

TO: Thomas Frutchey, City Manager  
FROM: Susan DeCarli, City Planner  
SUBJECT: 2016 Paso Robles Local Hazard Mitigation Plan adoption  
DATE: March 15, 2016

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Needs: Conduct a public hearing to consider adoption of an updated 2016 Local Hazard Mitigation Plan (LHMP), which assess risks posed by natural and human-caused hazards, and includes a mitigation strategy for reducing the City's risks.

- Facts:
1. The proposed 2016 LHMP would supersede the existing 2005 LHMP.
  2. A LHMP incorporates mitigation strategies and actions the City could take to mitigate or reduce impacts from possible future disasters, including, but not limited to: earthquakes; flooding; drought; extreme heat, stormwater, landslides; wildland fires; and hazardous material incidents. The Final Draft LHMP is provided in Attachment 1.
  3. Federal regulations governing assistance from the Federal Emergency Management Agency (FEMA) provide that local jurisdictions must have a FEMA-approved LHMP in order to apply for Hazard Mitigation Grants and disaster relief.
  4. The LHMP was prepared by URS Corp., under contract to the City. The plan preparation process included participation by several city departments and by other interested governmental agencies (e.g., School District, County Office of Emergency Services, CDF, etc.).
  5. Copies of the Final Draft LHMP were distributed to the City Council, placed in the City Library, and posted on the City's website.
  6. Copies of the Draft LHMP were submitted to the California Office of Emergency Services and to FEMA. Both agencies provided comments, which were incorporated into the plan. In February 2016, FEMA reported that they were satisfied with the revised Draft LHMP. See Attachment 2, Letter from FEMA.

Analysis and Conclusion: The requirement for local jurisdictions to prepare an LHMP was adopted by Congress as part of the Disaster Mitigation Act of 2000.

Agencies are required to have an up-to-date LHMP to enable them to qualify for competitive grant funds that could be used construct improvements that would

mitigate future damage to public facilities. An example of this could be to apply for grant funds to upgrade stormwater management facilities to reduce the risk of floods.

The LHMP focuses on the types of hazards listed below, which have the highest likelihood of occurrence in the City.

- Dam Failure Inundation
- Drought
- Earthquakes
- Expansive Soils
- Extreme Heat
- Flood
- Freeze/Extreme Cold
- Hazardous Materials
- Land Subsidence
- Landslide
- Wildfire

As a result of public outreach, which included: creating and meeting with a steering Planning Committee, (with members from the City's Emergency Services, Police, Public Works, City Manager's Office, Community Development and Administrative Services departments); meeting with interested stakeholders including CalFire, California Highway Patrol, SLO County OES, Camp Roberts, and others; hosting a general public workshop; posting the draft document on the City's website for six months; and coordinating review and input with Cal OES and FEMA, and assessing the risk from the above listed factors, a complete set of goals, objectives, and actions that the City could pursue to mitigate hazards was identified and included in the LHMP. Table 7.5, below, identifies the specific mitigation actions included in the Plan.

**Table 7-5. 2016 LHMP Mitigation Action Plan**

No.	Description	Facility to be Mitigated (if Known and/or Applicable)	Department or Agency	Timeframe
3	Develop a drought contingency plan to provide an effective and systematic means of assessing drought conditions, develop mitigation actions and programs to reduce risks in advance of drought, and develop response options that minimize hardships during drought.	Not applicable		1 Year
6	Acquire, relocate, elevate, and/or flood-proof public works critical facilities that are located within the 100-year floodplain.	Water Division Corp Yard	Public Works Department	3-5 Years
7	Reinforce roads from flooding through protection activities, including elevating the road and installing/widening culverts beneath the road or upgrading storm drains.	23 <sup>rd</sup> & Vine Streets Paso Robles Street 12 <sup>th</sup> Street	Public Works Department	3-5 Years
11	Create a new vegetation management program that provides vegetation management services to elderly, disabled, and/or low-income property owners who lack the resources to remove flammable vegetation from around their homes.	Residential properties owned by the elderly, disabled, and/or low-income	Community Developme nt Department	Ongoing, to be conducted on an annual basis
12	Implement a fuel modification program for new construction by requiring builders and developers to submit their plans, complete with proposed fuel modification zones, to the Community Development Department/Department of Emergency Services for review and approval prior to beginning construction.	New construction	Community Developme nt Department /Departmen t of Emergency Services	Ongoing

Policy

Reference: Federal regulations governing FEMA assistance.

