying guarantees and requirements for success.

ii. He asked the Planning Team if two (2) weeks would be adequate for documentation review throughout the process.

1. Brian asked how the draft LHMP will be divided for review.
2. Evan replied that the first half of the draft will be available before the first planning meeting so that the Planning Team can review it beforehand.
3. Evan stated that with each new draft, a data needs matrix will be provided, and the notes on what the edits are will be provided.
4. Brian stated that he believes that the two (2) week time frame might be too short, but they will try to complete the task in the time frame.
5. Evan stated that Constant will set it for two (2) weeks, but an open dialogue will be maintained to adjust as necessary. If time becomes pressing, it may be necessary to institute a hard deadline for feedback on each document iteration to ensure that the planning process can continue.
6. Jenele stated that she believes that the two (2) week period is a good goal, but agreed to adjust as necessary.

iii. He asked the Planning Team to think of community organizations that have been helpful in the past in terms of public outreach. He noted that they can be helpful in amplifying outreach efforts because they are a trusted member of the community that can connect with specific audiences and encourage participation. Such organizations can be an important part of the outreach strategy.

c. Evan provided a general overview on the Planning Team Meeting process (page 9).

i. Stated that there will be three (3) Planning Team Meetings with assignments given in between to the Planning Team.

d. Evan provided an overview of the Data Collection items that will be provided to the Planning Team to be completed before Planning Team Meeting #1 (page 10).

i. The Planning Team will be provided multiple data collection tools to guide their efforts. These will tentatively include a Hazard and Community Data Sheet, a Capabilities Data Collection matrix, and a Planning Team and Stakeholder Questionnaire.

ii. The first half of the Planning Team and Stakeholder Questionnaire is for Planning Team members. The second half is designed to be shared with departments/community organizations that the Planning Team members feel could provide valuable information in preparing the LHMP.

V. Action Items & Next Steps

a. KO Meeting minutes will be provided in five (5) to seven (7) business days.
   i. Data collection forms will be sent to the Planning Team with instructions on Monday, August 17, 2020. Deadline for completion and submission of these documents is Wednesday, September 2, 2020.
b. The next Planning Team Meeting (Planning Team Meeting #1) will be during the middle to end of September 2020.
c. Constant will send a Doodle survey to the Planning Team to determine the best date/time for Planning Team Meeting #1.
d. To ensure continuity and an expeditious planning process, Planning Team members should appoint an alternate representative to attend if they cannot dedicate the full time themselves.

VI. Questions & Discussions

a. Dana stated that if there are any issues, the Planning Team members can reach out to him for assistance.
b. Jenele asked Dana for the existing LHMP.
c. Dana stated that he would send the existing LHMP to the Planning Team with the caveat that the current product is generic and not a good example.
d. Jim stated that Constant will send another City's current LHMP to the Planning Team as reference.
e. Sue asked if there is a specific response rate target for the public survey.
f. Jim stated that whatever the City can garner is fine, but that documentation is critical (i.e. screenshots) in the final LHMP, and that an effort is made to elicit participation.

VII. Adjourn

City of Victorville
**2020 Local Hazard Mitigation Plan Update Project**
Project Kickoff Meeting - Minutes

Table 2: Meeting Attendees

| # | Name | Position | Organization/Department |
|---|---|---|---|
| 1. | Dana Wellborn | Emergency Management Coordinator | Victorville Fire Department |
| 2. | Sue Jones | Public Information Officer | City Manager's Office |
| 3. | Jenele Davidson | Deputy City Manager | City Manager's Office |
| 4. | Eric Ray | Director | Victorville Airport |
| 5. | James Murawski | Manager | Victorville Airport |
| 6. | Brian Gengler | Director | Victorville Engineering Department |
| 7. | Ed Sohm | Project Coordinator | Victorville Parks and Recreation |
| 8. | Michael Szarzynski | Senior City Planner | Development Department |
| 9. | Jim Sims | Subject Matter Expert | Constant Associates |
| 10. | Evan Koepke | Project Manager | Constant Associates |
| 11. | MJ Yoon | Project Support Staff | Constant Associates |

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## Planning Team Meeting #1

**Invitations:**

**Victorville Local Hazard Mitigation Plan: Meeting #1 Scheduling via Doodle Survey**

MJ Yoon <MJ@constantassociates.com>
Mon 8/17/2020 8:30 AM

To: MJ Yoon <MJ@constantassociates.com>
Cc: Jim Simi <Jim@constantassociates.com>; Evan Koepke <evan@constantassociates.com>; Ryan Dufour <Ryan@constantassociates.com>
Bcc: dwellborn@victorvilleca.gov <dwellborn@victorvilleca.gov>; Sue Jones <sjones@victorvilleca.gov>; jdavidson@victorvilleca.gov <jdavidson@victorvilleca.gov>; eray@victorvilleca.gov <eray@victorvilleca.gov>; swebb@victorvilleca.gov <swebb@victorvilleca.gov>; bgengler@victorvilleca.gov <bgengler@victorvilleca.gov>; eshim@victorvilleca.gov <eshim@victorvilleca.gov>; ssmith@victorvilleca.gov <ssmith@victorvilleca.gov>; gbenson@victorvilleca.gov <gbenson@victorvilleca.gov>; jmurawski@victorvilleca.gov <jmurawski@victorvilleca.gov>; jtrevino@victorvilleca.gov <jtrevino@victorvilleca.gov>; rbessinger@victorvilleca.gov <rbessinger@victorvilleca.gov>; mszarzynski@victorvilleca.gov <mszarzynski@victorvilleca.gov>

Good morning,

Thank you to those that attended the virtual Victorville Local Hazard Mitigation Plan Kickoff Meeting on Wednesday, August 12. We appreciate your time and commitment and would like to proceed with scheduling the first official Planning Meeting in September. We will be using GoToWebinar again. For those that could not join us during the Kickoff Meeting, please let me know if you run into any issues with using the platform for the first time. I would be happy to assist as needed.

**Please click on the link to submit your preferred times/dates for September's meeting: https://doodle.com/poll/p75ie4m3723qmatp Please submit your answers by Friday, August 21st at 5pm.** You may opt in to as many dates/times that fit your schedule, and we will send the invite with the finalized date/time by the end of August via email and an Outlook Calendar invite. As a reminder, please note that these subsequent planning meetings may take up to two (2) hours.

As always, if you have any questions, please feel free to contact me at any time.

Thank you, and I hope you have a great week.

Best,

MJ Yoon
Administrative Assistant

**CONSTANT ASSOCIATES**

## Victorville LHMP Planning Team Meeting #1 (Wed, Sep 23 @ 1pm-3pm)

MJ Yoon <MJ@constantassociates.com>
Mon 8/24/2020 8:30 AM

To: Sue Jones <cjones@victorvilleca.gov>; jdavidson@victorvilleca.gov <jdavidson@victorvilleca.gov>; eray@victorvilleca.gov <eray@victorvilleca.gov>; swebb@victorvilleca.gov <swebb@victorvilleca.gov>; bgengler@victorvilleca.gov <bgengler@victorvilleca.gov>; esohm@victorvilleca.gov <esohm@victorvilleca.gov>; ssmith@victorvilleca.gov <ssmith@victorvilleca.gov>; gbenson@victorvilleca.gov <gbenson@victorvilleca.gov>; jmurawski@victorvilleca.gov <jmurawski@victorvilleca.gov>; jtrevino@victorvilleca.gov <jtrevino@victorvilleca.gov>; rbessinger@victorvilleca.gov <rbessinger@victorvilleca.gov>; mszarzynski@victorvilleca.gov <mszarzynski@victorvilleca.gov>
Cc: Evan Koepke <evan@constantassociates.com>; Jim Sims <Jim@constantassociates.com>; dwellborn@victorvilleca.gov <dwellborn@victorvilleca.gov>

Good morning,

Thank you once again for submitting your time/date availability via Doodle last week. **The first Planning Team Meeting is scheduled for Wednesday, September 23 at 1pm PDT.** To reiterate, these planning meetings can take up to two hours, so please plan accordingly.

**The virtual meeting will take place on GoToWebinar**. Please register at the link below. After registering, you will receive a confirmation email with the option to schedule a calendar invite and information about how to join:

**https://attendee.gotowebinar.com/register/7142508207487123470**

An Outlook Calendar invite will also be sent to you in a separate email with the information to help set a reminder.

It is best to log onto the meeting from your computer and use the built in speaker/microphone. This will enable you to also have video capability so that documents can be shared while the meeting is taking place. If you opt to phone in, you will need to register through your computer to obtain a voice pin. This individual pin will need to be entered upon calling so that you can be heard by other participants. These directions will be available upon registration.

Thank you once again for your cooperation. If you have any questions, please feel free to contact me.

Best,

MJ Yoon
Administrative Assistant

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**Meeting Agenda:**

City of Victorville
**Local Hazard Mitigation Plan Update Project 2020**
Planning Meeting 1 - Agenda

# Meeting Agenda

## Project Kickoff Meeting

**Location:** Virtual Meeting on GoToWebinar
**Date:** Wednesday, September 23, 2020
**Time:** 1pm-3pm PDT
**Dial-In:** GoToWebinar
**Participant Pin:** Received upon registration
**Webinar Link:** https://attendee.gotowebinar.com/register/7142508207487123470

I. Welcome & Agenda
   a. Meeting Purpose
   b. Administration
   c. Agenda
II. Project Status Update
   a. Overview
   b. Schedule
III. Hazard Identification and Prioritization
   a. Historical Hazards
   b. Hazard List and Prioritization
   c. Hazard Selection
IV. Outstanding Data Requirements
V. Action Items & Next Steps
VI. Questions & Discussion
VII. Adjourn

CONSTANT ASSOCIATES

1

## Sign-in Sheet:

City of Victorville
**Local Hazard Mitigation Plan Update Project 2020**
Project Planning Team Meeting #1

# Sign-In Sheet

## Project Planning Team Meeting #1

**Location:** Virtual Meeting on GoToWebinar
**Date:** Wednesday, September 23, 2020
**Time:** 1pm-3pm PDT
**Dial-In:** GoToWebinar
**Participant Pin:** Received upon registration
**Webinar Link:** https://attendee.gotowebinar.com/register/7142508207487123470

| # | Name | Organization/ Department | Telephone | Email | Attendance |
|---|---|---|---|---|---|
| 1. | Dana Wellborn | Emergency Management Coordinator | 760-243-6344 | dwellborn@victorvilleca.gov | Present |
| 2. | Sue Jones | Public Information Officer (PIO) | | sjones@victorvilleca.gov | Present |
| 3. | Jenele Davidson | Deputy City Manager | 760-243-6343 | jdavidson@victorvilleca.gov | Present |
| 4. | Eric Ray | Director, Airport | | eray@victorvilleca.gov | |
| 5. | James Murawski | Manager, Airport | | jmurawski@victorvilleca.gov | |
| 6. | Brian Gengler | Director, Engineering | 760-955-5156 | bgengler@victorvilleca.gov | Present |
| 7. | Ed Sohm | Project Coordinator, Parks | 760-243-1980 | esohm@victorvilleca.gov | |
| 8. | Sophie Smith | Deputy City Manager | | ssmith@victorvilleca.gov | |
| 9. | Greg Benson | Fire Chief | | gbenson@victorvilleca.gov | |
| 10. | Josie Trevino | Human Resources (Risk Management) | | jtrevino@victorvilleca.gov | |
| 11. | Rick Bessinger | Captain, San Bernardino Sheriff's Dept. | | rbessinger@victorvilleca.gov | |
| 12. | Michael Szarzynski | Senior City Planner | 760-955-5142 | mszarzynski@victorvilleca.gov | Present |
| 13. | Candace Harper-Woods | Human Resources (on behalf of Josefina Trevino) | | chwoods@victorvilleca.gov | Present |
| 14. | Jim Sims | Constant Associates | 424-320-2586 | jim@constantassociates.com | Present |
| 15. | Evan Koepke | Constant Associates | 424-320-2011 | evan@constantassociates.com | Present |
| 16. | Lee Rosenberg | Constant Associates | 424-320-2588 | ryan@constantassociates.com | Present |
| 17. | MJ Yoon | Constant Associates | 424-226-0170 | mj@constantassociates.com | Present |

**Presentation (Cover Only):**

**Meeting Minutes:**

City of Victorville
2020 Local Hazard Mitigation Plan Update Project
Planning Team Meeting 1

# Meeting Minutes

## Planning Team Meeting 1

Location: Virtual Meeting on GoToWebinar
Date: Wednesday, September 23, 2020
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Table 1: Action Items

| # | Item | Due Date | Responsibility |
|---|---|---|---|
| 1. | Provide the Planning Team with Planning Team Meeting #1 minutes | 9/30/2020 | Constant/MJ |
| 2. | Change risk level for Extreme Heat on the Hazard Identification & Prioritization chart on page 9 from H to M | 9/30/2020 | CONSTANT/Evan |
| 3. | Change risk level for Fire/Wildfire on the Hazard Identification & Prioritization chart on page 9 from H to M | 9/30/2020 | CONSTANT/Evan |
| 4. | Confirm if there are more than natural gas lines that need to be addressed per Pipeline/HAZMAT/Transport on the chart on page 10 | 10/7/2020 | Victorville |
| 5. | Amend weighted score for Flood Flash Flood on the Hazard Identification & Prioritization chart on page 9 from 3.0 to 2.7 and change Risk Level from H to M | 9/30/2020 | CONSTANT/Lee |
| 6. | Add information about train routes Pipeline/HAZMAT/Transport on the chart on page 10 | 10/7/2020 | CONSTANT/Lee |
| 7. | Provide GIS mapping information regarding pipelines that transport liquid fuels from Colton to Las Vegas to CONSTANT per Pipeline/HAZAMAT/Transport on the chart on page 10 | 9/23/2020 | Dana |
| 8. | Add information about Municipal Utilities providing electricity per Power Failure/PSPS on the chart on page 10 | 10/7/2020 | CONSTANT/Lee |
| 9. | Confirm if the City has a list of prior city emergency and disaster declarations besides COVID-19 | 10/7/2020 | Victorville |
| 10. | Confirm with Chuck Pugh (risk management) if the City has participated in the National Flood insurance program | 10/7/2020 | Victorville/ Brian |
| 11. | Research with FEMA data if the City has participated in the National Flood insurance program if information cannot be found via risk management | 10/7/2020 | CONSTANT/Lee |
| 12. | Obtain more information regarding non-facility critical infrastructure assets and community assets | 10/7/2020 | CONSTANT/Jim & Victorville/Mike |

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City of Victorville
2020 Local Hazard Mitigation Plan Update Project
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| | | | |
|---|---|---|---|
| 13. | Create list of organizations that assist with mitigation efforts outside of the City staff | 10/7/2020 | Victorville/Dana |
| 14. | Create list of education and outreach programs established/conducted by the City to aid in mitigation efforts | 10/7/2020 | CONSTANT/Jim & Victorville/Mike |
| 15. | Provide GIS Maps that provide information regarding the lift stations, wash crossings and sanitary water piping | 10/7/2020 | Victorville/Dana & Brian (via Matt Hu) |
| 16. | Update Hazard Evaluation Table in the PPT and send to the Planning Team for review | Complete | CONSTANT/Evan |
| 17. | Conduct risk assessment and analyze public survey | 10/30/2020 | CONSTANT/Evan |
| 18. | Send Planning Team a condensed copy of prior mitigation strategy and actions with key questions | 10/14/2020 | CONSTANT/Evan |
| 19. | Collect and deliver remaining data requirements as stated above (or other information that may be relevant) | 10/7/2020 | Victorville |
| 20. | Review mitigation strategy and actions from current LHMP, consider provided questions, and be prepared with answers | 10/30/2020 | Victorville/Planning Team |
| 21. | Send Doodle Poll to evaluate the best time/date for Planning Meeting #2 | 10/14/2020 | CONSTANT/MJ |

*Note: Page numbers refer to the Victorville LHMP Planning Meeting 1 PowerPoint presentation.*

I. **Welcome & Agenda**
   a. Evan stated the primary and secondary purposes of the meeting per page 2
      i. The City's hazards will be identified, the Planning Team will help prioritize those hazards, and the Planning Team will select which hazards to include in the LHMP
   b. Evan reviewed the administrative details
      i. Meeting agenda and PPT are available for download via GoToWebinar handouts
      ii. The meeting minutes will be available within the week from CONSTANT
   c. Evan introduced Lee to the City Planning Team
      i. Lee provided his personal background and stated that he will do the bulk of the writing for the LHMP
   d. Evan reviewed the agenda on page 3

II. **Project Status Update**
   a. Evan reviewed the project status update on page 4
      i. The public Hazard Mitigation Survey was given to the Planning Team with supporting media releases thanks to Sue
      ii. There were sixty-five (65) responses as of this morning, which is a really good response, comparatively speaking
      iii. The LHMP Questionnaire was given to Planning Team
      iv. Open-source data was collected regarding historical hazard events and disasters in the county and select events (as readily available) in the city of Victorville

v. City data on water infrastructure, airport, and facilities was collected thanks to Dana, James, and Arnold Villarreal

vi. Began collection of information for the City's capabilities inventory thanks to Dana and Michael

vii. Rough working draft of LHMP was created

viii. Will discuss later-on in the meeting the outstanding data requirements that are needed to conduct risk assessment

ix. The next steps involve finalizing the hazard list, conducting preliminary hazard prioritization, and conducting risk assessment; along with reviewing the mitigation strategies and actions that will enable the Planning Team to make decisions on what to include in the LHMP

b. Evan reviewed the project status update schedule

i. Planning Team Meeting #2 is tentatively scheduled for October 2020 that will focus on reviewing the risk analysis, review mitigation strategies, and start the action plan review

ii. Planning Team Meeting #3 is tentatively scheduled for November 2020 that will focus on updating the action plan and implementing strategy

III. **Hazard Identification, Prioritization, and Selection**

a. Lee reviewed the historical hazards in San Bernardino County on page 6

i. Two different types of declarations including Federal and others

1. The City has had a fair number of wildfires and flooding under federal declarations from 1953-2020
2. Some severe storms, and to a lesser extent, biological, severe freezing, and earthquakes were also federally declared
3. Other declarations between 1954-2017 included fire, flood, weather/storm, earthquakes, gasoline shortage, water shortage, terrorism

b. Lee reviewed the hazard identification and prioritization table on page 7-8

i. The table summarizes the degree of risk a hazard imposes on the City

ii. Per probability, a value is assigned on the likelihood that a hazard will occur with a value from 1-4, and the weight of each hazard is 45% of the total value

1. FEMA approved this approach since it shows a systematic approach towards the degree of risk

iii. Per magnitude/severity, the hazard is assigned a value of 1-4 depending on how much damage is caused, injuries are sustained, and how long the critical facilities are shut down

iv. Per warning time, the hazard is assigned a value of 1-4 depending on how much warning time people have before the hazard occurs

1. For example, is the event like a drought or flood that allows for more warning versus an earthquake that has far less warning

v. Per duration, the hazard is assigned a value of 1-4 depending on how long the impact of the disaster lasts

1. For example, the aftermath of an earthquake can have a longer duration due to damages/injuries caused by the actual event

c. Lee reviewed the table on pages 9-10 that takes potential hazards that the City faces and gives an assigned risk level number for each
   i. The chart is his educated estimate in rating the hazards per available information, but the Planning Team needs to evaluate if the ratings are appropriate
      1. Lee stated that since the City has an airport, there is higher risk of Aviation Accident than other cities that do not have one, and since the City handles a lot of cargo planes, the potential for catastrophic damage is higher
         - Sue Jones stated that the number assignments look fine
         - Brian Gengler stated that the approach is rational and methodical, but he needs to go over the data carefully to assess if the numbers are accurate
         - Lee stated that the Planning Team can go over the information and that CONSTANT can alter it as needed
      2. Lee reviewed Climate Change; stated that FEMA expects it to be addressed in the Plan and that it is hard to dispute that it is happening, but the causes do not need to be discussed; rather, the consequences need to be addressed
         - Brian asked if risk power shortages should be addressed under this because the City has experienced this recently
         - Lee stated that power shortage is addressed as a separate hazard
      3. Lee reviewed Dam Inundation; stated that Mojave Dam is in bad shape
         - Brian stated that the Corp of Engineers did a risk analysis of the Mojave Dam, but he does not have the data readily available
         - Lee stated that he has seen the data and that the risk level has gone up significantly
      4. Lee reviewed Drought; stated that we are expecting another El Nina year which can result water supply shortages and increased fire risk
      5. Lee reviewed Earthquake; stated that California is due for a higher magnitude earthquake within the foreseeable future
      6. Lee reviewed Extreme Heat; checked if the City is in the high desert
         - Brian confirmed that the City is in the high desert, around 3,000 ft above sea level
         - Lee stated that most people in the desert have A/C, but power shortages can cause problems, especially with the more vulnerable populations
         - Lee stated that this should change from H to M in the Risk Level
      7. Lee reviewed Fire/Wildfire; stated that there might not be much warning time and that the intensity and duration can change quickly
         - Stated that this should change from H to M in the Risk Level as well