Fiscal

Impact: None.

Options: After receiving all public testimony, that the City Council consider the following options:

- a. Adopt attached Resolution No. XX, adopting the 2016 Local Hazard Mitigation Plan; or
- b. Amend the foregoing options; or
- c. Refer back to staff for additional analysis; or
- d. Take no action.

Attachments:

1. February 2016 Final Draft Paso Robles Local Hazard Mitigation Plan (exhibit "A" of attached resolution). The plan is also available on the City website at: [www.prcity.com/government/](http://www.prcity.com/government/) and at the Paso Robles City Library
2. Letter from FEMA
3. Resolution to adopt the City of Paso Robles 2016 Final Draft Local Hazard Mitigation Plan
4. Newspaper Notice

**DRAFT RESOLUTION A  
RESOLUTION NO.  
A RESOLUTION OF THE CITY COUNCIL  
OF THE CITY OF EL PASO DE ROBLES  
ADOPTING THE 2016 LOCAL HAZARD MITIGATION PLAN**

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WHEREAS, pursuant to the Federal Disaster Mitigation Act of 2000 as set forth in 44 CFR Part 201, the City of El Paso de Robles has prepared an updated 2016 Local Hazard Mitigation Plan to identify the risks to lives and property created by natural and artificial hazards to the City, and to formulate a set of goals, objectives and actions to mitigate risks created by these hazards; and

WHEREAS, the process of preparing the Plan included consultation with other affected governmental agencies, and a public outreach program; and

WHEREAS, the City did not receive any comments from the public on the Draft Plan; and

WHEREAS, the Draft Plan was submitted to the California Department of Emergency Services ("Cal OES"), and to the Federal Emergency Management Agency ("FEMA") for their review and comment; and

WHEREAS, comments received from Cal OES and FEMA were incorporated into the plan; and

WHEREAS, in February 2016, FEMA notified the City that it determined that the plan is eligible for final approval pending adoption by the City of El Paso de Robles; and

WHEREAS, the February 2016 Paso Robles Local Hazard Mitigation Plan is provided as "Exhibit A" to this resolution; and

WHEREAS, a public hearing was conducted by the City Council on March 15, 2016, to consider the Final Draft 2016 Local Hazard Mitigation Plan, staff report, presentation, and comments from the public. No written comments were received from the public prior to the public hearing.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of El Paso de Robles as follows:

Findings:

1. The Final Draft 2016 Paso Robles Local Hazard Mitigation Plan is consistent with the Disaster Mitigation Act of 2000; and
2. The Final Draft 2016 Paso Robles Local Hazard Mitigation Plan identifies potential future disasters, and incorporates mitigation strategies and actions the City could take to

mitigate or reduce impacts from potential disaster impacts; and

3. The City conducted a formal outreach program to solicit input from the public and affected agencies to assist in the preparation of the Final Draft 2016 Paso Robles Local Hazard Mitigation Plan; and
4. The Final Draft 2016 Paso Robles Local Hazard Mitigation Plan meets the requirements established by FEMA, and is eligible for final approval by the City of Paso Robles.
5. The above Recitals and Findings are true and correct and incorporated herein by this reference.

PASSED AND ADOPTED by the City Council of the City of El Paso de Robles on this 15<sup>th</sup> day of March, 2016 by the following vote:

AYES:  
NOES:  
ABSENT:  
ABSTAIN:

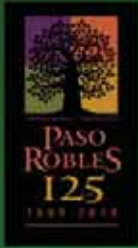
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Steven W. Martin, Mayor

ATTEST:

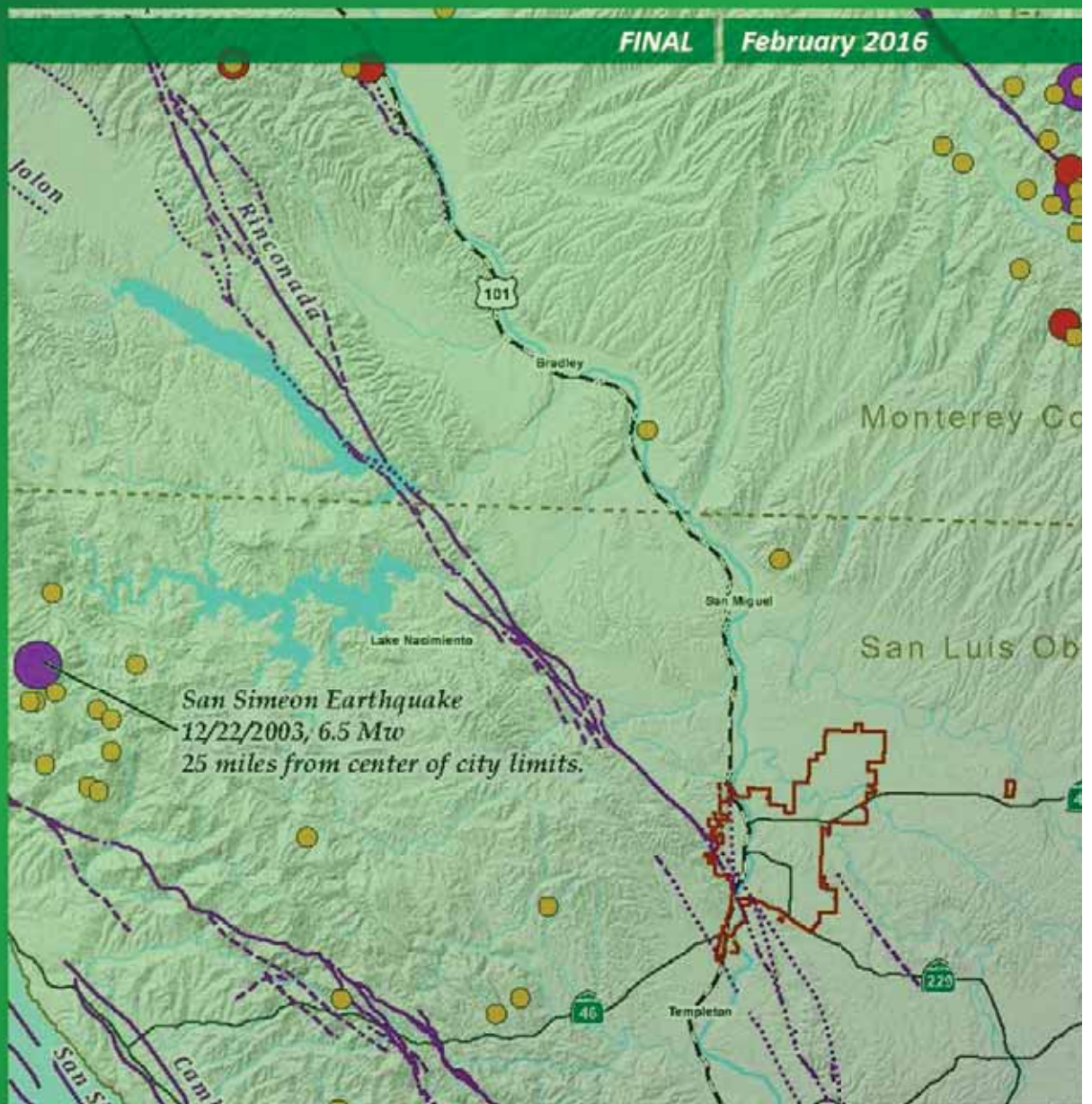
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Kristen L. Buxkemper, Deputy City Clerk



# CITY OF PASO ROBLES LOCAL HAZARD MITIGATION PLAN

FINAL February 2016



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# LOCAL HAZARD MITIGATION PLAN