8. Lee reviewed Flood/Flash Flood; stated that summer monsoons can occur in the City and need to be addressed in the LHMP
    - Janele stated that the math needs to be corrected (i.e. should be 2.7, thus at a moderate level)
    - Lee confirmed that this was correct and would be amended
9. Lee reviewed Storm/High Wind; stated that it can last for a number of days
10. Lee reviewed Pandemic; stated that warning times usually are from several weeks to months and that the duration can be several months to even years
11. Lee reviewed Pipeline/HAZMAT/Transport; stated that CONSTANT needs information from the City to confirm if there are more than natural gas lines that need to be addressed
    - Brian requested that the train routes (i.e. Cajon Pass by the 15) be addressed in Transport
    - Lee stated that rail would be included
    - Dana stated that the national pipeline mapping system for liquid fuels that are transported from Colton to Las Vegas and goes through 395 communities should be addressed
    - Lee stated that some of the GIS mapping products can be included if the City provides this information
    - Dana stated that he sent the link to Evan
12. Lee reviewed Power Failures/PSPS; stated that the probability is high that this is going to happen and asked if Southern California experienced any public safety shutoffs
    - Brian confirmed that the City did experience rolling shutoffs
    - Sue stated that one thing of interest may be that the City has external Municipal Utilities that provide electricity to commercial businesses
    - Lee stated that this could be added to the plan if the City provides more details
    - Brian stated that he would like to clarify that SCE power is purchased from the Municipal Utilities and that the latter is not running on its own power
    - Lee stated that this could be added as a critical infrastructure
13. Lee reviewed Terrorism; stated that FEMA only requires natural hazards to be addressed, so this does not need to be included, but can be if the City would like to include it to the LHMP
    - Brian asked if civil unrest follow under this category; rocks were recently thrown at police cars in front of the detention center, and people were asked not to park their cars at City Hall in fear of being vandalized

- Lee stated that civil unrest can be listed as a hazard if the probability merits it, but that from his perspective, unless it becomes a major riot, it can be classified as illegal acts
- Lee stated that grant funding comes from FEMA and that FEMA changed PDM to Bric program that emphasizes natural hazards and building resilient infrastructures and communities
- Evan stated that adding more hazards to the LHMP has pros/cons; the more hazards added, the more time it will take to complete and maintain the plan, and that including security related hazards would not provide additional access to related grant funding or overly support mitigation efforts
- Lee confirmed that listing all of the possible hazards may add some value, but by going into too much detail, it is going beyond the effective scope of the LHMP

14. Dana asked per Pipeline/HAZMAT/Transport, if this section should be taken out of the City's LHMP because although some agencies get money for PSPS, there is little mitigation that could prevent anything
    - Lee stated that one reason to keep it is the potential for getting funding for hazmat clean up kits and PPE for responders
    - Dana agreed that these resources are needed, so the item should not be omitted
    - Lee stated that the rating could be changed as necessary, since FEMA is not going to judge the plan or allocate a grant based on this too, but FEMA will ask if mitigations are taken into account

d. Lee reviewed the hazard selection information on page 11 regarding the changes in the new LHMP versus the previous 2012 LHMP
    i. Stated that the hazard analyses are based on FEMA's requirements
    ii. The new LHMP will address additional new hazards including Aviation Incident, Climate Change, Dam Inundation, Drought, and HAZMAT Release
    iii. The new LHMP will also address Extreme Heat, Extended Power Outages/PSPS, and Pandemic if the City finds it necessary
    iv. The new LHMP will update Flash Flood as Flood/Flash Flood
    v. The new LHMP will address Dam Risk from the Mojave River Dam
e. Brian asked if there would be discussion about critical infrastructure at some point since it was included in the data requested by CONSTANT
    i. Evan stated that this would be discussed in the next section

IV. **Outstanding Data Requirements**

a. Evan stated that the outstanding data requirements address the data CONSTANT does not generally have access to and will need the City's assistance to obtain
b. Jim introduced himself and reviewed the information on page 12 regarding outstanding data requirements

i. The City will need to provide historical data and/or a contact that has the information, specifically any prior City emergency and disaster declarations and data on the impact of these events (i.e. location, fatalities, dollar amounts, etc.)
    1. Dana stated that the City has asked for reimbursements for several issues, but the only formal declaration to City Council that he is aware of is for COVID-19
    2. Jenele stated that the City asked FEMA for assistance in the past, but she is not sure if a formal declaration was made
    3. Dana stated that in 2010, La Mesa Road collapsed from storm damage and that the City followed a State declaration that piggybacked the funding for the road damage, but that a local declaration was never made
    4. Dana stated that he would look into the history the City has sought for reimbursement
    5. Jim asked if the City participated in the National Flood Insurance Program
    6. Dana stated that Stefan is the NFIP coordinator that could possibly give more information
    7. Brian confirmed and stated the this would probably go through risk management via Chuck McKay
    8. Lee asked if there is a record of flood insurance policies with information on repetitive loss properties
    9. Brian stated that he is not sure if the data is accessible
    10. Lee stated that he would do some more research with FEMA

c. Jim reviewed risk assessment, stating that CONSTANT needs more information regarding non-facility critical infrastructure assets and community assets
    i. Mike stated that he would review this information directly with Jim

d. Jim asked if the City has administrative and technical staff/organizations that help with mitigation efforts
    i. Brian stated that the County of San Bernardino maintains the flood channels and so forth and that staff can be mobilized to come into the City as needed
    ii. Brian stated that there is a CalTrans field office in Victorville and that staff can be mobilized to come into the City as needed
    iii. Dana stated that he will email a list of organizations to Evan
    iv. Brian stated that there are utility companies that also have their own resources
    v. Sue stated that CalOE helped with the COVID-19 response
    vi. Dana stated that there are volunteer organizations including the Red Cross

e. Jim asked if the City does any education and outreach to help people in the community understand how to prepare themselves, family, neighborhoods in case of an emergency/disaster
    i. Dana stated that the City has conducted some cert training, ham radio, outreach with some organizations, made a presence at community events
    ii. Sue asked if Stop the Bleed fits into the category

iii. Dana agreed that it does
iv. Dana stated that the City partnered with the Red Cross for a smoke detector event last year
v. Sue stated that the County has a readiness app that people can sign up for to receive advance warnings and that the City shared this on its social media outlets
vi. Dana stated the City's website posted information on reverse 911 for cell phones
vii. Jim stated that for every hazard on the list, mitigation actions need to be addressed, so this information would be helpful
viii. Jim stated that he would work with Dana to get the list finalized

f. Brian asked if it would be helpful if he were to provide a list of the bridges and interchanges in the City, City and CalTrans traffic signal locations, wash crossing areas in the City (provided by public works), sewer system locations with critical life stations and washes
   i. Lee stated that for simplicity of the plan, it is good to get the data, but it is best to compile the numbers into a single value
   ii. Lee stated that the lift stations should be listed separately along with the wash crossings and sanitary water piping, and that they should be assigned a risk value
   iii. Evan stated that any geographic graphic can be used to summarize in the plans
   iv. Dana that the City has 64 layers that already may be populated in GIS
   v. Brian stated that he could coordinate with Matt Hu to get the GIS maps

V. **Action Items, Next Steps, Questions, and Discussion**

a. Evan reviewed the action items and the summary of the next meeting
   i. CONSTANT's action items include:
      1. The meeting minutes will be available within five (5) business days
      2. The Hazard Evaluation Table will be updated in the PPT and sent to the Planning Team for review
      3. Conduct risk assessment and analyze public survey result
      4. Send the Planning Team a condensed copy of prior mitigation strategy and actions with key questions for consideration
   ii. The City's Planning Team action items include:
      1. Collection and delivery of the remaining data requirements
      2. Review mitigation strategy and actions from the current LHMP prior to the next meeting and be ready to answer provided questions
   iii. The next meeting is scheduled for mid to late October, but may have to be in the beginning of November
      1. Doodle poll will be sent out to evaluate which date would work the best
      2. The next meeting will also take about two (2) hours

VI. **Adjourn**

City of Victorville
2020 Local Hazard Mitigation Plan Update Project
Planning Team Meeting 1

Table 2: Meeting Attendees

| # | Name | Organization/ Department | Email | Attendance |
|---|---|---|---|---|
| 1. | Dana Wellborn | Emergency Management Coordinator | dwellborn@victorvilleca.gov | Present |
| 2. | Sue Jones | Public Information Officer (PIO) | sjones@victorvilleca.gov | Present |
| 3. | Jenele Davidson | Deputy City Manager | jdavidson@victorvilleca.gov | Present |
| 4. | Brian Gengler | Director, Engineering | bgengler@victorvilleca.gov | Present |
| 5. | Michael Szarzynski | Senior City Planner | mszarzynski@victorvilleca.gov | Present |
| 6. | Candace Harper-Woods | Human Resources (on behalf of Josefina Trevino) | chwoods@victorvilleca.gov | Present |
| 7. | Jim Sims | Constant Associates | jim@constantassociates.com | Present |
| 8. | Evan Koepke | Constant Associates | evan@constantassociates.com | Present |
| 9. | Lee Rosenberg | Constant Associates | lee@constantassociates.com | Present |
| 10. | MJ Yoon | Constant Associates | mj@constantassociates.com | Present |

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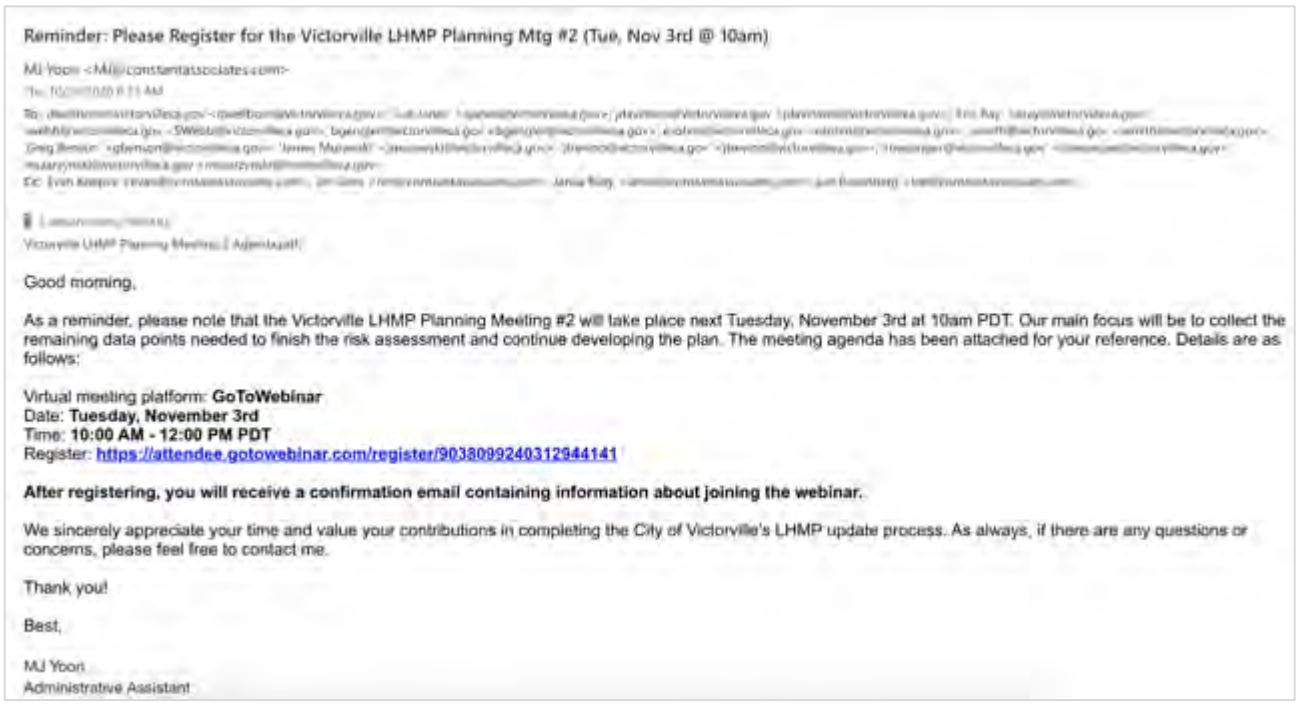
## Planning Team Meeting #2

**Invitations:**



Reminder: Please Register for the Victorville LHMP Planning Mtg #2 (Tue, Nov 3rd @ 10am)

MJ Yoon <MJ@constantassociates.com>

Good morning,

As a reminder, please note that the Victorville LHMP Planning Meeting #2 will take place next Tuesday, November 3rd at 10am PDT. Our main focus will be to collect the remaining data points needed to finish the risk assessment and continue developing the plan. The meeting agenda has been attached for your reference. Details are as follows:

Virtual meeting platform: **GoToWebinar**
Date: **Tuesday, November 3rd**
Time: **10:00 AM - 12:00 PM PDT**
Register: **https://attendee.gotowebinar.com/register/9038099240312944141**

**After registering, you will receive a confirmation email containing information about joining the webinar.**

We sincerely appreciate your time and value your contributions in completing the City of Victorville's LHMP update process. As always, if there are any questions or concerns, please feel free to contact me.

Thank you!

Best,

MJ Yoon
Administrative Assistant

IMMEDIATE UPDATE: Victorville LHMP Plan Mtg #2 Rescheduled

MJ Yoon <MJ@constantassociates.com>

Hello,

The Victorville LHMP Update Planning Team Meeting #2 originally scheduled for tomorrow (Tue, Nov 3rd at 10am) is being be pushed to the following week. A new Doodle poll will be sent on the morning of Wed. Nov 4th to determine the best time/date for all Planning Team members.

We understand that due to the elections and the upcoming holiday season, everyone is extremely pressed for time. Thus, we are very appreciative of your continued efforts and contributions to updating the City's LHMP in a timely fashion. This meeting is critical for completing the risk analysis and data collection elements of the project. We cannot complete them without your direct insight and input.

If there is any specific way that we can help accommodate your schedule, please feel free to contact either me or Evan Koepke (CONSTANT Project Manager) at evan@constantassociates.com / direct: 424-320-2011.

Best,

MJ Yoon
Administrative Assistant

**CONSTANT ASSOCIATES**
8(a) Certified Business
Emergency Management | Health Security | Healthcare Preparedness | Counterterrorism
Direct: (424) 266-0170
Email: mj@constantassociates.com

**RESCHEDULED: Victorville LHMP Plan Mtg #2: Tue, Nov 10th (2pm-4pm)**

MJ Yoon <M[redacted]>

To: [redacted]
Cc: Evan Koepke <evan[redacted]>; Jeff Dinn <jeff[redacted]>; Lee Rosenberg <lee[redacted]>; Jesse Ray <jesse[redacted]>

Good afternoon,

Please note that the Victorville LHMP Planning Team Meeting #2 has been rescheduled for **Tuesday, November 10th at 2pm**.

**If you have yet to register, please click here.** Upon registering, a confirmation email with information about joining the virtual meeting on GoToWebinar will be sent.

This meeting is critical for completing the risk assessment and mitigation planning elements of the LHMP. Without your direct insight and input, we will be unable to integrate the information required by FEMA and CalOES for approval. Be aware that, with the holiday season rapidly approaching, the time remaining for plan development and public review is rapidly drawing down.

We anticipate the meeting will be between 1-2 hours. If there is any specific way that we can help accommodate your schedule, please feel free to contact either me or Evan Koepke (CONSTANT Project Manager) at evan@constantassociates.com / direct: 424-320-2011

Thank you once again for your time and efforts. We look forward to seeing you during Tuesday's meeting.

Best,

MJ Yoon
Administrative Assistant

**CONSTANT ASSOCIATES**
8(a) Certified Business
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Direct: (424) 266-0170
Email: mj@constantassociates.com
www.constantassociates.com

**Meeting Agenda:**

City of Victorville
**Local Hazard Mitigation Plan Update Project 2020**
Planning Meeting 2 - Agenda

# Meeting Agenda

## Planning Meeting 2

**Location:** Virtual Meeting on GoToWebinar
**Date:** Tuesday, November 10, 2020
**Time:** 2pm-4pm PDT
**Dial-In:** GoToWebinar
**Participant Pin:** Received upon registration
**Webinar Link:** https://attendee.gotowebinar.com/register/9038099240312944141

I. Welcome & Agenda
   a. Meeting Purpose
   b. Administration
   c. Agenda
II. Project Status Update
   a. Overview
   b. Schedule
III. Feedback and Data Collection Workshop
   a. Facility Hazard Exposure
   b. Prior Mitigation Action Status
   c. Remaining data requirements
IV. Mitigation Strategy (if time allows)
V. Action Items & Next Steps
VI. Questions & Discussion
VII. Adjourn

CONSTANT ASSOCIATES

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## Sign-in Sheet:

City of Victorville
**Local Hazard Mitigation Plan Update Project 2020**
Project Planning Team Meeting #2

# Sign-In Sheet

## Project Planning Team Meeting #2

**Location:** Virtual Meeting on GoToWebinar
**Date:** Tuesday, November 10, 2020
**Time:** 2pm-3:15pm PDT
**Dial-In:** GoToWebinar
**Participant Pin:** Received upon registration
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| 2. | Sue Jones | Public Information Officer (PIO) | | sjones@victorvilleca.gov | Present |
| 3. | Jenele Davidson | Deputy City Manager | 760-243-6343 | jdavidson@victorvilleca.gov | Present |
| 4. | Eric Ray | Director, Airport | | eray@victorvilleca.gov | |
| 5. | James Murawski | Manager, Airport | | jmurawski@victorvilleca.gov | |
| 6. | Brian Gengler | Director, Engineering | 760-955-5156 | bgengler@victorvilleca.gov | Present |

City of Victorville
**Local Hazard Mitigation Plan Update Project 2020**
Project Planning Team Meeting #2

| | | | | | |
|---|---|---|---|---|---|
| 7. | Ed Sohm | Project Coordinator, Parks | 760-243-1980 | esohm@victorvilleca.gov | Present |
| 8. | Sophie Smith | Deputy City Manager | | ssmith@victorvilleca.gov | |
| 9. | Greg Benson | Fire Chief | | gbenson@victorvilleca.gov | |
| 10. | Josie Trevino | Human Resources (Risk Management) | | jtrevino@victorvilleca.gov | |
| 11. | Rick Bessinger | Captain, San Bernardino Sheriff's Dept. | | rbessinger@victorvilleca.gov | |
| 12. | Michael Szarzynski | Senior City Planner | 760-955-5142 | mszarzynski@victorvilleca.gov | |
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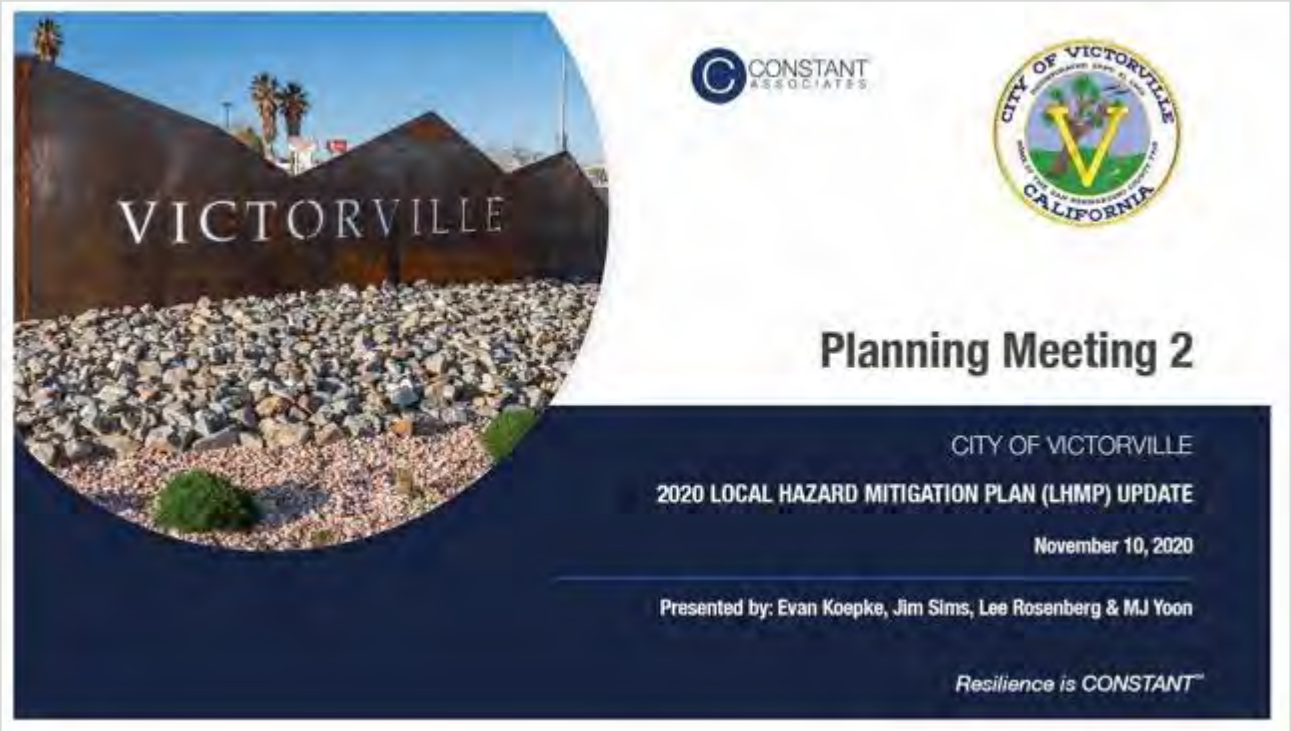
**Presentation (Cover Only):**



**Meeting Minutes:**

City of Victorville
**2020 Local Hazard Mitigation Plan Update Project**
Planning Team Meeting #2

# Meeting Minutes

## Planning Team Meeting #2

**Location:** Virtual Meeting on GoToWebinar
**Date:** Tuesday, November 10, 2020
**Time:** 2pm-3:15pm PDT
**Dial-In:** GoToWebinar
**Participant Pin:** Received upon registration
**Webinar Link:** https://attendee.gotowebinar.com/register/9038099240312944141

Table 1: Action Items

| # | Item | Due Date | Responsibility |
|---|---|---|---|
| 1. | Provide the Planning Team with Planning Team Meeting #2 minutes | 11/12/2020 | Constant/MJ |
| 2. | Provide information on National Flood Insurance Program participation and damages to insured structure (note: meeting with Chuck on 11/10 scheduled to go over information) | 11/17/2020 | Victorville/Dana |
| 3. | With regards to facility hazard susceptibility, provide a monetary value for the roadway repairs assessed in dollars per square foot | 11/17/2020 | Victorville/Brian |
| 4. | If new mitigation actions for each City specific hazard is identified, notify CONSTANT | 11/30/2020 | Victorville/All team members |
| 5. | Send out Doodle Poll to determine Planning Team Meeting #3 date/time | 11/12/2020 | Constant/MJ |
| 6. | Schedule Planning Team Meeting #3 with confirmed date/time | 11/17/2020 | Constant/MJ |
| 7. | Contact FEMA to receive more information about JPA airport information | 11/17/2020 | CONSTANT/Lee & Evan |
| 8. | Follow up with Arnold Villareal who is in charge of the City's RRA to see the status of the RRA and provide an update to Lee | 11/17/2020 | Victorville/Dana |
| 9. | Provide initial draft LHMP for the City to review | 11/30/2020 | Constant/Lee, Evan, & Jim |

*Note: Page numbers refer to those on the Victorville LHMP Planning Meeting #2 PowerPoint presentation. Specific actions and decisions regarding the list of prior mitigation actions can be found in Attachment 1.*

1

City of Victorville
**2020 Local Hazard Mitigation Plan Update Project**
Planning Team Meeting #2

I. Welcome & Agenda
- a. Evan provided a summary of the meeting's agenda:
  - i. Review data gaps for the risk assessment elements of the project
  - ii. Review facility hazard exposure
  - iii. Identify status of prior mitigation actions
- b. Evan stated that the following documents are available on download via GoToWebinar:
  - i. Meeting agenda
  - ii. Meeting presentation
  - iii. Facility Hazard Susceptibility document
  - iv. LHMP Mitigation Action Review Worksheet document
  - v. City of Victorville Hazard Mitigation Survey Analysis document
- c. MJ conducted the roll call and confirmed voice capability

II. Project Status Update (page 4)
- a. Evan stated that following actions have been started and/or completed:
  - i. Hazard mitigation survey was completed
  - ii. Completed collection of community capabilities information
  - iii. Started building out prior mitigation actions through deploying the worksheet to the planning team
  - iv. Have received a significant portion of information for the risk assessment analysis, but still need more data to finalize it
- b. Evan stated the following items may face challenges to complete on schedule and/or need more support from the planning team:
  - i. Schedule delays impending for the outstanding data requirements for conducting risk assessment
  - ii. If things come up unexpectedly, inform CONSTANT so that adjustments can be assessed and made (i.e. unplanned events coming up)
- c. Evan stated that the next steps are as follows:
  - i. Collect remaining information needs to complete analysis for the risk assessment
  - ii. Begin reviewing mitigation strategies and actions
- d. Evan went over the revised schedule
  - i. Because of data collection needs, the current planning meeting was pushed to November
  - ii. Goals of Planning Meeting #3 are to look at the action plan and implementation strategy updates
    1. Need to be ready to talk through City's mitigation strategy, review plans, and talk implementation of the plan during the meeting
    2. Planning on pushing meeting to end of November/beginning of December

iii. Potential for Planning Meeting #4 if needed towards the end of December
iv. Still aiming to finish the LHMP draft for submission by January/February 2021

III. Outstanding Data Requirements (page 6)

a. Evan stated that per hazard description and historical impacts, more information regarding the City's participation in the National Flood Insurance Program is needed
   i. Are there any records of damage to insured structures?
   ii. Dana stated that he will be meeting with Chuck later today to go over the questions and will provide an update.
b. Evan stated that per risk assessment, information from the City was received and reviewed in the past week to make sure it fits all the requirements
   i. Lee stated that he looked over the community hazard information and believe the information needed is there; some of the material received do not need to be included in the LHMP draft, but assured that cultural and natural resources will be included
   ii. Evan stated that with regards airport insurance information, due to Joint Powers of Authority (JPA), the airport is formally viewed as separate jurisdiction that has to essentially do prepare its own mitigation plan by conducting a hazard survey and assess community capabilities
      1. City is the only participant in the JPA, so CONSTANT will provide an explanation to FEMA to assess the best manner on how to move forward
      2. Lee stated that the City would not need to put forth the effort to receive funding if the airport operates completely independently, but that FEMA would have to advise if this is the best way for the City to proceed
   iii. Evan stated with regards to community capabilities and mitigation efforts, specific requirements per FEMA will need to be addressed including explaining what the City has done since its last LHMP to assess and mitigate disaster risks

IV. Facility Hazard Susceptibility Review (page 7)

a. Lee asked the City staff to review the table from the preliminary analysis findings and that the values come from assumptions derived from insurance loadout but that the City staff knows what the City's 107 owned facilities are specifically susceptible to with regards to natural/manmade disasters
   i. Climate change: Cities are susceptible, but the impact is not largely financial; with respect to the City, since it is not a coastal, the degree of risk is not as high
   ii. Dam/Flooding: Received information on a new dam within the City, but still need to be informed of which facilities are within the danger zone
      1. Lee asked if the City has reviewed it with the GIS staff?
   iii. Drought: Need to discuss if all facilities need to be included or only the several dozen wells in the City need to be of concern
   iv. Earthquake: Relevant to every facility in the City with two (2) significant faults besides the San Andreas running through the City

v. Excessive heat: Can cause problems like a drought where there may be no physical damage, but it can largely impact the community center and parks and recreation services provided to the public
vi. Fire/Wildfire: Any facilities besides the wells can be impacted
vii. Flood and flashflood: Area that needs the most City input with regards to more specific information gaps
    1. Lee asked if the City has GIS and facilities GO coded and requested the City to send mapping to implement into tables;
viii. High winds/Storms: Any facility is susceptible since high winds can blow out windows
ix. Pandemic: Significant impact on population, not directly to facilities
x. Pipeline/Transportation: Can affect any area with roadways near it
xi. Power loss: Any facility is susceptible, but does not cause direct damage
xii. Terrorism: Low risk, but may be something that the City may want to include
xiii. Cyberattack: City may want to consider

b. Evan asked the City if anything was missing in the facilities hazard susceptibility that CONSTANT did not address
    i. Evan asked if there are specific location with high flood risk
        1. Brian stated that the City has a list of locations that was sent to CONSTANT where the roads tend to flood and that signs are displayed around those areas
        2. Lee confirmed that CONSTANT received the list, but roadways need to be added that were not on the insurance list
        3. Lee asked if monetary values for the roadways available with regards to repairing damaged roads
            A. Brian confirmed that a dollar per square foot price could be assessed
    ii. Brian stated that power failure has ancillary effects (i.e. increase traffic accidents) and that the battery backup only lasts for two (2) to four (4) hours
        1. Lee stated that several cities has done sustained loss of power public safety plans and that this may be a mitigative action that the City could have to apply for specific grants

c. Dana stated that with any water-related issues, Arnold (City's Department of Water Supervisor) would be the contact and that Arnold has been working with a consultant in regards to the City's emergency action plans specifically related to the City's water
    i. Dana asked if this correlated to the issues that the LHMP is addressing and/or if should be included in the LHMP as well
    ii. Lee stated that the risk and resilience assessment in response to an emergency response plan is correlated, but independent, and that it is probably a good idea to leave it in the LHMP since these issues are prime candidates for mitigation actions

d. Evan stated that CONSTANT will look to include the following in the analysis:
    i. Road data

ii. Hazard susceptible points with the buildings
iii. Adjust flooding-based data once received
iv. If more are identified, the City can provide more information preferably within the next week or two to integrate in the analysis

V. Prior Mitigation Actions (page 8)

a. Evan stated that the goal in looking over the prior mitigation actions is to:
   i. Look at the status of the mitigation actions from the prior LHMP
   ii. Review the descriptive information and make edits if necessary
   iii. Check if point of contacts are correct
   iv. Provide any other information as needed

b. Lee stated that the status for each mitigation action does not need to be complete or incomplete, but rather could be classified as ongoing in the 2020 plan

c. Mitigation Actions/POC Chart:
   i. #1: Brian stated that the point of contact (POC) for building-related issues/fire prevention is Kevin Collins (Building/Fire Official), Doug Matthews is for water-related issues (Director of Public Works), and that any other fire-related issues, the Fire Chief would be the POC
      1. Since code are updated on a regular basis, the status can be ongoing
      2. Dana confirmed that most of this section falls under Kevin Collins
      3. Lee suggested that the last sentence be removed in the mitigation action
      4. Dana agreed since very few buildings fall under the indefensible space area
      5. Lee suggested to include an action that encourages defensible spaces in the wild urban interface
   ii. #2: Dana stated to make this an ongoing action since the City is always looking for grant funding
   iii. #3: Brian asked if this overlaps with #1 since the building codes are always kept current
      1. Lee agreed and said that it could be edited to be covered under mitigation action #1
   iv. #4: Dana stated that a little public education was conducted with regards to the COVID-19 pandemic, but that the City could add more information to the website; make the action as ongoing
   v. #5: Brian stated that he is working with the City's GIS people and that it may be a matter of integrating what the City GIS has online, but that he is not sure if it is current; stated that POC may be Matt Hieu, but he is not sure
      1. Evan stated that CONSTANT has the POC and can reach out to GIS Team
   vi. #6: Brian stated that this is already in the City's code so that the action can be considered completed
   vii. #7: Brian stated that this is a standard requirement with all of the City's new projects

1. Evan confirmed to mark it as ongoing

viii. #8: Brian stated that this action somewhat overlaps with action #6
   1. Lee stated that action #6 and #8 are somewhat at odds and will reword it to say it is ongoing and not in conflict with #6
   2. Brian stated that certain areas on the zoning map are open space and that buildings are not allowed in those areas

ix. #9: Evan asked if this document is known to be in the City's existing planning materials and implemented on a regular basis
   1. Brian stated that he believes so, but it should confirm with Michael Szarzynski
   2. Lee stated that this is common for relatively large cities that are somewhat flat and have drainage issues
   3. Lee stated that it would be updated as ongoing

x. #10: Brian alluded to the flood map amendment when looking at the flood map
   1. Lee stated that it would be updated as ongoing

xi. #11: Brian stated that this is ongoing and stated that he is not sure what distinction between actions #10 and #11
   1. Lee asked if the county has a program to update the flood hazard overlay program, not just FEMA, and that they need to look at both programs and different products
   2. Brian stated that this is ongoing

xii. #12: Brian stated that this is ongoing and a standard part of the process

xiii. #13: Brian stated that this is tentative with respect to who has the information since it is dependent on the drainage study submitted to the City
   1. Stated that this is ongoing

xiv. #14: Lee stated that he is not sure what this action means and recommended editing it
   1. Brian confirmed that it is redundant
   2. Evan stated that it could be listed as an unidentifiable action

xv. #15: Brian stated that this is ongoing

xvi. #16: Brian stated that this is ongoing
   1. Evan asked if there is long-term planning
   2. Brian stated that the master plan of drainage documents are used for guidance
   3. Lee stated that these action items are very generic and it would be advisable for the City to specify actionable mitigation activities that the City wants to include in the LHMP to get funding for
   4. Evan stated that the next phase of the project would be to focus on that once the risk assessment is completed
   5. Dana asked if the City identifies a mitigation action what is an acceptable form of mitigation

A. Lee stated that anything that protects life/property is a mitigation action (i.e. if twelve (12) signs on six (6) roads are displayed in flooding areas, flashing dropdown barriers are placed, siren system implemented, etc.)

6. Brian asked if it would be possible to consolidate some of the drainage mitigation actions to avoid redundancies
    A. Lee stated that it could be done and that the City should focus on actionable items that it could get grant funding for

xvii. #17: Brian stated that this was covered in an above action

xviii. #18: Brian stated that this is ongoing

1. Couple of studies are in progress for regional facilities and the small facilities

xix. #19: Brian stated that this can be consolidated since it is redundant

1. Lee agreed that all drainage issues can be consolidated

xx. #20: Dana stated that the City has a public info system and that it utilizes sheriff reverse 911 system if needed

xxi. #21: Lee stated that one flood warning system is through public information (i.e. education) and the other is reverse 911

1. Dana stated that the county flood control uses the same telephone notification system and that it is a universal program throughout the county that is reviewed on an ongoing basis when the plan is updated
2. Lee stated that actions #20 and #21 can be identified as being complete

xxii. #22: Dana stated that he is not sure if the new mapping has been shared with engineering department

1. Lee asked if this should be ongoing
2. Dana stated that the Amethyst Basin Plan's draft form is currently with the county and going to the Division of Dam Safety in the state; the City is an incorporated part of the agencies that has liabilities within the
3. Lee stated that CONSTANT has a copy of the plan in the inundation maps, but is curious to see if the City has evacuation plans for the other inundation areas (i.e. Mojave, Cedar Springs)
4. Dana stated that this should be ongoing and that he is meeting with the US Army Corp of Engineers in January with regards to inundation maps

xxiii. #23: Evan stated that this should be designated as ongoing

xxiv. #24: Lee stated that this should be designated as ongoing

xxv. #25: Brian stated that this overlaps with funding mechanism above

1. Lee agreed and stated that it should be designated as ongoing

xxvi. #26: Brian stated the City has repaired the area mentioned a number of times and that it is subject to damage in the future

1. Lee stated that it would a good mitigation action to include, but the City needs to identify a specific action since only the problem is described in detail (i.e. get permits, build some sort of structure)

2. Brian stated that right now it is a natural wash and that the sewer had to be incased in concrete to hold it in place
3. Evan stated that the long-term plan may need to address this
4. Lee stated that it may be good to request grand funding on how to address this specific problem

xxvii. #27/28: Brian stated that there is not much the City can do other than what has already been done

1. Lee asked that without understanding physical dimensions of roadway/culvert could be put in there
2. Brian stated that the road was an access road, not a public one, but that he is not sure why this was separated into two separate actions;
3. Lee state that once more information is provided by the City, these actions can be edited

xxviii. #29: Brian stated that the City did a project there a few years back and that storage drain were installed

1. Lee stated that this could be delineated as completed

xxix. #30: Brian stated that storm drains were installed a few years back

1. Lee stated that his could be delineated as partially complete and ongoing

VI. Action Items and Next Meeting (page 14)

a. Lee stated that the City should keep in mind that it may come up with other mitigation activities moving forward
   i. Per each hazard identified, there needs to be at least one mitigation action
   ii. Constant has some that can be included (i.e. excess heat, drought water conservation, etc.), but if City has specific problems and needs (i.e. bigger fuel tank, retrofit a City owned facility that is not seismically sound), these can be addressed in the plan
b. Brian stated that the City has a few other projects that identified mitigation actions; if these should be included
   i. Evan stated that if these projects go towards the generic mitigation action, it can give more credence that the City is doing its best to advance mitigation goals
   ii. Lee stated that he City should not spend a lot of time compiling this information since FEMA review the prior mitigation actions per the current LHMP;
   iii. Lee stated that CONSTANT could add a section that is in additional to the 29 activities in the 2015 plans if the City identifies new hazards/actions
c. Evan stated that CONSTANT will finish the risk assessment with the data and additional information received from the City (i.e. national flood insurance program information) and the JPA airport information from FEMA and will then advise City on the course of action
d. Lee stated that the basic draft plan with suggestion on mitigation activities pending feedback from the City can possibly be done by the end of the month
e. Lee stated that with regards to the airport situation, he can call Region 9 to confirm

f. Jenele stated that she heard about from Deputy City Manager and confirmed that there are two (2) separate entities with regards to the airport: JPA (City) and Victorville Water District, but that they were under the same governing board
    i. Lee stated that CONSTANT will follow up with FEMA to confirm since JPA is a legal district, but FEMA may say the City can include it or not in the LHMP
g. Evan stated that towards the end of the month, CONSTANT should have a first draft of the plan available with content mitigation strategies and actions
h. Evan stated that during the next few weeks, the City team members should look over the risk assessment content and provide guidance on thinking through prior mitigation strategies and possible updates to mitigation strategies
i. Lee stated that the City has a lot of facilities and to inform the plan, feedback via public engagement and engaging neighboring communities and cities will need to be conducted later because it is another FEMA requirement
j. Evan stated that CONSTANT will look at scheduling planning team meeting #3 in early December and send a Doodle poll to the team members soon
k. Lee stated that if the City has a completed RRA, it may bode well to look through anything there with regards to mitigation actions to make the LHMP correlate with the RRA since FEMA looks at other planning mechanisms
    i. Dana stated Arnold Villareal is in charge of the RRA and that his contact information was sent to CONSTANT; will follow up with him to see the status

## VII. Adjourn

Table 2: Meeting Attendees

| # | Name | Organization/ Department | Email |
|---|---|---|---|
| 1. | Dana Wellborn | Emergency Management Coordinator | dwellborn@victorvilleca.gov |
| 2. | Sue Jones | Public Information Officer (PIO) | sjones@victorvilleca.gov |
| 3. | Jenele Davidson | Deputy City Manager | jdavidson@victorvilleca.gov |
| 4. | Brian Gengler | Director, Engineering | bgengler@victorvilleca.gov |
| 5. | Ed Sohm | Project Coordinator, Parks | esohm@victorvilleca.gov |
| 6. | Jim Sims | Constant Associates | jim@constantassociates.com |
| 7. | Evan Koepke | Constant Associates | evan@constantassociates.com |
| 8. | MJ Yoon | Constant Associates | mj@constantassociates.com |
| 9. | Lee Rosenberg | Constant Associates | lee@constantassociates.com |

City of Victorville
**2020 Local Hazard Mitigation Plan Update Project**
Planning Team Meeting #2

## Attachment 1: Summary of Actions and Decisions

| # | Action/Decision | Responsible |
|---|---|---|
| 1. | Update Prior Mitigation Action #1: POC as Kevin Collin for building-related issues/fire prevention (Building/Fire Official), Doug Matthews for water-related issues (Director of Public Works), Fire Chief for all other fire-related issues | Constant/Lee |
| 2. | Update Prior Mitigation Action #1: Remove final sentence and update status as ongoing in 2020 plan | Constant/Lee |
| 3. | Prior Mitigation Action #2: Update status as ongoing in 2020 plan since the City is always looking for sources of grant funding | Constant/Lee |
| 4. | Prior Mitigation Action #3: Incorporate with action #1 to eliminate redundancy | Constant/Lee |
| 5. | Prior Mitigation Action #4: Update status as ongoing in 2020 plan | Constant/Lee |
| 6. | Prior Mitigation Action #5: Contact GIS team to confirm designated floodway and floodplain areas as identified by FEMA on Flood Insurance Map | Constant/Evan |
| 7. | Prior Mitigation Action #6: Update status as completed in 2020 plan | Constant/Lee |
| 8. | Prior Mitigation Action #7: Update status as ongoing in 2020 plan | Constant/Lee |
| 9. | Prior Mitigation Action #8: Reword action and have it not be in conflict with information from Action #6 | Constant/Lee |
| 10. | Prior Mitigation Action #9: Update status as ongoing in 2020 plan | Constant/Lee |
| 11. | Prior Mitigation Action #10: Update status as ongoing in 2020 plan | Constant/Lee |
| 12. | Prior Mitigation Action #11: Update status as ongoing in 2020 plan | Constant/Lee |
| 13. | Prior Mitigation Action #12: Update status as ongoing in 2020 plan | Constant/Lee |
| 14. | Prior Mitigation Action #13: Update status as ongoing in 2020 plan | Constant/Lee |
| 15. | Prior Mitigation Action #14: Edit wording and/or include it as an unidentifiable action in the 2020 plan | Constant/Lee |
| 16. | Prior Mitigation Action #15: Update status as ongoing in 2020 plan | Constant/Lee |
| 17. | Prior Mitigation Action #16: Redundant, so incorporate with other flood hazard area actions | Constant/Lee |
| 18. | Prior Mitigation Action #17: Update status as ongoing in 2020 plan | Constant/Lee |
| 19. | Prior Mitigation Action #18: Update status as ongoing in 2020 plan | Constant/Lee |
| 20. | Prior Mitigation Action #19: Redundant, so incorporate with other drainage actions | Constant/Lee |

City of Victorville
**2020 Local Hazard Mitigation Plan Update Project**
Planning Team Meeting #2

| | | |
|---|---|---|
| 21. | Prior Mitigation Action #20: Update status as completed in 2020 plan | Constant/Lee |
| 22. | Prior Mitigation Action #21: Update status as completed in 2020 plan | Constant/Lee |
| 23. | Prior Mitigation Action #22: Update status as ongoing in 2020 plan | Constant/Lee |
| 24. | Prior Mitigation Action #23: Update status as ongoing in 2020 plan | Constant/Lee |
| 25. | Prior Mitigation Action #24: Update status as ongoing in 2020 plan | Constant/Lee |
| 26. | Prior Mitigation Action #25: Update status as ongoing in 2020 plan | Constant/Lee |
| 27. | Prior Mitigation Action #26: Reword information to include specific mitigation actions | Constant/Lee Victorville (as needed) |
| 28. | Prior Mitigation Action #27/#28: Clarify mitigation action descriptions and provide information to CONSTANT | Victorville/Brian |
| 29. | Prior Mitigation Action #29: Update status as completed in 2020 plan | Constant/Lee |
| 30. | Prior Mitigation Action #30: Update status as partially completed and ongoing in 2020 plan | Constant/Lee |

## Planning Team Meeting #3

**Invitations:**

**Please register: Victorville LHMP Plan Team Mtg #3 (Tue, Dec 1st/10am)**

MJ Yoon <MJ@constantassociates.com>
Fri 11/20/2020 8:30 AM

To: dwellborn@victorvilleca.gov <dwellborn@victorvilleca.gov>; 'Sue Jones' <sjones@victorvilleca.gov>; jdavidson@victorvilleca.gov <jdavidson@victorvilleca.gov>; 'Eric Ray' <eray@victorvilleca.gov>; swebb@victorvilleca.gov <SWebb@victorvilleca.gov>; bgengler@victorvilleca.gov <bgengler@victorvilleca.gov>; esohm@victorvilleca.gov <esohm@victorvilleca.gov>; ssmith@victorvilleca.gov <ssmith@victorvilleca.gov>; 'Greg Benson' <gbenson@victorvilleca.gov>; 'James Murawski' <jmurawski@victorvilleca.gov>; 'jtrevino@victorvilleca.gov' <jtrevino@victorvilleca.gov>; 'rbessinger@victorvilleca.gov' <rbessinger@victorvilleca.gov>; mszarzynski@victorvilleca.gov <mszarzynski@victorvilleca.gov>
Cc: Evan Koepke <evan@constantassociates.com>; Jim Sims <Jim@constantassociates.com>; Lee Rosenberg <lee@constantassociates.com>

Good morning,

We have confirmed a date/time for Victorville LHMP Update Planning Meeting #3. We will be meeting virtually via GoToWebinar on **Tuesday, December 1st at 10am**. Please click HERE to register.
After registering, you will receive a confirmation email containing information about joining the webinar.

Please be advised that we anticipate this meeting to last between 1-2 hours. We will be discussing the details of the Threat and Hazard Analysis, addressing specific concerns that pertain to the City of Victorville. Your insight is needed and greatly appreciated.

As always, if you have any questions or scheduling concerns, please feel free to contact me or our Project Manager, Evan Koepke at evan@constantassociates.com / direct: 424-320-2011.

Thank you for your continued assistance. Have a great weekend!

Best,

MJ Yoon
Administrative Assistant

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Email: mj@constantassociates.com
www.constantassociates.com

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**Registration: Victorville LHMP Plan Team Mtg #3 (Scheduled: Tomorrow)**

MJ Yoon <MJ@constantassociates.com>
Mon 11/30/2020 8:30 AM

To: 'bwellborn@victorvilleca.gov' <bwellborn@victorvilleca.gov>; 'Sue Jones' <sjones@victorvilleca.gov>; jdavidson@victorvilleca.gov <jdavidson@victorvilleca.gov>; 'Eric Ray' <eray@victorvilleca.gov>; swebb@victorvilleca.gov <SWebb@victorvilleca.gov>; bgengler@victorvilleca.gov <bgengler@victorvilleca.gov>; esohm@victorvilleca.gov <esohm@victorvilleca.gov>; esmith@victorvilleca.gov <esmith@victorvilleca.gov>; 'Greg Benson' <gbenson@victorvilleca.gov>; 'James Murawski' <jmurawski@victorvilleca.gov>; 'jtrevino@victorvilleca.gov' <jtrevino@victorvilleca.gov>; 'rbessinger@victorvilleca.gov' <rbessinger@victorvilleca.gov>; mszarzynski@victorvilleca.gov <mszarzynski@victorvilleca.gov>
Cc: Evan Koepke <evan@constantassociates.com>

Good morning,

Our next Victorville LHMP Update Planning Meeting #3 is scheduled for **tomorrow, Tuesday, December 1st at 10am**. Please click **HERE** to register if you have not already. After registering, a confirmation email with information about joining the webinar will be sent to you.

Please be advised that this meeting is anticipated to last between 1-2 hours. We will be discussing the City's mitigation strategy, detailing specific actions the City would like to integrate. As previously mentioned, please be prepared to bring ideas that can help advance your department's goals and objectives with regards to mitigation actions and projects. Any information concerning costs or prospective funding sources would be helpful.

If you have any questions or scheduling conflicts, please feel free to contact our Project Manager, Evan Koepke at evan@constantassociates.com / direct: 424-320-2011. We gladly provide any assistance we can to help facilitate the process.

Thank you. We look forward to working with you tomorrow.

Best,

MJ Yoon
Administrative Assistant

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CONSTANT ASSOCIATES

**Meeting Agenda:**

City of Victorville
**Local Hazard Mitigation Plan Update Project 2020**
Planning Meeting 3 - Agenda

# Meeting Agenda

## Planning Meeting 3

**Location:** Virtual Meeting on GoToWebinar
**Date:** Tuesday, December 1, 2020
**Time:** 10:00am-12:00pm PDT
**Dial-In:** GoToWebinar
**Participant Pin:** Received upon registration
**Webinar Link:** https://attendee.gotowebinar.com/register/3362447706324658956

I. Welcome & Agenda
   a. Meeting Purpose
   b. Administration
   c. Agenda
II. Project Status Update
   a. Overview
   b. Schedule
III. Risk Assessment Overview
IV. Mitigation Goals
V. Mitigation Actions
   a. Ongoing
   b. New
VI. Action Items, Questions, & Discussion
VII. Adjourn

CONSTANT ASSOCIATES

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## Sign-in Sheet:

City of Victorville
**Local Hazard Mitigation Plan Update Project 2020**
Project Planning Team Meeting #3

# Sign-In Sheet

## Project Planning Team Meeting #3

**Location:** Virtual Meeting on GoToWebinar
**Date:** Tuesday, December 1, 2020
**Time:** 10:00am-12:00pm PDT
**Dial-In:** GoToWebinar
**Participant Pin:** Received upon registration
**Webinar Link:** https://attendee.gotowebinar.com/register/3362447706324658956

| # | Name | Organization/ Department | Telephone | Email | Attendance |
|---|---|---|---|---|---|
| 1. | Dana Wellborn | Emergency Management Coordinator | 760-243-6344 | dwellborn@victorvilleca.gov | Present |
| 2. | Sue Jones | Public Information Officer (PIO) | | sjones@victorvilleca.gov | Present |
| 3. | Jenele Davidson | Deputy City Manager | 760-243-6343 | jdavidson@victorvilleca.gov | Present |
| 4. | Brian Gengler | Director, Engineering | 760-955-5156 | bgengler@victorvilleca.gov | Present |
| 5. | Ed Sohm | Project Coordinator, Parks | 760-243-1980 | esohm@victorvilleca.gov | Present |
| 6. | Michael Szarzynski | Senior City Planner | 760-955-5142 | mszarzynski@victorvilleca.gov | Present |

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City of Victorville
**Local Hazard Mitigation Plan Update Project 2020**
Project Planning Team Meeting #3

| | | | | | |
|---|---|---|---|---|---|
| 7. | Jim Sims | Constant Associates | 424-320-2586 | jim@constantassociates.com | Present |
| 8. | Evan Koepke | Constant Associates | 424-320-2011 | evan@constantassociates.com | Present |
| 9. | Lee Rosenberg | Constant Associates | 424-320-2580 | lee@constantassociates.com | Present |
| 10. | MJ Yoon | Constant Associates | 424-226-0170 | mj@constantassociates.com | Present |

**Presentation (Cover Only):**

**Meeting Minutes:**

City of Victorville
**2020 Local Hazard Mitigation Plan Update Project**
Planning Team Meeting #3

# Meeting Minutes

## Planning Team Meeting #3

**Location:** Virtual Meeting on GoToWebinar
**Date:** Tuesday, December 1, 2020
**Time:** 10:00am-12:00pm PDT
**Dial-In:** GoToWebinar
**Participant Pin:** Received upon registration
**Webinar Link:** https://attendee.gotowebinar.com/register/3362447706324658956

Table 1: Action Items

| # | Item | Due Date | Responsibility |
|---|---|---|---|
| 1. | Provide the Planning Team with Planning Team Meeting #3 minutes | Dec 7, 2020 | CONSTANT/MJ |
| 2. | Engage Building Officer regarding NFIP and integrate into future planning efforts supporting LHMP developments | Dec 23, 2020 | City of Victorville/Dana |
| 3. | Conduct an internal City meeting to discuss possible additional actions to include in the Proposed New Mitigation Actions goals and present ideas to CONSTANT to include in the LHMP draft | Dec 14, 2020 | City of Victorville/All Departments |
| 4. | Provide information regarding Mutual Aid agreements with regards to Goal 4.1 (i.e fire stations) to be included in additional goals within section Goal 4: Proposed New Mitigation Actions | Dec 4, 2020 | City of Victorville/Dana |
| 5. | Provide information to include in Proposed New Mitigation Actions Goal 5.3 regarding City's participation in community programs such as Stop the Bleed, smoke detector programs with the Red Cross, etc. | Dec 4, 2020 | City of Victorville/Dana |
| 6. | Follow up with James Murawski to see if he has input on other Proposed New Mitigation Actions related to the City's airport | Dec 14, 2020 | City of Victorville/Dana |
| 7. | Schedule a quick meeting with the City planning team to review the review guide that will accompany the LHMP draft | Dec 23, 2020 | CONSTANT/Evan |
| 8. | Provide the Draft LHMP for review to the City planning team | Dec 23, 2020 | CONSTANT |

*Note: Page numbers refer to those on the Victorville LHMP Planning Meeting #3 PowerPoint presentation. Specific actions and decisions regarding the list of mitigation actions can be found in Attachment 1 below.*

1

City of Victorville
**2020 Local Hazard Mitigation Plan Update Project**
Planning Team Meeting #3

I. Welcome & Agenda
- a. Evan provided a summary of the meeting's agenda:
  - i. Project status update;
  - ii. Review and approve/review mitigation strategy goals;
  - iii. Specify mitigation actions for action plan (except water district and airport);
  - iv. Secondary: Update project schedule; discuss action items; answer questions.
- b. Evan stated that the following documents are available on download via GoToWebinar:
  - i. Meeting presentation.
- c. MJ conducted the roll call and confirmed voice capability.

II. Project Status Update (page 4)
- a. Evan went over the actions taken and tasks completed;
  - i. Continued data collection efforts/risk assessment;
  - ii. Verified with CalOES/FEMA that the City airport and water district can be included in the plan;
  - iii. Documented listing of prior mitigation actions and condensed/updated them;
  - iv. Updated LHMP draft.
- b. Challenges and support needs outstanding;
  - i. Outstanding data requirements for conducting risk assessment may cause delays;
    - i. Currently working on conducting water district risk assessment.
  - ii. National Flood Insurance Program (NFIP) participation and damages to insured structures;
    - i. Dana stated that the City currently has no knowledge regarding the NFIP; currently working with FEMA to see if there is additional assistance that can be provided.
- c. Evan stated that the next steps are:
  - i. Collecting remaining information to complete risk assessment and analysis;
  - ii. Develop and finalize mitigation strategy, action plan, and mitigation action specifications;
  - iii. Evan went over the proposed revised schedule:
    - i. Aiming to have first draft by Christmas; feedback by early January 2021;
    - ii. Planning meeting will be scheduled If needed in January or February 2021.

III. Risk Assessment (page 6)
- a. Lee went over graph delineating the total estimated potential losses to City property:
  - i. Earthquake/Seismic has the greatest amount of risk;
  - ii. Terrorism, Pipeline Rupture/HAZMAT, High Winds/Severe Storm, Fire/Wildfire, and Climate Change: Not as much property damage, with a parallel outcome, so the potential risk values are the same;

b. Lee stated that when the City's current HMP was reviewed, the numbers were based on the number of facilities and the values of the facilities;
   i. Missing information: Aviation accidents; cannot find historical data;
   ii. City can determine if the values are accurate; amounts can be adjusted if needed; current values are based on best estimates;
c. Evan stated that the values may change since the airport assessment is still currently being done.

IV. Proposed Mitigation Goals (page 7)

a. Lee stated that the goals listed were the ones in the current HMP; the goals help align mitigation activities and group them in a systematic way;
   i. For example, the City is subject to dam inundation: Grant funding potentially available; delineating the mitigation goals helps the City be eligible for funding;
   ii. Proposed draft goals in the plan:
      i. Protect life, property, and reduce potential injuries from hazard (i.e. fire and building codes, City code, support life safety);
      ii. Education and outreach (i.e. City website, safety fairs, activities by cert team, etc.);
      iii. Promote disaster resilience for City's natural, existing, and future environments (i.e. water conservation measures);
      iv. Working with partnerships and collaboration;
      v. Enhance City's ability to respond effectively to a disaster (i.e. emergency action plans, training for first responders, alert and warning communication, systems).

V. Ongoing Mitigation Actions (page 8)

a. Lee stated that the actions are the heart of the plan and have been aligned with the goals, hazards, what type of activities they are;
b. Will make another table/ask for timeline of implementation, estimated costs, timing, which City department is responsible for each action;
c. City Code Article 16 has more information about flood plain management; designates Building & Safety Department as responsible for implementation (i.e. specific department for managing flood plain program); not sure if that particular department has been contacted;
   i. Dana asked Jenele if the contact person for this is Kevin;
   ii. Evan confirmed that the Building Official is designated as the Flood Plain Manager per the documentation;
   iii. Jenele stated that Kevin is the Building and Fire Official and is checking if the duties still makes sense.
d. Evan stated that he would go over each action and requested for the City team to confirm if the implementing department(s) is correct for each:

i. Action #1: Mike confirmed that Building & Safety Planning is correct;
ii. Action #2: Mike confirmed that Building & Safety is correct;
iii. Action #3: Brian confirmed that Emergency Service/PIO is correct;
iv. Action #4: Brian confirmed that Emergency Services/PIO;
v. Action #5: Mike confirmed that Emergency Services is correct;
vi. Action #6: Brian confirmed that Emergency Services and Planning are correct
    i. Dana stated that he and Sue will have a meeting with the Army Corps of Engineers in January 2021;
vii. Action #7: Dana asked if Planning should be included;
    i. Mike agreed;
    ii. Brian stated that Public Works needs to be added;
    iii. Evan stated that it would be added;
viii. Action #8: Dana asked if that what the City is currently doing;
    i. Evan stated that it is denote the City's need to do a broader risk and vulnerability study;
    ii. Constant can reword the action to make it clearer/specific;
    iii. Dana stated that this would be an ongoing action that demonstrate within the HMP that there is progress towards the mitigation action;
ix. Action #9: Brian confirmed that Public Works is correct, but that it is more feasible to realign the sewer than the channel;
    i. Evan stated that these edits would be made;
x. Action #10: Brian confirmed that Public Works is correct;
    i. Evan asked if the action description is broad enough;
    ii. Brian confirmed;
xi. Action #11: Brian confirmed that Public Works is correct;
    i. Confirmed that the wash-out problem still relevant;
xii. Action #12: Brian confirmed that Public Works is correct;
xiii. Action #13: Jenele requested a code section to be able to find the information;
    i. Evan stated that it is Code 16-5.16.060, administration part (c);
    ii. Dana stated that the Building Official is not the contact regarding the NFIPs; needs to follow up with Kevin to see if there is any information;
    iii. Mike stated that the Planning Department should be included;
    iv. Jenele agreed that both the Planning Department and Building & Safety should be included;
xiv. Action #14: Evan stated that this action captures all of the regulatory actions for the day-to-day work;
    i. Brian stated that Public Works should be included;
        A. Review drainage studies conducted by Engineering that is under umbrella of Public Works umbrella

ii. Evan stated that Public Works would be added;
iii. Jenele stated that she prefers calling out Engineering when appropriate, even if it is under Public Works;
iv. Brian stated that it should include Engineering specifically with Public Works;
v. Lee stated that language in the code derives from FEMA approved verbiage and was used when the City was approved to be part of NFIP;
vi. Lee stated that the City staff will need to review and confirm the general timeline, estimated costs provided;

e. Jenele stated that she would like to include the City's Building & Safety manager into the conversation; Dana agreed to do so in the future.

VI. Proposed New Mitigation Actions: Goal 1 (page 11)

a. Evan requested for the City to check if the timeline, estimated costs, funding source, and implementing department are correct;
b. Goal 1.1: Mike stated that the implementing department should only be Building & Safety and not Planning;
    i. Lee stated that Planning would be taken out;
c. Goal 1.2: Jenele confirmed that the action description is fine;
    i. Lee stated that Planning would be taken out;
d. Goal 1.3: Mike suggested that Emergency Services may need to be added;
    i. Dana agreed;
    ii. Lee stated that Emergency Services would be added;
e. Goal 1.4: Dana stated that the action description is appropriate;
    i. Jenele agreed;
    ii. Lee confirmed that this would remain the same;
f. Goal 1.5: Dana stated that the City participated in all of items delineated except the Emergency Action Plan portion, so those items are completed, and the last one should be stated as a work-in-progress;
    i. Confirmed that the implementing department is correct;
    ii. Lee stated that the Amethyst Basin Dam portion would be taken out of the verbiage;
g. Evan asked if additional goals/actions need to be added to section Goal 1;
    i. Dana stated that a generator for the Community Center in response to PSPS/Earthquake response should be included;
    ii. Stated that the City's Emergency Center that serves as a POD location should be added;
    iii. Stated that he would have to discuss with Jenele due to the sensitivity of the issue whether certain signage should be included;
        i. For example: Turn Around Don't Drown, flood warning signs on Pebble Beach and Rodeo;

iv. Jenele agreed that it is a sensitive topic and the locations may not need to be called out specifically, but to state that signage will be posted when deemed appropriate;
v. Brian stated that these locations have signs, but adding more would not take more effort or incur much costs;
vi. Dana stated that the City works with the National Weather Service for TADD signs, and this could show mitigation efforts;
vii. Brian stated that due to ongoing litigations regarding on of the locations, the City team should discuss the options regarding this topic;
viii. Lee stated that if educating the community about flood safety is the goal, it can be done via postings on social media outlets without providing very specific information;
    i. Not a requirement for the National Flood Program, but the City can participate in community rating systems which can in turn provide a reduction in rates to homeowners; the City would need to document it and send it to be approved for the reduce rates that can save money for the community;
    ii. Will provide the material to Evan who can send it to the City.

VII. Proposed New Mitigation Actions: Goal 2 (page 12)

a. Goal 2.1: No comments from City team regarding changes;
b. Goal 2.2: No comments from City team regarding changes;
c. Goal 2.3: Lee stated that these organizations can include the Red Cross, Salvation Army, Team Rubicon, etc.
    i. Dana stated the Emergency Services could probably be added;
d. Goal 2.4: No comments from City team regarding changes;
e. Goal 2.5: Dana asked if Community Services should be added;
    i. Mike stated that Development is fine;
f. Goal 2.6: No comments from City team regarding changes;
g. Lee asked if there are any additional actions to encourage public understanding/support;
    i. Dana suggested for the City team to each come up with two to three ideas to present to the team and to prioritize them in order of importance;
    ii. Lee agreed that most of the mitigation activities are relatively easy to implement and do not incur much in costs;
    iii. Brian suggested having a meeting in order to discuss possible items to add;
    iv. Lee stated that this would be included as an action item for the City team members.

VIII. Proposed New Mitigation Actions: Goal 3 (page 14)

a. Goal 3.1: No comments from City team regarding changes;
b. Goal 3.2: No comments from City team regarding changes;

c. Goal 3.3: Mike stated that Community Development should be included;
d. Goal 3.4: Mike stated that only the Planning Department needs to be included since it is currently updating the General Plan; one of the safety items considered is the LHMP;
    i. Lee stated that he could work with the department's outside affiliate to use the same language within the LHMP;
e. Goal 3.5: Brian stated that Victorville Water District is more appropriate for the implementing department;
f. Goal 3.6: Dana stated that the Solid Waste Division may need to be added;
    i. Brian stated that Public Works may need to be added since it is dealing with debris;
    ii. Jenele stated that the Solid Waste Division falls under Public Works, so it should remain as is;
    iii. Dana requested for Public Works to be mentioned before Emergency Services;
    iv. Lee stated that this change would be made;
g. Lee stated that he will have a separate list of Victorville Water District hazards and will go over those during another meeting once the meeting with the District takes place;
    i. Dana stated the Lee should speak with Arnold since many are contained in the Emergency Response Plan that was just created;
    ii. Lee stated that this would be helpful since these items can be included in the LHMP to apply for grant funding.

IX. Proposed New Mitigation Actions: Goal 4 (page 15)

a. Goal 4.1: Lee asked if there is coverage for first responders;
    i. Sue stated that the City has its own police department, but the fire department is contracted with the County of San Bernardino;
    ii. Lee stated that the fire department would be taken out from the action description;
    iii. Dana stated that there are Mutual Aid agreements with regards to the fire department;
    iv. Lee asked if we could get a list or those from the City so that possible new goals could be added (i.e. 4.3 and 4.4);
b. Goal 4.2: Jenele stated that the implanting department should be the City Management Office and the Building Department.

X. Proposed New Mitigation Actions: Goal 5 (page 16)

a. Goal 5.1: No comments from City team regarding changes;
b. Goal 5.2: Dana asked if additional information needs to be added to specify what the City needs to request from Southern California Edison;
    i. Lee stated that this item does not need to be included;
    ii. Brian stated that it can remain since the City has regular meetings with Southwest Gas and can bring up safety mitigation measures that needs to be coordinate;

iii. Brian stated that the City infrequently meets with Southern California Edison, but during a recent meeting, they discussed better notifications for power shut-offs;

iv. Dana stated that the City has worked with SCE to coordinate some of the public notification/liaison relationships and finds the need to improve sharing information on a timely basis;

v. Lee stated that wording in the action description can be changed to reflect that improvements on communication between SCE and the City can be made;

c. Goal 5.3: Lee stated that he could not find information on a City cert team;

i. Dana confirmed that the City currently does not have one; the latter items in the action description are ongoing or have been done, but the cert program is something that the City is thinking about implementing in the future;

ii. Lee stated that the cert portion can be taken out and made into a separate future mitigation activity;

iii. Dana stated that the City is working on creating an Emergency Communications group and a group of general disaster service workers;

iv. Dana stated that he would send CONSTANT more information about what the City has currently;

v. Lee stated that an item can be created to state that the City is planning on recruiting and canvassing the community for emergency response volunteers;

vi. Dana stated that the City has already participated in community training programs including Stop the Bleed, smoke detector training with the Red Cross, outreach events, etc. and would send the list to Constant;

d. Lee stated that he will work with the City's Water District to add more goals and have the City team review them;

e. Jim asked if the City has a Continuity of Government Plan;

i. Dana stated that the City currently does not have one;

ii. Jim stated that if the City prefers, it can be added as a goal;

iii. Dana agreed that this should be added;

f. Mike asked if James Murawski should join in on future meetings since has knowledge about the airport;

i. Dana confirmed that he was invited to prior meetings and would follow up.

XI. Action Items and Next Meeting (tentative)

a. Evan stated that Constant would provide meeting minutes within the week, complete the risk assessment and mitigation actions for the Victorville Water District and the City's airport, and develop the LHMP Draft 1 for the City team to review;

b. The Planning Team needs to collect/deliver remaining data requirements and provide information for the data gaps to complete the mitigation action plan;

c. Tentative future planning meeting will be scheduled in early January 2021 if needed and anticipated to last two (2) hours;

d. Dana asked if it would be helpful to the City team if once Constant presents the review guide that comes with the LHMP draft, a short meeting would be beneficial for the team where Constant can provide an overview;
   i. Brian and Sue agreed that this would be helpful;
   ii. Evan stated that a meeting would be scheduled;
   iii. Lee stated that Constant will use the same format as per the FEMA Region 9 Review Guide as a template and that it would bode well to review that document.

XII. Adjourn

Table 2: Meeting Attendees

| # | Name | Organization/ Department | Email |
|---|---|---|---|
| 1. | Brian Gengler | Director, Engineering | bgengler@victorvilleca.gov |
| 2. | Dana Wellborn | Emergency Management Coordinator | dwellborn@victorvilleca.gov |
| 3. | Ed Sohm | Project Coordinator, Parks | esohm@victorvilleca.gov |
| 4. | Jenele Davidson | Deputy City Manager | jdavidson@victorvilleca.gov |
| 5. | Mike Szarzynski | Senior City Planner | mszarzynski@victorvilleca.gov |
| 6. | Sue Jones | Public Information Officer (PIO) | sjones@victorvilleca.gov |
| 7. | Evan Koepke | Constant Associates | evan@constantassociates.com |
| 8. | Jim Sims | Constant Associates | jim@constantassociates.com |
| 9. | Lee Rosenberg | Constant Associates | lee@constantassociates.com |
| 10. | MJ Yoon | Constant Associates | mj@constantassociates.com |

City of Victorville
**2020 Local Hazard Mitigation Plan Update Project**
Planning Team Meeting #3

Attachment 1: Mitigation Action Revisions

| # | Item |
|---|---|
| 1. | Ongoing Mitigation Action #7: Add Public Works to implementing department |
| 2. | Ongoing Mitigation Action #8: Reword action description to make it clearer and more specific |
| 3. | Ongoing Mitigation Action #9: Change description to indicate modifying sewer to mitigate flood ing |
| 4. | Ongoing Mitigation Action #14: Add Public Works and Engineering under implementing department |
| 5. | New Mitigation Actions 1.1: Remove Planning from the implementing department |
| 6. | New Mitigation Actions 1.2: Remove Planning from the implementing department |
| 7. | New Mitigation Actions 1.3: Add Emergency Services to implementing department |
| 8. | New Mitigation Actions 1.5: Take Amethyst Basin Dam portion out of the verbiage or the action description since it is currently a work-in-progress while the other two items have been completed |
| 9. | New Mitigation Actions 3.3: Add Community Development to implementing department |
| 10. | New Mitigation Actions 3.4: Remove Community Development from the implementing department |
| 11. | New Mitigation Actions 3.4: Work with the Planning Department's outside partner who is developing the General Plan to produce the same verbiage in the LHMP |
| 12. | New Mitigation Actions 3.5: Change implementing department to City of Victorville Water District |
| 13. | New Mitigation Actions 3.6: Change implementing department order to Public Works first then Emergency Services |
| 14. | New Mitigation Actions 4.1: Remove fire stations from the action description |
| 15. | Create new goals in Proposed New Mitigation Action: Goal 4 for Mutual Aid agreements with regards to the fire stations |
| 16. | New Mitigation Actions 4.2: Change implementing departments to City Management Office and Building Department |
| 17. | New Mitigation Actions 5.2: Change verbiage in action description to include improved communication methods between the City and the utility companies (i.e. Southern California Edison) so that information is sent/received in a more efficient, timely fashion |
| 18. | New Mitigation Actions 5.3: Change verbiage in action description to remove mention of City cert team to include in another mitigation action |
| 19. | New Mitigation Actions 5.3: Include Stop the Bleed, etc. in the action description (specific information to be provided by Dana) |
| 20. | Create new mitigation action regarding City's effort to create a CERT team (separate from 5.3) |
| 21. | New Mitigation Actions Goal 5.3: Integrate city information regarding City's participation in community programs such as Stop the Bleed, smoke detector programs with the Red Cross, etc. |
| 22. | Include new goals in the Proposed New Mitigation Actions presented during the Victorville Water District meeting for the City team to review |
| 23. | Add the creation/implementation of a City COOP/COG Plan as one of the Mitigation Actions |

## Review Guide Brief and Mitigation Workshop

**Invitation:**

**Register for Dec 17 @ 11am: Victorville LHMP Draft Review Briefing/Mitigation Actions Workshop**

MJ Yoon <MJ@constantassociates.com>
Fri 12/11/2020 8:38 AM

To: dwellborn@victorvilleca.gov <dwellborn@victorvilleca.gov>; 'Sue Jones' <sjones@victorvilleca.gov>; jdavidson@victorvilleca.gov <jdavidson@victorvilleca.gov>; 'Eric Ray' <eray@victorvilleca.gov>; swebb@victorvilleca.gov <SWebb@victorvilleca.gov>; bgengler@victorvilleca.gov <bgengler@victorvilleca.gov>; esohm@victorvilleca.gov <esohm@victorvilleca.gov>; ssmith@victorvilleca.gov <ssmith@victorvilleca.gov>; 'Greg Benson' <gbenson@victorvilleca.gov>; 'James Murawski' <jmurawski@victorvilleca.gov>; 'jtrevino@victorvilleca.gov' <jtrevino@victorvilleca.gov>; 'rbessinger@victorvilleca.gov' <rbessinger@victorvilleca.gov>; mszarzynski@victorvilleca.gov <mszarzynski@victorvilleca.gov>
Cc: Evan Koepke <evan@constantassociates.com>; Jim Sims <JimH@constantassociates.com>; Lee Rosenberg <lee@constantassociates.com>

Good morning,

Our Victorville LHMP draft review briefing will be held on Thursday, Dec 17 @ 11am-12pm on GoToWebinar. **Please click HERE to register.** To reiterate, during this briefing, we will be providing insight on streamlining the LHMP draft review process and troubleshooting relevant issues.

In addition, we will be conducting a quick workshop to brainstorm on additional mitigation actions to be included in the LHMP update. **To expedite this process, please prepare 2+ mitigation actions based on your department needs.** We anticipate the entire briefing/workshop to last about an hour.

Thank you for your continued assistance. If you have any questions about the briefing or feedback on the meeting minutes, feel free to contact our Project Manager: Evan Koepke (evan@constantassociates.com / direct: 424-320-2011).

Best,

MJ Yoon
Administrative Assistant

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## Sign-in Sheet:

City of Victorville
**Local Hazard Mitigation Plan Update Project 2020**
Planning Team Review Guide & Mitigation Action Workshop

# Sign-In Sheet

### Review Guide & Mitigation Action Workshop

**Location:** Virtual Meeting on GoToWebinar
**Date:** Thursday, December 17, 2020
**Time:** 11am – 11:50am
**Dial-In:** GoToWebinar
**Participant Pin:** Received upon registration
**Webinar Link:** https://register.gotowebinar.com/register/8034536495998188816

| # | Name | Organization/ Department | Telephone | Email | Attendance |
|---|---|---|---|---|---|
| 1. | Dana Wellborn | Emergency Management Coordinator | 760-243-6344 | dwellborn@victorvilleca.gov | Present |
| 2. | Sue Jones | Public Information Officer (PIO) | | sjones@victorvilleca.gov | Present |
| 3. | Jenele Davidson | Deputy City Manager | 760-243-6343 | jdavidson@victorvilleca.gov | Present |
| 4. | Brian Gengler | Director, Engineering | 760-955-5156 | bgengler@victorvilleca.gov | Present |
| 5. | Evan Koepke | Constant Associates | 424-320-2011 | evan@constantassociates.com | Present |
| 6. | MJ Yoon | Constant Associates | 424-226-0170 | mj@constantassociates.com | Present |

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**Presentation (Cover Only):**

**Meeting Minutes:**

City of Victorville
**2020 Local Hazard Mitigation Plan Update Project**
Planning Team Review Guide & Mitigation Action Workshop

# Meeting Minutes

## Review Guide & Mitigation Action Workshop

**Location:** Virtual Meeting on GoToWebinar
**Date:** Thursday, December 17, 2020
**Time:** 11am – 11:50am
**Dial-In:** GoToWebinar
**Participant Pin:** Received upon registration
**Webinar Link:** https://register.gotowebinar.com/register/8034536495998188816

Table 1: Action Items

| # | Item | Due Date | Responsibility |
|---|---|---|---|
| 1. | Provide the Planning Team with Review Guide & Mitigation Action Workshop meeting minutes | Dec 18, 2020 | CONSTANT/MJ |
| 2. | Build out the draft messaging contact for the public review | Dec 21, 2020 | CONSTANT/Evan |
| 3. | Provide Planning Area Description section to Dana for review via email | Dec 21, 2020 | CONSTANT/Evan |
| 4. | Send verbiage to Dana for approval regarding Capital Improvement Planning and Programs (to be approved by the City attorney before final inclusion) | Dec 18, 2020 | CONSTANT/Evan & City/Dana |
| 5. | Confirm if the City has a list or count of the number of commercial/industrial buildings and send information to Evan | Dec 18, 2020 | City/Dana |
| 6. | Include/Confirm information in the draft: CDBG grant program is administered by the Planning Department / Stop the Bleed Program is led by the City Fire Department | Dec 18, 2020 | CONSTANT/Evan |
| 7. | Confirm which department tracks childcare facilities, eldercare facilities, and sites with hazardous materials | Dec 21, 2020 | CONSTANT/Evan & City/Dana |
| 8. | Add additional mitigation goals/actions to the plan per item V. part b. and d. in the meeting minutes | Dec 21, 2020 | CONSTANT/Evan |
| 9. | Send Evan and CC Dana on the email with more mitigation actions from each department | Dec 23, 2020 | City/All planning team members |
| 10. | Conduct final outreach/data collection as needed | Dec 30, 2020 | CONSTANT/Evan |
| 11. | Develop Draft 1 of LHMP and distribute to the City planning team for review | Jan 5, 2021 | CONSTANT/Evan |
| 12. | Prep City website posting for public review | TBD | City/Dana |
| 13. | Provide necessary data to complete mitigation action plan | Dec 30, 2020 | City/All planning team members |

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City of Victorville
**2020 Local Hazard Mitigation Plan Update Project**
Planning Team Review Guide & Mitigation Action Workshop

*Note: Page numbers refer to those on the Victorville LHMP Planning Meeting Review Guide & Mitigation Action Workshop presentation.*

I. Welcome & Agenda
   a. Evan provided a summary of the meeting's agenda:
      i. Brief approach for efficiently reviewing Draft LHMP;
      ii. Collect outstanding datapoints;
      iii. Collect and workshop additional new mitigation actions;
   b. Evan stated that the following documents are available on download via GoToWebinar:
      i. Meeting presentation.

II. Review Guide Briefing (Overview) (pg. 4)
   a. Evan went over the plan's Table of Contents;
   b. Delineated key points:
      i. Final will be approximately 120 pages long;
      ii. Significant portion is material/substantiations to meet CalOES and FEMA requirements;
      iii. Sections in bold are those with critical content for reviewal;
      iv. Important to review all sections including subsections that are jurisdiction-specific and tables.

III. Review Guide Briefing (Critical Content for Review)
   a. Evan went over the Planning Area Description key points (pg. 5):
      i. Built out of open-source data (i.e. US census data);
      ii. Skim content to verify accuracy and identify any additional content;
      iii. Examine land use and development trends in more detail to ensure accuracy since this information will be evaluated as part of mitigation grant requests;
      iv. Important tables include City demographics and land use data;
         i. Dana requested for Evan to send this small section to him via email so that he could provide any information that needs to be added;
   b. Evan went over the Capabilities Assessment key points (pg. 6):
      i. Consolidated content from worksheets provided to the Planning Team with additional details from open-sourced research;
      ii. Team can skip block written content and focus on table content for validity;
      iii. Team can review NFIP content for awareness;
      iv. Important tables focus on the capabilities of the following:
         i. Planning and regulatory;
         ii. Administrative and technical;
         iii. Financial;
         iv. Educational and outreach;

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c. Evan went over the Planning Area Description key points (pg. 7):
   i. Team can read the first two sections to verify accuracy;
   ii. Team can briefly review table for section 3;
   iii. Team can skim hazard risk profiles;
   iv. Team can review vulnerability and risk assessment in detail;
   v. Important tables focus on critical facilities, hazard susceptibility of City owned facilities, potential losses;

d. Evan went over the Hazard Mitigation Strategy key points (pg. 8):
   i. Review content thoroughly to ensure we have accurately captured the status of prior mitigation;
   ii. Constant will provide a survey to gather more information;
   iii. Important tables focus on mitigation actions 2012 status, new mitigation actions, and mitigation action plan;

e. Evan went over the Planning Area Description key points (pg. 9):
   i. Some appendices will be blank because content can only be added once FEMA approves of the plan and the City Council adopts it;
   ii. Team can skip all except Mitigation Action Prioritization and Water District Detailed Risk Assessment;
      i. Dana asked if all of the data needed from the Water District has been obtained;
      ii. Evan stated that he will follow up with Arnold today to ensure this is the case;
   iii. Important table focuses on STAPLEE; analysis method for prioritization that combines hazard assessment with mitigation actions;

IV. Outstanding Questions/Datapoints (pg. 10)

a. Evan asked which documents the City intends to incorporate the mitigation hazards and risks, plan recommendations;
   i. Dana stated that the City's EOP is outdated and needs to be updated in the next calendar year and should be included;
   ii. Evan stated that General Plan Safety Element and Climate Change Element are required by law;
   iii. Dana stated that the planning team is aware of this and will work to include it;
   iv. Brian stated that the vast majority for Capital Improvement Planning and Programs are not related to hazard mitigation, and if referenced, the language needs to specifically denote limited liability with regards to hazard mitigation;
      i. Evan stated that the wording varies in different jurisdictions; he will double check on the working and send the language to Dana;
      ii. Dana agreed and stated that the City attorney should look over the verbiage;
   v. Evan asked which department administers the CDBG grant program;
      i. Brian confirmed that is it the Planning Department;
   vi. Evan asked who leads the Stop the Bleed Program;

i. Dana confirmed it is the Victorville Fire Department;

vii. Evan asked if the City has a list or counts the number of commercial/industrial buildings;

i. Dana stated that he will find out;

viii. Evan asked what department/official tracks child-care facilities/elder-care facilities/sites with hazardous material;

i. Dana stated that he is not sure, but most may be tracked under County-run programs;

ii. Brian asked for clarification on what tracking means;

iii. Evan stated that if the City keeps tabs on registered facilities with at-risk populations (i.e. if a mass evacuation has to be done, does the City know where these facilities are);

iv. Dana stated that the EOC plans and Development Section might have it;

v. Sue stated that George might be able to assist since it is something that would be of concern from a business-license standpoint;

vi. Evan stated that he would clarify this with Dana.

V. Mitigation Action Workshop (pg. 11)

a. Evan opened the floor for the planning team to provide additional mitigation actions per their respective departments;

b. Brian stated that he had the following:

i. Generators;

ii. Turn Around Don't Drown signs at flood crossings;

iii. Storm drain improvements (Rodeo & Pebble Beach);

iv. Public notification system (low power AM radio) reverse 911;

v. Pandemic support, FTS, ACS, mass care, hospital surge support;

c. Evan asked which implementing department would be in charge of the above-mentioned mitigation actions;

d. Brian confirmed the following:

i. Generators: Facilities;

ii. Turn Around Don't Drown signs: Engineering;

iii. Storm drain: Engineering;

iv. Public notification system: IT, PIO, Emergency Services;

v. Pandemic: Emergency Services/Management;

e. Evan stated that he will give the planning team a worksheet enlisted with names, descriptions, hazard, etc.;

i. Need the following information from the team:

i. Timeline: How far out in time will these mitigation actions be completed;

ii. Estimated cost from an educated guess; it is fine to say that the project requires more study if needed;

iii. Potential sources of funding; these can change, but the specific source needs to be named.

VI. Action Items and Next Meeting (pg. 12)

a. Dana requested for the planning team to come up with more mitigation actions and to email them to Evan with him CC-ed;

b. Brian stated that he could send some actions via email;

c. Evan stated that a fair amount of mitigation funding is potentially on the way from FEMA next year; surge of opportunities due to COVID-19;

d. Evan stated that Constant would do the following:

i. Provide minutes from this meeting;

ii. Conduct final outreach/data collection as needed;

iii. Develop the first draft of the LHMP with a target of the first week of January 2021 for distribution to the planning team;

e. Evan requested for the following action items to be completed by the City planning team:

i. Prep to post on City website for public review;

ii. Provide necessary data to complete mitigation action plan;

f. Brian requested for a summary of the process for the plan to be completed and adopted;

i. Evan stated the following actions will need to be completed in this order:

i. Team review and finalization of the draft;

ii. Public review for two (2) weeks;

iii. Integrate public review feedback if needed; to expedite the process, any changes will be done in a table format (i.e. recommendation / action) for the planning team to sign off;

iv. Draft goes to CalOES and can take two to four (2-4) weeks for approval;

v. Once approved by CalOES, copies will be sent to FEMA Region 9 for approval with a letter from CalOES; FEMA is required to respond within forty-five (45) days;

vi. Once FEMA approves, the FEMA review tool is included in the draft for the City Council to approve and adopt; City Council will provide a resolution;

vii. The final document with the resolution will be sent to FEMA for their records;

g. Brian asked if the plan needs to be approved by CalOES before the City can apply for certain grants;

i. Evan stated that the current plan expires in March 2021, so grants can be applied for with no concern; however if the new plan is not approved before April 1, 2021, there might be a gap in time where the City cannot apply.

VII. Adjourn

Table 2: Meeting Attendees

| # | Name | Organization/ Department | Email |
|---|---|---|---|

City of Victorville
**2020 Local Hazard Mitigation Plan Update Project**
Planning Team Review Guide & Mitigation Action Workshop

| | | | |
|---|---|---|---|
| 1. | Brian Gengler | Director, Engineering | bgengler@victorvilleca.gov |
| 2. | Dana Wellborn | Emergency Management Coordinator | dwellborn@victorvilleca.gov |
| 3. | Jenele Davidson | Deputy City Manager | jdavidson@victorvilleca.gov |
| 4. | Sue Jones | Public Information Officer (PIO) | sjones@victorvilleca.gov |
| 5. | Evan Koepke | Constant Associates | evan@constantassociates.com |
| 6. | MJ Yoon | Constant Associates | mj@constantassociates.com |

6

# APPENDIX C – PUBLIC ENGAGEMENT DOCUMENTION

**Appendix C** contains documentation of stakeholder engagement and outreach. It includes survey format and results, webpage and social media account postings, and public notification material.

| Event Date | Event Activity | Documentation |
|---|---|---|
| September 2, 2020 - September 22, 2020 | Public engagement survey posted on City Website | Survey questions and results |
| September 2, 2020 - September 22, 2020 | Media campaign to generate awareness and participation in public engagement survey | Posting on City's website |
| September 13, 2020<br>September 16, 2020 | | Postings on City's Facebook page |
| September 3, 2020<br>September 7, 2020<br>September 13, 2020<br>September 16, 2020<br>September 20, 2020 | | Postings on City's Twitter |
| September 7, 2020<br>September 16, 2020<br>September 20, 2020 | | Postings on City's Instagram |
| September 2, 2020 | | Media release to regional print, television, and radio news outlets |
| February 8, 2021<br>February 22, 2021 | Public HMP draft posted on the City's website and sent to the following neighboring jurisdictions (including regional utility providers and operational area) for review and comment. See Table 2-3 for the full list of jurisdictions. | Postings on City Website – no substantive comments received |
| February 23, 2021<br>March 8, 2021 | | Email to neighboring jurisdictions. No substantive feedback was received. |

## Website Post Content for Survey

The following material was posted on the City Website.

### Survey Webpage

**City of Victorville Local Hazard Mitigation Plan Survey**

The City of Victorville is updating its Local Hazard Mitigation Plan or HMP. The purpose of an HMP is to 1) evaluate the threat posed by natural disasters and 2) establish a City-wide strategy for managing that risk. This plan will allow Victorville to receive both state and federal hazard mitigation grants and disaster relief funds. Moreover, it will guide the city efforts to minimize the impact of disasters and climate change on Victorville's residents and businesses.

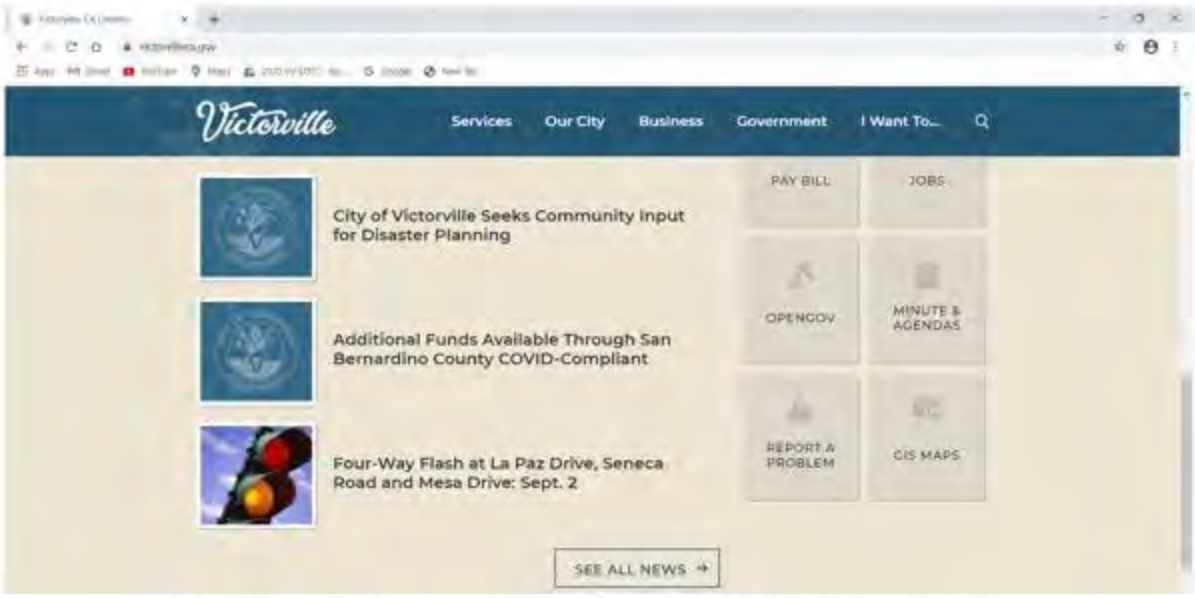
Public input and feedback are crucial to building an effective HMP. This is because hazard mitigation is a whole-community effort. Everyone has a role in keeping Victorville safe! As such, there will be multiple opportunities for you to share your thoughts, concerns, and interests about the plan. However, the first step is to help us understand YOU.

Fill out the survey below to share your thoughts on key disaster issues and tell the city how it can best help your household prepare for a natural disaster. All survey answers are anonymous and will only be used to help develop the city's emergency management plans.

https://www.surveymonkey.com/r/WY6C7FV

**Post about Survey to City of Victorville Website Home Page**

**News Section**



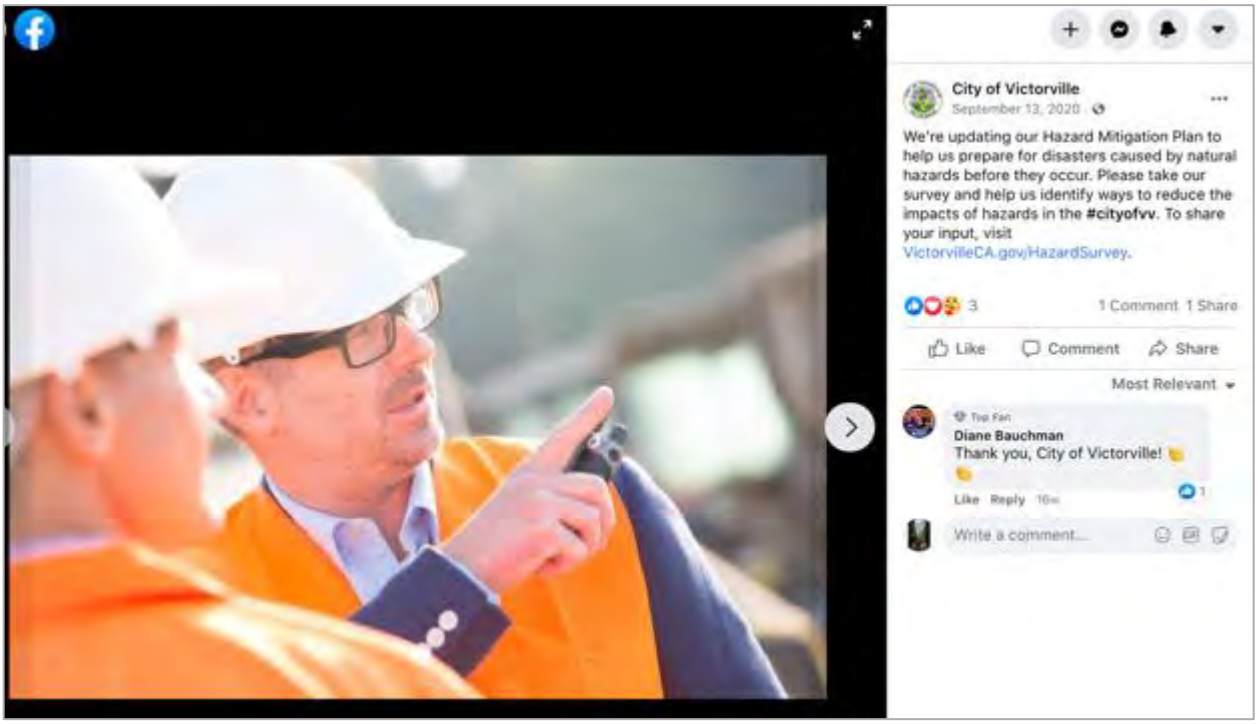

**Post about Survey to City of Victorville Website (Internal Page)**

**Link: VictorvilleCA.gov/HazardSurvey**

## Social Media Post Content

The following material was posted on the City's Facebook, Twitter, and Instagram accounts.

**Facebook**




**Twitter**


City of Victorville @cityofvv · Sep 3, 2020
We are creating a plan to address natural hazards in the #cityofvv and need your help! To share your input, visit VictorvilleCA.gov.
1


City of Victorville @cityofvv · Sep 7, 2020
The #cityofvv needs YOU! Help us cut hazards in the #cityofvv down to size. VictorvilleCA.gov/HazardSurvey
We need your help!
1


City of Victorville @cityofvv · Sep 13, 2020
We're updating our Hazard Mitigation Plan to help us prepare for disasters caused by natural hazards before they occur. Please take our survey and help us identify ways to reduce the impacts of hazards in the #cityofvv. To share your input, visit VictorvilleCA.gov/HazardSurvey.


City of Victorville @cityofvv · Sep 16, 2020
Help us identify hazards in the #cityofvv before they happen! Your input will help us update our plan to reduce the risk posed by hazards in our community. Please take our Hazard Mitigation Survey at VictorvilleCA.gov/HazardSurvey.
SURVEY
1


City of Victorville @cityofvv · Sep 20, 2020
Please help us identify ways to reduce the impacts of hazards in the #cityofvv! To share your input, visit VictorvilleCA.gov/HazardSurvey.
WE NEED YOUR HELP!
1

**Instagram**


We need your help!
cityofvv • Follow
cityofvv Don't let natural disasters go unchallenged. Help us cut hazards in the #cityofvv down to size. VictorvilleCA.gov/HazardSurvey
17w
35 likes
Add a comment...


SURVEY
cityofvv • Follow
cityofvv Help us identify hazards in the #cityofvv before they happen! Your input will help us update our plan to reduce the risk posed by hazards in our community. Please take our Hazard Mitigation Survey at VictorvilleCA.gov/HazardSurvey.
16w
23 likes
Add a comment...


WE NEED YOUR HELP!
cityofvv • Follow
cityofvv Please help us identify ways to reduce the impacts of hazards in the #cityofvv! To share your input, visit VictorvilleCA.gov/HazardSurvey.
15w
28 likes
SEPTEMBER 20, 2020
Add a comment...

## Media Releases

The City provided the following press releases. 230 news, media, academic, and community organization recipients received the press releases via direct email.

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# Press Release

## CITY OF VICTORVILLE SEEKS COMMUNITY INPUT FOR DISASTER PLANNING

**FOR IMMEDIATE RELEASE: September 2, 2020**

**VICTORVILLE, Calif.** – Small cities don't always have an opportunity to plan ahead for natural disasters and climate change. That is why the City of Victorville did not hesitate when the opportunity arose to update its Local Hazard Mitigation Plan (or LHMP) – a plan that guides city-wide efforts to reduce the risk of hazards such as flooding and earthquakes. However, for this planning effort to be successful, the City of Victorville needs input from the people who work and live within its boundaries. To start collecting this input, the city has released a Hazard Mitigation Planning Survey on its website, which can be accessed at VictorvilleCA.gov/HazardSurvey.

Public participation is a key part of hazard mitigation planning. It provides planners insight into public preferences and access to community knowledge about the city. It also allows planners to ensure that the needs of vulnerable populations, those who may be disproportionately affected by disasters, are accounted for. For these reasons, the City of Victorville will be providing several opportunities for public participation. "We invite any individual who lives or works in the City of Victorville to complete this survey and help shape our approach to hazard mitigation – the survey is a crucial first step," said Victorville Mayor, Gloria Garcia.

Investing in the creation of quality LHMPs provides cities with multiple benefits. First, they allow the city to take a comprehensive approach towards reducing the likelihood and impact of disaster events. Second, LHMPs are the principal qualification for a locality to receive state and federal hazard mitigation and disaster relief funds. Hazard mitigation funds can be applied to risk management projects such as brush or drainage clearing to reduce wildfire and flooding risk. Meanwhile disaster relief funding helps cities pay the immense costs inherent in responding to, and recovering from, disasters. Ultimately, these advance planning efforts reduce the likelihood and impact of disasters while minimizing the disruption and suffering that they cause.

To lead its planning effort, the city has hired Constant Associates, a Torrance – based emergency management consulting firm. The project, which is expected to be complete by March 2021, is being funded through a federal grant.

Located in Southern California at the high-point between Los Angeles and Las Vegas, Victorville is the leading city for both industry and retail in the High Desert Region. Victorville is a growing, vibrant community that is home to approximately 125,000 residents and some of the area's largest employers. Clean air, abundant mountain vistas, family-friendly recreation activities, spectacular sunsets and breathtaking night skies entice locals and visitors alike to fall in love with this city that is within a few hours of SoCal beaches, National Parks, mountain retreats, other major attractions; and less than an hour from Ontario International Airport. Additional information about the City of Victorville is available at VictorvilleCA.gov.

# # #

The City sent the press release to the following subscribers:

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| bellack.liesl@gmail.com | Liesl | Bellack |
| carnuts@aol.com | Stacy | Berro |
| rwmanuel@gmail.com | Reginald | Manuel |
| Nells332000@yahoo.com | Nelly | Munoz |
| koswald@wisc.edu | Kole | Oswald |
| mariapat8@aol.com | maria | neri |
| rz2323@hotmail.com | Rosa | Chavez |
| sullyasu81@gmail.com | Mike | Sullivan |
| leimr7650@gmail.com | Marlene | Reynolds |
| [illegible] | [illegible] | [illegible] |

The City posted the following press release on the City's website:

**Press Release about Survey on City of Victorville Website**

**Link: https://www.victorvilleca.gov/Home/Components/News/News/600/16**

Victorville

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## Recent News Articles

### City of Victorville Seeks Community Input for Disaster Planning

**Post Date:** 09/02/2020 3:02 PM

**Press Release**

CITY OF VICTORVILLE SEEKS COMMUNITY INPUT FOR DISASTER PLANNING

FOR IMMEDIATE RELEASE: September 2, 2020

VICTORVILLE, Calif. – Small cities don't always have an opportunity to plan ahead for natural disasters and climate change. That is why the City of Victorville did not hesitate when the opportunity arose to update its Local Hazard Mitigation Plan (or LHMP) – a plan that guides city-wide efforts to reduce the risk of hazards such as flooding and earthquakes. However, for this planning effort to be successful, the City of Victorville needs input from the people who work and live within its boundaries. To start collecting this input, the city has released a Hazard Mitigation Planning Survey on its website, which can be accessed at VictorvilleCA.gov/HazardSurvey.

Public participation is a key part of hazard mitigation planning. It provides planners insight into public preferences and access to community knowledge about the city. It also allows planners to ensure that the needs of vulnerable populations, those who may be disproportionately affected by disasters, are accounted for. For these reasons, the City of Victorville will be providing several opportunities for public participation.

"We invite any individual who lives or works in the City of Victorville to complete this survey and help shape our approach to hazard mitigation – the survey is a crucial first step," said Victorville Mayor, Gloria Garcia.

Investing in the creation of quality LHMPs provides cities with multiple benefits. First, they allow the city to take a comprehensive approach towards reducing the likelihood and impact of disaster events. Second, LHMPs are the principal qualification for a locality to receive state and federal hazard mitigation and disaster relief funds. Hazard mitigation funds can be applied to risk management projects such as brush or drainage clearing to reduce wildfire and flooding risk. Meanwhile disaster relief funding helps cities pay the immense costs inherent in responding to, and recovering from, disasters. Ultimately, these advance planning efforts reduce the likelihood and impact of disasters while minimizing the disruption and suffering that they cause.

To lead its planning effort, the city has hired Constant Associates, a Torrance - based emergency management consulting firm. The project, which is expected to be complete by March 2021, is being funded through a federal grant.

Located in Southern California at the high-point between Los Angeles and Las Vegas, Victorville is the leading city for both industry and retail in the High Desert Region. Victorville is a growing, vibrant community that is home to approximately 125,000 residents and some of the area's largest employers. Clean air, abundant mountain vistas, family-friendly recreation activities, spectacular sunsets and breathtaking night skies entice locals and visitors alike to fall in love with this city that is within a few hours of SoCal beaches, National Parks, mountain retreats, other major attractions; and less than an hour from Ontario International Airport. Additional information about the City of Victorville is available at VictorvilleCA.gov.

Contact: Sue Jones, Public Information Officer

## HMP Community Survey

The survey form for posting on the City website and as a hardcopy handout.

City of Victorville
**2020 Local Hazard Mitigation Plan Update Project**
Community Survey – Overview and Questions

# LHMP Community Survey Overview

### A Plan for Reducing Disaster Risk

The City of Victorville is developing a Local Hazard Mitigation Plan or LHMP. The purpose of an LHMP is to 1) evaluate the threat posed by natural disasters and 2) establish a city-wide strategy for managing that risk. This plan will allow Victorville to receive both state and federal hazard mitigation grants and disaster relief funds. Moreover, it will guide the city efforts to minimize the impact of disasters and climate change on Victorville's residents and businesses.

### Public Input is Critical

Public input and feedback are crucial to building an effective LHMP. This is because hazard mitigation is a whole-community effort. Everyone has a role in keeping Victorville safe! As such, there will be multiple opportunities for you to share your thoughts, concerns, and interests. However, the first step is to help us understand YOU.

### Help Us to Help You

Fill out the attached survey to share your thoughts on key disaster issues and tell the city how it can best help your household prepare for a natural disaster. All survey answers are anonymous and will only be used to help develop the city's disaster management plans. Additional comment/answer space is available at the end of the survey if you need additional space.

City of Victorville
**2020 Local Hazard Mitigation Plan Update Project**
Community Survey – Overview and Questions

# LHMP Community Survey Questions

1. **Residents and businesses in Victorville face a number of potential hazards. How concerned are you about the following hazards in Victorville? (Check one for each hazard)**

| | Not Concerned | Somewhat Concerned | Concerned | Very Concerned | Extremely Concerned |
|---|---|---|---|---|---|
| Earthquake | ☐ | ☐ | ☐ | ☐ | ☐ |
| Severe Storms | ☐ | ☐ | ☐ | ☐ | ☐ |
| Drought | ☐ | ☐ | ☐ | ☐ | ☐ |
| Extreme Heat | ☐ | ☐ | ☐ | ☐ | ☐ |
| Strong Winds | ☐ | ☐ | ☐ | ☐ | ☐ |
| Tornadoes | ☐ | ☐ | ☐ | ☐ | ☐ |
| Floods | ☐ | ☐ | ☐ | ☐ | ☐ |
| Windstorms | ☐ | ☐ | ☐ | ☐ | ☐ |

2. **How prepared is your household to cope with a hazard event? (Check one)**

| ☐ Not sure | ☐ Not at all prepared | ☐ Somewhat prepared | ☐ Adequately prepared | ☐ Well prepared | ☐ Very well prepared |
|---|---|---|---|---|---|

3. **Which of the following actions has your household taken to prepare for hazard events? (Check all that apply)**

- ☐ Prepare a disaster kit
- ☐ Stored water (one gallon/person per day)
- ☐ Purchased earthquake insurance
- ☐ Installed smoke detectors on each level of the house
- ☐ Taken a Community Emergency Response Team (CERT) Course
- ☐ Stored medical supplies (first aid kit, prescription & over the counter meds)
- ☐ Created a home evacuation plan
- ☐ Designated a family meeting place
- ☐ Stored non-perishable food
- ☐ Received First Aid/CPR training
- ☐ Purchased flood insurance
- ☐ Installed carbon monoxide detectors on each level of the house
- ☐ Have fire extinguishers in appropriate areas of the house
- ☐ Stored a battery powered radio, flashlights, and extra batteries
- ☐ Identified utility shut-offs / have shut-off tools available
- ☐ None

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City of Victorville
**2020 Local Hazard Mitigation Plan Update Project**
Community Survey – Overview and Questions

☐ Other (please specify):

_____

_____

4. **Which of the following sources of information have helped you to prepare for a hazard event? (Check all that apply)**

- ☐ Emergency preparedness information from a government source
- ☐ Attending meetings that have provided disaster preparedness information
- ☐ Community Emergency Response Team (CERT) Training
- ☐ Disaster exhibit at a local fair or community event
- ☐ Church disaster preparedness event
- ☐ Civic organization disaster preparedness (Red Cross, etc.)
- ☐ Personal experience with previous hazards or disasters
- ☐ School or other academic institution distribution of materials
- ☐ Locally news or regional media source
- ☐ Phone book or marketing distribution of materials
- ☐ Other (please specify):

_____

5. **How important do you find the following community-wide actions or activities that may reduce the risk of hazards in Victorville?**

| | Not Important | Somewhat Important | Very Important | Extremely Important |
|---|---|---|---|---|
| **Prevention activities** such as administrative or regulatory actions that influence the way land is developed and buildings are built (ex: planning, zoning, & building codes) | ☐ | ☐ | ☐ | ☐ |
| **Property protection actions** that modify existing buildings to protect them from a hazard or removal from the hazard area, such as acquisition, relocation, elevation, and structural retrofits | ☐ | ☐ | ☐ | ☐ |
| **Structural projects intended to lessen hazard impact** by modifying the natural progression of the hazard, such as detention/retention basins, retaining walls, storm sewers, and restoration efforts to increase the natural environment's capacity to absorb hazard impacts | ☐ | ☐ | ☐ | ☐ |

City of Victorville
**2020 Local Hazard Mitigation Plan Update Project**
Community Survey – Overview and Questions

| | | | | |
|---|---|---|---|---|
| **Emergency services actions** that protect people and property during and immediately after a hazard event, such as warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems | ☐ | ☐ | ☐ | ☐ |
| **Public education and awareness activities** to inform community members about hazards and the techniques they can use to protect and prepare their property and themselves, including outreach projects, CERT, school programs, library materials, and safety fair events | ☐ | ☐ | ☐ | ☐ |
| **Other (Please Specify):** _____ | ☐ | ☐ | ☐ | ☐ |

6. **Do you or anyone in your household have disabilities and/or access and functional needs and would you be interested in early warning notifications or specialized response to evacuate during disasters?**
   - ☐ Yes
   - ☐ No
   - ☐ Other (Please Specify): _____

7. **If you answered yes to Question 6: do you have a certified service animal that you would be interested in evacuating with you or a household member to a shelter during a disaster?**
   - ☐ Yes
   - ☐ No
   - ☐ Other (Please Specify): _____

8. **If you answered yes to Question 6: would you be interested in more information about Disaster Assistance for people with disabilities and / or access and functional needs?**
   - ☐ Yes
   - ☐ No
   - ☐ Other (Please Specify):

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City of Victorville
**2020 Local Hazard Mitigation Plan Update Project**
Community Survey – Overview and Questions

**Additional Comments/Answer Space:**

5

## Hazard Mitigation Community Survey Analysis

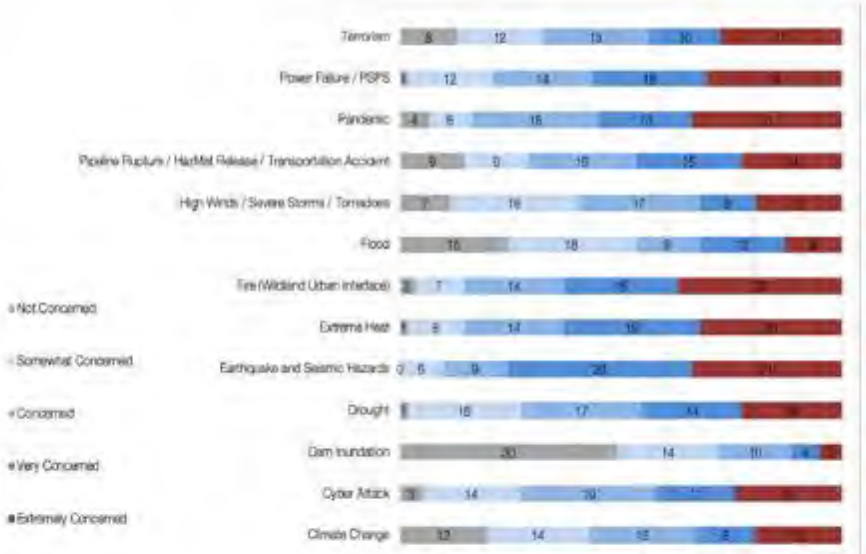
To inform the update of the City's HMP, a survey was conducted measuring citizens level of concern for various hazards and their general level of preparedness. This electronic survey was conducted from September 3, 2020 to September 22, 2020. Responses were collected via the City's website and social media channels. Sixty-two (62) City residents responded to the survey.

Local Hazard Mitigation Plan
Hazard Mitigation Community Survey Analysis

### Hazard Mitigation Community Survey Analysis

To inform the update of the City of Victorville's Local Hazard Mitigation Plan (LHMP), a survey was conducted measuring citizens level of concern for various hazards and their general level of preparedness. This electronic survey was conducted from September 3 to September 22, 2020. Responses were collected via the City's website and social media channels. In total, 62 residents of the City responded to the survey.

**Question 1: City of Victorville residents and businesses may encounter a variety of hazards and/or disasters. How concerned are you about the following hazards impacting you, your business and the City of Victorville? (Check one response for each hazard)**

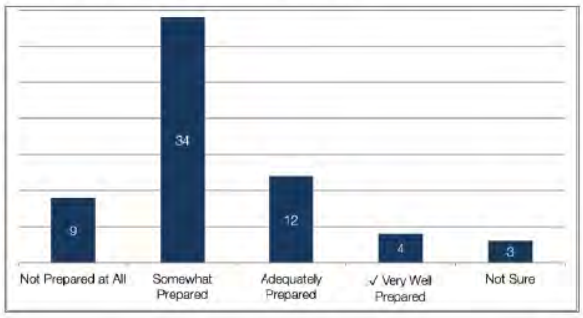



Survey respondents to this question highlighted fires, pandemics, and earthquake and seismic hazards as being of extreme concern, with 23 respondents (37%) being extremely concerned about fire events, 21 respondents (33%) extremely concerned about pandemic events, and 21 respondents (33%) extremely concerned about earthquake and seismic events.

The hazards of least concern were dam inundation, flood events, and climate change, with 30 respondents (49%) not concerned with dam inundation, 15 respondents (24%) not concerned with flooding, and 12 respondents (19%) not concerned with climate change.

**Question 2: How prepared is your household to cope with a hazard event?**

Respondents were asked to rate their preparedness for their household if confronted with a hazardous event. They were asked to select one answer rating their current preparedness ranging from very well prepared, adequately prepared, somewhat prepared, and not prepared at all. All 62 respondents completed this question.




Overall, 34 respondents (54%) stated they were somewhat prepared for a hazardous event. This answer is the second to last level of preparedness, indicating that more training and resources regarding household preparedness may be needed to bring city residents to satisfactory levels of preparedness.

**Question 3: Which of the following steps has your household taken to prepare for hazardous events?**

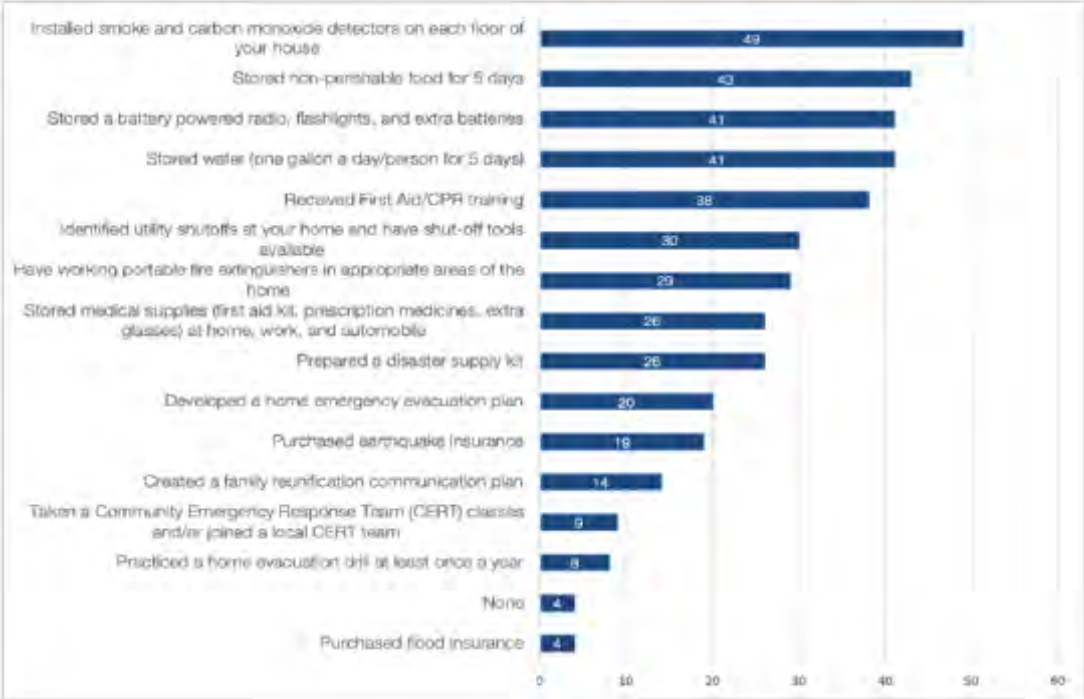
Respondents were asked to indicate which actions their households have taken to prepare for hazardous events. These questions allow the City to recognize common strengths in preparedness among households and identify gaps they may need to address and add to response efforts during emergency response.

There were 16 options for respondents to choose from, ranging from stored non-perishable food and water for each household to no actions taken. The full list of categories can be seen in the corresponding table.

Out of the 62 total respondents to the electronic survey, 1 respondent skipped this question for a total of 61 responses. The most common steps taken by households in the City included installation of smoke and carbon monoxide detectors on each floor of the home with 49 respondents (80%) indicating they have taken this step. The two next most common steps included storing enough non-perishable food for 5 days with 43 respondents (70%) stating they have taken this step, and storing water at levels of one gallon per day per person for 5 days with 41 respondents (67%) stating they have taken this step. Finally, the third most popular step completed was the storage of a battery-powered radio, flashlights, and extra batteries, with 41 respondents (67%) stating they have taken this step.

City of Victorville
Local Hazard Mitigation Plan
Hazard Mitigation Community Survey Analysis

The preparedness steps with the lowest completion rates by respondents included taking a Community Emergency Response Team (CERT) class and/or joining a CERT team, with only 14 respondents (14%) of respondents indicating they have completed this step, practicing a home evacuation drill at least once per year with 8 respondents (13%) indicating they have completed this step, and purchasing of flood insurance, with 4 respondents (6%) indicating they have completed this step. 4 respondents (6%) stated they took no precautions.

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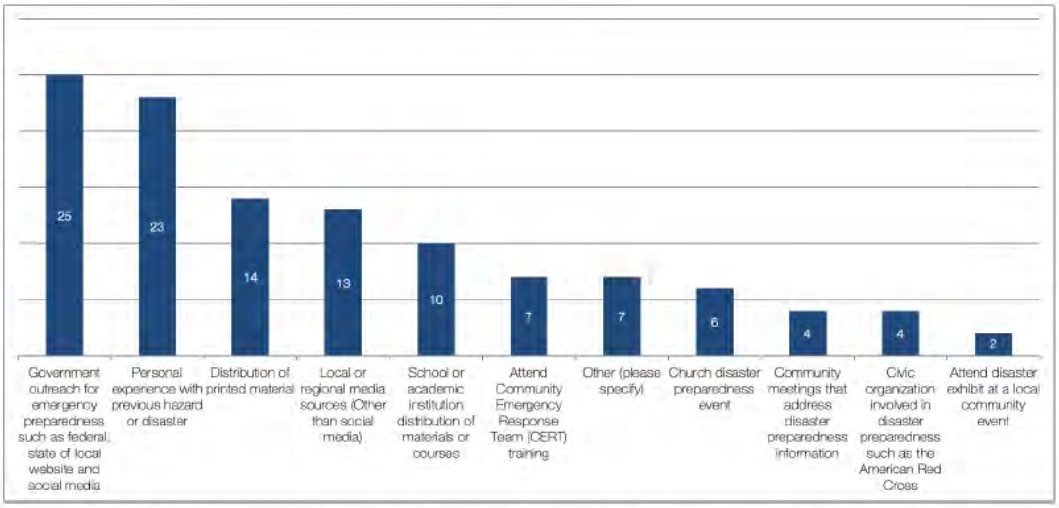
City of Victorville
Local Hazard Mitigation Plan
Hazard Mitigation Community Survey Analysis

**Question 4: Which of the following sources of information have helped you to prepare for hazardous events? (Check all that apply)**

This question assists the City in identifying strengths in community engagement regarding preparation for hazardous events, as well as identifying gaps in increasing community-wide preparedness and education surrounding such events.




From the 49 participants who responded to this question, 25 respondents (51%) identified government outreach for emergency preparedness such as federal, state, and local websites and social media as their primary sources of information for preparation.

Other highly rated sources of information included personal experience with previous hazards or disasters, with 23 respondents (49%) indicating this option as a source of information, and distribution of printed material with 14 respondents (28%) indicating this as a source of information. Small percentages of participants identified the following as sources of information, including civic organizations (8% of respondents), community meetings addressing disaster preparedness information (8% of respondents), attendance at a disaster exhibit at a local event (4% of respondents), and the phone book (4% of respondents).

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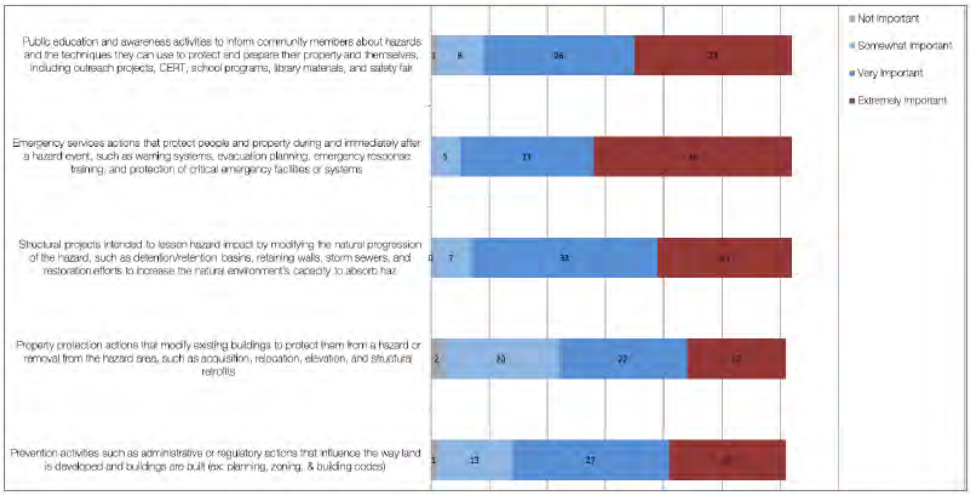
City of Victorville
Local Hazard Mitigation Plan
Hazard Mitigation Community Survey Analysis

**Question 5: How important do you find the following community-wide actions or activities that may reduce the risks of hazards in Victorville?**

This question asked respondents to identify the importance of community-wide actions and activities to increase preparedness and reduce the risks of hazards in Victorville.

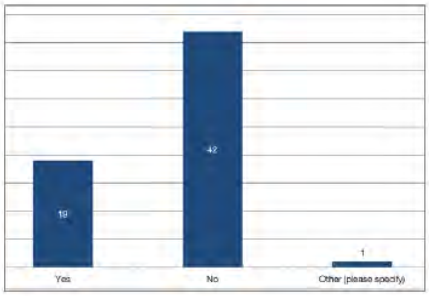



34 of the 62 respondents, or 54% of the answers to this question identified emergency services actions as extremely important. Additionally, 27 respondents (43%) identified public education and awareness activities as extremely important, and 23 respondents (37%) identified structural projects intended to lessen hazard impacts as extremely important.

**Question 6: Do you or anyone in your household have disabilities and/or access and functional needs, and would you be interested in early warning notifications or specialized response to evacuate during disasters?**

This question allows the City a top-level look at the needs of their community in order to recognize areas where access and function needs may surface during a hazards event response.

Of the 62 respondents to this question, 19 respondents (30%) answered yes, that they do have additional access and functional needs and would be interested in early warning notifications or specialized response to evacuate during disasters.




CONSTANT ASSOCIATES

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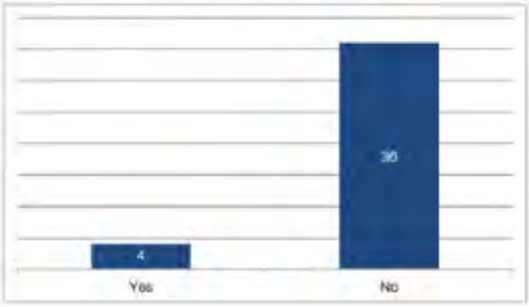
ocal Hazard Mitigation Plan
azard Mitigation Community Survey Analysis

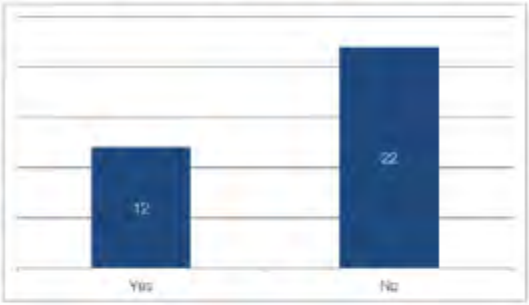
uestion 7: If you answered yes to Question 6, do you have a certified service animal that you ould be interested in evacuating with you or a household member to a shelter during a disaster?

f the respondents that answered yes to the revious question, 4 respondents (10%) of spondents indicated that they do have a rtified service animal that may evacuate with eir household to a shelter during a disaster sponse. 36 respondents (90%) said they do not eed to evacuate a certified service animal during response.




uestion 8: If you answered yes to Question 6, would you be interested in more information out Disaster Assistance for people with disabilities and/or access and functional needs?

f the respondents that answered yes to uestion 6, 12 respondents (35%) indicated that ey would be interested in more information out Disaster Assistance, with 22 respondents 4%) answering no.

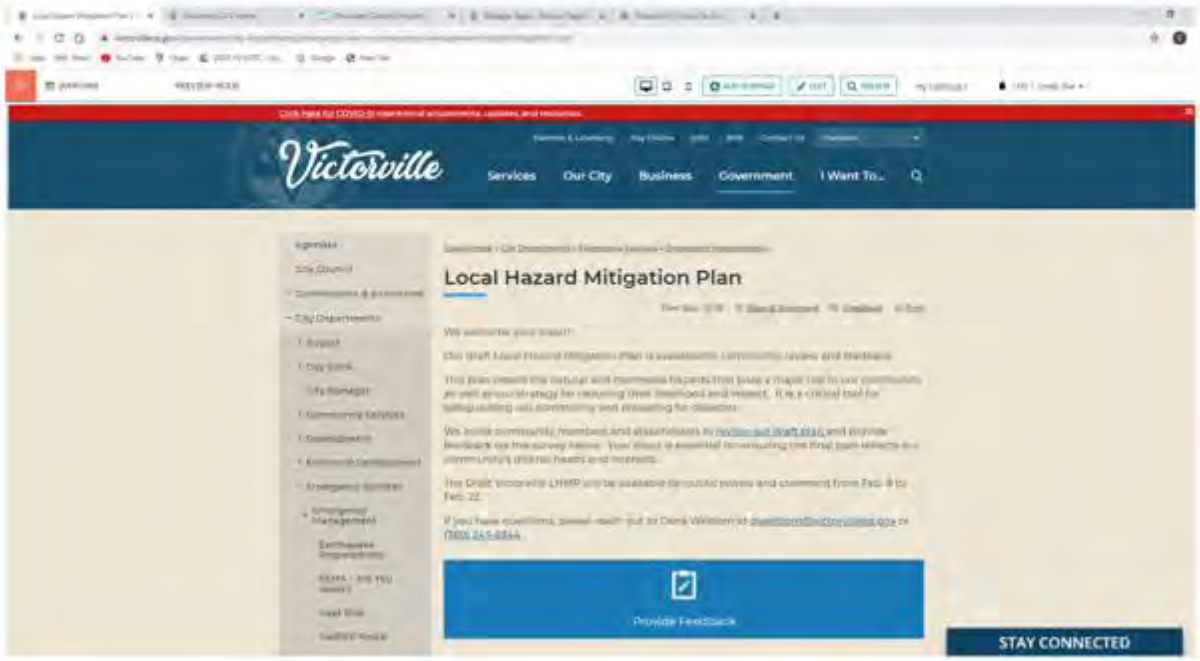


## Website Post for Public Review of Draft LHMP

The following material was posted on the City Website. No substantive feedback was received.

**Post Inviting Community Feedback for LHMP Draft**

**City of Victorville Website (Internal Page)**



## Email to Adjacent Jurisdictions for Review of Draft LHMP

The following message was sent to adjacent jurisdictions, the Operational Area, and key regional utility providers, along with a copy of the Draft LHMP, for review and feedback.

**From:** Dana Wellborn
**Sent:** Tuesday, February 23, 2021 9:56 AM
**To:** rmolina@cityofhesperia.us; Hannah Raleigh <hraleigh@applevalley.org>; Munoz, Daniel <Daniel.Munoz@oes.sbcounty.gov>; Juan Lopez (juan.m.lopez@sce.com) <juan.m.lopez@sce.com>; Christine Plasting <cplasting@vvta.org>; Christopher Davy <Christopher.Davy@swgas.com>; jflores@ci.adelanto.ca.us
**Subject:** VICTORVILLE - Local Hazard Mitigation Plan (LHMP) Update, Input Request

Good Morning to All,

Over the last five months, the City of Victorville has been working to update its Local Hazard Mitigation Plan. We are in the final stages of this process and would greatly appreciate your feedback on our final draft (linked below). In particular, we wish to ensure that our mitigation action plan works in harmony with your own and that it does not pose a potential for negative impacts on your jurisdiction.

Draft Victorville LHMP:
https://www.dropbox.com/s/2uvpp5331dw4vij/Victorville%20HMP%20Draft%202%202.2.2021.pdf?dl=0

Please provide your feedback within 10 business days (COB March 8) to me (dwellborn@victorvilleca.gov) and our consultant (evan@constantassociates.com). After that date, we will finalize the plan and submit it to CalOES for approval.

We appreciate your time – especially given the demands of COVID response. Please let me know if you have any questions or issues accessing the document.

Best regards,
Dana

# APPENDIX D – MITIGATION ACTION PRIORITIZATION (STAPLEE)

These worksheets follow the FEMA State and Local Mitigation Planning How-To Guide: Developing the Mitigation Plan – Identifying Mitigation Actions and Implementation Strategies published by FEMA in 2003.

| STAPLEE Prioritization Tool (Scoring: "+" = 1 point, "-" = -1 point, "n/a" = 0 point, "n/k" = not known) | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Social | | T Technical | | | A Administrative | | | P Political | | | L Legal | | | E Economic | | | | E Environmental | | | | | |
| **Mitigation Action** | Community Acceptance | Effect on Segment of Population | Technical Feasibility | Long-Term Solution | Secondary Impacts | Staffing | Funding Allocated | Maintenance/Operations | Political Support | Local Champion | Public Support | State Authority | Existing Local Authority | Potential Legal Challenge | Benefit of Action | Cost of Action | Contributes to Economic Goals | Outside Funding Required | Effect on Land/Water | Effect on Endangered Species | Effect on HAZMAT/ Waste Sites | Consistent with Comm. Environmental Goals | Consistent with Federal Environmental Laws | **Priority Total (net)** |
| 1.1 Encourage private property owners of un- reinforced masonry structures to complete seismic retrofits. | + | + | + | + | n/k | 0 | 0 | 0 | + | + | + | + | + | 0 | + | 0 | + | 0 | 0 | 0 | + | + | + | **15** |
| 1.2 Encourage seismic strength evaluations of critical facilities in the City to identify building integrity. | + | + | + | + | n/k | 0 | 0 | 0 | + | + | + | + | + | 0 | + | - | + | - | 0 | 0 | + | + | + | **13** |
| 1.3 Evaluate City and non-City facilities identified as potential shelter sites for structural integrity. | + | + | + | + | n/k | 0 | 0 | 0 | + | + | + | + | + | 0 | + | - | + | 0 | 0 | 0 | + | + | + | **13** |
| 1.4 Identify and pursue funding opportunities to develop and implement local mitigation activities. | + | + | + | + | + | 0 | 0 | 0 | + | + | + | + | + | 0 | + | + | + | 0 | 0 | 0 | + | + | + | **15** |

| STAPLEE Prioritization Tool (Scoring: "+" = 1 point, "-" = -1 point, "n/a" = 0 point, "n/k" = not known) | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Social | | T Technical | | | A Administrative | | | P Political | | | L Legal | | | E Economic | | | | E Environmental | | | | | |
| **Mitigation Action** | Community Acceptance | Effect on Segment of Population | Technical Feasibility | Long-Term Solution | Secondary Impacts | Staffing | Funding Allocated | Maintenance/Operations | Political Support | Local Champion | Public Support | State Authority | Existing Local Authority | Potential Legal Challenge | Benefit of Action | Cost of Action | Contributes to Economic Goals | Outside Funding Required | Effect on Land/Water | Effect on Endangered Species | Effect on HAZMAT/ Waste Sites | Consistent with Comm. Environmental Goals | Consistent with Federal Environmental Laws | **Priority Total (net)** |
| 1.5 Acquire the latest Emergency Action Plan for the DWR owned Cedar Springs Dam and the USACE owned Mohave Forks Dam Continue to participate in annual training on dam emergencies. | + | + | + | + | + | 0 | + | 0 | + | + | + | + | + | 0 | + | 0 | + | 0 | 0 | 0 | + | + | + | **16** |
| 1.6 Continue to identify natural drainage courses and designate City Drainage Easements as a means to preserve natural drainage flow paths and/or constructed drainage facilities.* | + | + | + | + | + | 0 | 0 | 0 | + | + | + | + | + | 0 | + | 0 | + | + | 0 | 0 | + | + | + | **16** |
| 1.7 Conduct repair and flood mitigation to sewer at Turner Wash Trunk, north of Mojave Drive, to include realignment of the sewer line. | + | + | + | + | + | 0 | 0 | 0 | + | + | + | + | + | 0 | + | 0 | + | + | 0 | 0 | + | + | + | **16** |
| 1.8 Repair damage and mitigate further flood risk to access road running along the Ossum Wash north of Capistrano Street and south of Rancho Road. | + | + | + | + | + | 0 | 0 | 0 | + | + | + | + | + | 0 | + | 0 | + | + | 0 | 0 | + | + | + | **16** |
| 1.9 Mitigate wash-out problems caused by flooding events at Eucalyptus Street, east of Cloverly Street. | + | + | + | + | + | 0 | 0 | 0 | + | + | + | + | + | 0 | + | 0 | + | + | 0 | 0 | + | + | + | **16** |

| STAPLEE Prioritization Tool (Scoring: "+" = 1 point, "-" = -1 point, "n/a" = 0 point, "n/k" = not known) | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Social | | T Technical | | | A Administrative | | | P Political | | | L Legal | | | E Economic | | | | E Environmental | | | | | |
| **Mitigation Action** | Community Acceptance | Effect on Segment of Population | Technical Feasibility | Long-Term Solution | Secondary Impacts | Staffing | Funding Allocated | Maintenance/Operations | Political Support | Local Champion | Public Support | State Authority | Existing Local Authority | Potential Legal Challenge | Benefit of Action | Cost of Action | Contributes to Economic Goals | Outside Funding Required | Effect on Land/Water | Effect on Endangered Species | Effect on HAZMAT/ Waste Sites | Consistent with Comm. Environmental Goals | Consistent with Federal Environmental Laws | **Priority Total (net)** |
| 1.10 Conduct storm drain improvements at Rodeo & Pebble Beach to prevent flooding | + | + | + | + | + | 0 | 0 | 0 | + | + | + | + | + | 0 | + | 0 | + | + | 0 | 0 | + | + | + | **16** |
| 1.11 Conduct analysis, then acquire and deploy new generators for pre-planned critical facilities | + | + | + | + | + | 0 | 0 | - | + | + | + | + | + | 0 | + | - | + | 0 | 0 | 0 | 0 | - | 0 | **10** |
| 2.1 Develop a public outreach and awareness program about the hazards in the City and mitigation actions community members can do in their homes. | + | + | + | + | + | 0 | 0 | 0 | + | + | + | + | + | 0 | + | - | + | 0 | 0 | 0 | + | + | + | **14** |
| 2.2 Increase public awareness of the natural, human-caused, and technological hazards to businesses as a means to reduce the potential damage from each hazard through educational and outreach. Maintain a resource center in the City Hall and display racks. Provide information on the City websites and social media accounts. | + | + | + | + | + | 0 | 0 | 0 | + | + | + | + | + | 0 | + | - | + | 0 | 0 | 0 | + | + | + | **14** |

| STAPLEE Prioritization Tool (Scoring: "+" = 1 point, "-" = -1 point, "n/a" = 0 point, "n/k" = not known) | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Social | | T Technical | | | A Administrative | | | P Political | | | L Legal | | | E Economic | | | | E Environmental | | | | | |
| **Mitigation Action** | Community Acceptance | Effect on Segment of Population | Technical Feasibility | Long-Term Solution | Secondary Impacts | Staffing | Funding Allocated | Maintenance/Operations | Political Support | Local Champion | Public Support | State Authority | Existing Local Authority | Potential Legal Challenge | Benefit of Action | Cost of Action | Contributes to Economic Goals | Outside Funding Required | Effect on Land/Water | Effect on Endangered Species | Effect on HAZMAT/ Waste Sites | Consistent with Comm. Environmental Goals | Consistent with Federal Environmental Laws | **Priority Total (net)** |
| 2.3 Provide information on tools, partnership opportunities, and funding resources for businesses and philanthropical organizations to assist in implementing mitigation activities. | + | + | + | + | + | 0 | 0 | 0 | + | + | + | + | + | 0 | + | - | + | 0 | 0 | 0 | + | + | + | **14** |
| 2.4 Stress the risks associated with natural and manmade hazards at public awareness campaigns conducted by various City departments. | + | + | + | + | + | 0 | 0 | 0 | + | + | + | + | + | 0 | + | - | + | 0 | 0 | 0 | + | + | + | **14** |
| 2.5 Partner with local insurance agencies to hold workshops for property owners to educate about the Flood and Earthquake Insurance Programs and its requirements. | + | + | + | + | + | 0 | 0 | 0 | + | + | + | + | + | 0 | + | - | + | 0 | 0 | 0 | + | + | + | **14** |
| 2.6 Increase public awareness of dam failure hazards and mitigation measures to address them. | + | + | + | + | + | 0 | 0 | 0 | + | + | + | + | + | 0 | + | 0 | + | 0 | 0 | 0 | + | + | + | **15** |

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| 3.1 Improve hazard assessment information to make recommendations for avoiding new development in high hazard areas and encouraging preventative measures for existing development in areas vulnerable to natural, man-made, and technological hazards. | 0 | + | + | + | + | 0 | 0 | 0 | + | + | + | + | + | - | + | - | + | 0 | 0 | 0 | + | + | + | **12** |
| 3.2 Seek to implement codes, standards, and policies that will protect life and property from the impacts of hazards. | + | + | + | + | + | 0 | 0 | 0 | + | + | + | + | + | - | + | - | + | 0 | 0 | 0 | + | + | + | **13** |
| 3.3 Encourage purchase of earthquake hazard insurance. | + | + | + | + | + | 0 | 0 | 0 | + | + | + | + | + | - | + | - | + | 0 | 0 | 0 | + | + | + | **13** |
| 3.4 Integrate appropriate items from the HMP into the Safety Element of the General Plan and other regulatory documents as appropriate. | + | + | + | + | + | 0 | 0 | 0 | + | + | + | + | + | 0 | + | 0 | + | 0 | 0 | 0 | + | + | + | **15** |
| 3.5 Identify water resources management and conservation opportunities. | + | + | + | + | + | 0 | 0 | 0 | + | + | + | + | + | 0 | + | + | + | 0 | + | 0 | + | + | + | **17** |
| 3.6 Develop a disaster debris management plan. | + | + | + | + | + | 0 | 0 | 0 | + | + | + | + | + | 0 | + | - | + | 0 | + | 0 | + | + | + | **15** |

| STAPLEE Prioritization Tool (Scoring: "+" = 1 point, "-" = -1 point, "n/a" = 0 point, "n/k" = not known) | | | | | | | | | | | | | | | | | | | | | | |
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| 3.7 Continue to use development regulations with building and fire codes to set building placement, water supply, fire protection/ prevention, and construction requirements (including fuel reduction and defensible space) * | + | + | + | + | + | 0 | - | 0 | + | + | + | + | + | 0 | + | - | + | 0 | + | 0 | + | + | + | **15** |
| 3.8 Update building codes as new technology and data becomes avail. | + | + | + | + | + | + | - | 0 | 0 | + | + | + | + | - | + | - | + | 0 | + | 0 | + | + | + | **13** |
| 3.9 Seek grant funding to perform a study of city vulnerability. | + | + | + | + | + | 0 | 0 | 0 | + | + | + | + | + | 0 | + | - | + | 0 | + | 0 | + | + | + | **16** |
| 3.10 Work with County to prepare/maintain local area drainage plans and establish funding mechanisms to support the backbone draining system for watershed areas affecting the City and to create flood control facilities where warranted. | + | + | + | + | + | + | - | 0 | + | + | + | + | + | 0 | + | - | + | 0 | + | 0 | + | + | + | **16** |

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| 3.11 Maintain and regularly update the integration of FEMA floodplain and flood insurance map data with City land-use planning maps, drainage maps, and GIS systems. Supplement data with overflow studies and maps approved by the City Engineer or the San Bernardino County Flood Control District. Apply these resources to regularly assess City flood risk and inform actions in designated floodplain areas. | + | + | + | + | + | + | - | 0 | + | + | + | + | + | 0 | + | - | + | 0 | + | 0 | + | + | + | **16** |
| 3.12 Implement/maintain development regulations, permitting requirements, and building code specifications that promote flood risk identification, assessment, and mitigation action. | + | + | + | + | + | + | - | 0 | + | + | + | + | + | 0 | + | - | + | 0 | + | 0 | + | + | + | **16** |
| 4.1 Budget for maintenance and replacement of City owned fire and police stations. | + | + | + | + | + | 0 | - | + | + | + | + | + | + | 0 | + | - | + | 0 | 0 | 0 | + | + | + | **14** |

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| 4.2 Continue to develop mutual aid agreements and memorandum of understanding with agencies to serve emergency and disaster purposes. | + | + | + | + | + | + | 0 | 0 | + | + | + | + | + | 0 | + | 0 | + | 0 | 0 | 0 | + | + | + | **16** |
| 4.3 Continue developing intergovernmental coordination with cities, adjacent counties, the Army Corps of Engineers, and other agencies which have an interest in flood control projects that cross-jurisdictional boundaries. | + | + | + | + | + | + | - | 0 | + | + | + | + | + | 0 | + | - | + | 0 | + | 0 | + | + | + | **16** |
| 4.4 Coordinate land use and flood control planning through staff contacts between the County Flood Control District, Special Districts and cities within the County, and through the annual review of the Capital Improvements Program. | + | + | + | + | + | + | - | 0 | + | + | + | + | + | 0 | + | - | + | 0 | + | 0 | + | + | + | **16** |
| 5.1 Maintain cloud storage allowing access to vital records and data if City servers are disrupted. | + | + | + | + | + | 0 | 0 | + | + | + | + | + | + | 0 | + | 0 | + | 0 | 0 | 0 | + | + | + | **16** |

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| 5.2 Continue to coordinate with utility companies and vendors to strengthen, safeguard, or take other appropriate measures to provide supplemental services from hazards (e.g. protect and secure high-voltage lines, water, sewer, natural gas and petroleum pipelines). | + | + | + | + | + | 0 | 0 | + | + | + | + | + | + | 0 | + | 0 | + | 0 | 0 | 0 | + | + | + | **16** |
| 5.3 Build a cadre of volunteers to augment disaster response and recovery efforts in compliance with the California DSW program guidance, during and after a disaster. | + | + | + | + | + | + | 0 | 0 | + | + | + | + | + | 0 | + | - | + | 0 | 0 | 0 | + | + | + | **15** |
| 5.4 Develop and implement a plan to create Community Emergency Response Teams (CERT). | + | + | + | + | + | - | 0 | + | + | + | + | + | + | + | + | 0 | - | 0 | 0 | 0 | + | + | + | **15** |
| 5.5 Develop and implement a plan to create a City emergency communications system (ECS). | + | + | + | + | + | - | 0 | + | + | + | + | + | + | + | + | 0 | - | 0 | 0 | 0 | + | + | + | **15** |
| 5.6 Develop flood plain inundation evacuation plans through the County Office of Emergency Services. | + | + | + | + | + | + | - | 0 | + | + | + | + | + | 0 | + | - | + | 0 | + | 0 | + | + | + | **16** |

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| 5.7 Install "Turn Around Don't Drown" signs at flood crossings throughout the City | + | + | + | + | + | + | - | 0 | + | + | + | + | + | 0 | + | - | + | 0 | + | 0 | + | + | + | **16** |
| 5.8 Implement public notification system via low-power AM radio to augment reverse 911 capabilities during emergencies | + | + | + | + | + | + | - | 0 | + | + | + | + | + | 0 | + | - | + | 0 | + | 0 | + | + | + | **16** |
| 5.9 Acquire pandemic support resources to expand capacity to provide field technical support (FTS), alternative care sites (ACS), mass care, and hospital surge support | + | + | + | + | + | + | - | 0 | + | + | + | + | + | 0 | + | - | + | 0 | + | 0 | + | + | + | **16** |

# APPENDIX E – ACRONYMS

ACS – Alternative Care Sites

AEP – Annual Exceedance Probability

AGP – Adaptation Planning Guide

BCA – Benefit-Cost Analysis

BCR – Benefit-Cost Radio

BNSF – Burlington Santa Fe Railway Company

BRIC – Building Resilient Infrastructure and Communities

CAL FIRE – California Fire Protection

CalOES – California Governor's Office of Emergency Services

CAP – Climate Action Plan

CARB – California Air Resource Board

CBRNE – Chemical, Biological, Radiological, Nuclear, and Explosives

CBSC – California Building Standards Commission

CDBG – Community Development Block Grants

CEQA – California Environmental Quality Act

CERT – Community Emergency Response Teams

CID – Cubic Inch Displacement

CO2 – Carbon Dioxide

CPRI – Calculated Priority Risk Index

CPUC – California Public Utilities Commission

DMA 2000 – Disaster Mitigation Act of 2000

DSOD – Division of Safety of Dams

DTSC – Department of Toxic Substances Control

DWR – Department of Water Resources

ECS – Emergency Communications System

EO – Executive Order

EOC – Emergency Operations Center

EPA – Environmental Protection Agency

ER – Emergency Room

FAA – Federal Aviation Agency

FBI – Federal Bureau of Investigation

FEMA – Federal Emergency Management Agency

FHBM – Flood Hazard Boundary Map

FIRM – Flood Insurance Rate Map

FMA – Flood Mitigation Assistance

FTS – Field Technical Support

GAFB – George Air Force Base

GHG – Greenhouse Gas

HMA – Hazard Mitigation Assistance

HMGP – Hazard Mitigation Grant Program

HMP – Hazard Mitigation Plan

HMPG – Hazard Mitigation Grant Program

ITCZ – Intertropical Convergence Zone

JPA – Joint Powers Authority

LHMP – Local Hazard Mitigation Plan

M – Magnitude

N601SP – Pulsar 100

NFIP – National Flood Insurance Program

NWS – National Weather Service

OES – Office of Emergency Services

OSFM – Office of the State Fire Marshall

PDM – Pre-Disaster Mitigation

PHMSA – Pipeline and Hazardous Materials Safety Administration

PSPS – Public Safety Power Shutoffs

RFC – Repetitive Flood Claims

RL – Repetitive Loss

SARS – Severe Acute Respiratory Syndrome

SBCFCD – San Bernardino County Flood Control District

SCADA – Supervisory Control and Data Acquisition

SCLA – Southern California Logistics Airport

SRL – Severe Repetitive Loss

TENS – Telephone Emergency Notification System

UCERF3 – Uniform California Earthquake Rupture Forecast

UCLA – University of California, Los Angeles

USD – United States Dollar

WHO – World Health Organization

WMD – Weapons of Mass Destruction