## CITY OF PASO ROBLES

*Prepared for*

City of Paso Robles  
1000 Spring Street  
Paso Robles, CA 93446

February 2016

**AECOM**

AECOM  
130 Robin Hill Road  
Goleta, CA 93117

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# Table of Contents

---

1.	Section 1 Introduction.....	1-1
1.1	Overview.....	1-1
1.2	Hazard Mitigation Planning.....	1-1
1.3	Disaster Mitigation Act of 2000 .....	1-1
1.4	Grant Programs with Mitigation Plan Requirements.....	1-1
1.4.1	Stafford Act Grant Programs .....	1-2
1.4.2	National Flood Insurance Act Grant Programs.....	1-2
1.5	Community Profile.....	1-3
1.5.1	Location and Geography.....	1-3
1.5.2	Government.....	1-3
1.5.3	Demographics .....	1-4
1.5.4	Economy .....	1-4
1.5.5	Development Trends and Land Use.....	1-5
1.6	Description of the Hazard Mitigation Plan .....	1-6
1.6.1	Section 2: Record of Adoption .....	1-6
1.6.2	Section 3: Planning Process .....	1-6
1.6.3	Section 4: Hazard Analysis.....	1-6
1.6.4	Section 5: Vulnerability Analysis .....	1-6
1.6.5	Section 6: Capability Assessment.....	1-7
1.6.6	Section 7: Mitigation Strategy .....	1-7
1.6.7	Section 8: Plan Maintenance.....	1-7
1.6.8	Section 9: References.....	1-7
1.6.9	Appendices.....	1-7
2.	Section 2 Record of Adoption .....	2-1
2.1	Overview.....	2-1
2.2	Adoption Documentation.....	2-1
3.	Section 3 Planning Process.....	3-1
3.1	Overview.....	3-1
3.2	Summary of Planning Process .....	3-1
3.2.1	Major Milestones of the Planning Process.....	3-1
3.2.2	Changes in Development .....	3-2
3.3	Stakeholder Involvement and Public Outreach.....	3-3
3.3.1	Stakeholder Involvement .....	3-3
3.3.2	Public Outreach.....	3-4
3.4	Incorporation of Existing Plans and Other Relevant Information .....	3-4
4.	Section 4 Hazards Analysis .....	4-1
4.1	Overview.....	4-1
4.2	Hazard Identification and Screening.....	4-1
4.3	Hazard Profiles.....	4-2
4.3.1	Dam Failure Inundation .....	4-3

# Table of Contents

---

4.3.2	Drought .....	4-4
4.3.3	Earthquake .....	4-6
4.3.4	Expansive Soils.....	4-10
4.3.5	Extreme Heat .....	4-11
4.3.6	Flood .....	4-12
4.3.7	Freeze/Extreme Cold .....	4-16
4.3.8	Hazardous Materials .....	4-17
4.3.9	Land Subsidence .....	4-20
4.3.10	Landslide.....	4-20
4.3.11	Wildfire.....	4-22
5.	Section 5 Vulnerability Analysis .....	5-1
5.1	Overview.....	5-1
5.2	Asset Inventory .....	5-1
5.3	Methodology.....	5-4
5.4	Data Limitations.....	5-5
5.5	Exposure Analysis .....	5-6
5.6	Repetitive Loss Properties .....	5-26
5.7	Summary Of Impacts .....	5-26
6.	Section 6 Capability Assessment .....	6-1
6.1	Overview.....	6-1
6.2	Capability Assessment.....	6-1
7.	Section 7 Mitigation Strategy .....	7-1
7.1	Overview.....	7-1
7.2	Update of Local Hazard Mitigation Goals.....	7-1
7.3	Review of the 2005 LHMP Mitigation Action Plan .....	7-1
7.4	Identification of New and Updated Potential Mitigation Actions .....	7-3
7.5	Prioritization of The 2016 LHMP Mitigation actions.....	7-5
7.6	2016 LHMP Mitigation Action Plan.....	7-7
8.	Section 8 Plan Maintenance .....	8-1
8.1	Overview.....	8-1
8.2	Monitoring, Evaluating, and Updating the Plan .....	8-1
8.3	Implementation Through Existing Planning Mechanisms.....	8-2
8.4	Continued Public Involvement .....	8-3
9.	Section 9 References .....	9-1

# Table of Contents

---

## List of Tables

Table 1-1. 2003 General Plan Land Use Element (2012 Revision), Development Potential
Table 3-1. 2016 LHMP Planning Committee
Table 3-2. Stakeholders
Table 4-1. Paso Robles Hazards Screening
Table 4-2. Recent Droughts in California
Table 4-3. Magnitude/Intensity/Ground-Shaking Comparisons
Table 4-4. Major Active Faults
Table 4-5. Major Disaster Declarations for Floods, 1995-2011
Table 4-6. Top Five Recorded Historical Crests for the Salinas River at Paso Robles
Table 4-7. Hazardous Material Mobile Incidents in Paso Robles, 1998-2013
Table 4-8. Hazardous Material Fixed Incidents in Paso Robles, 1996-2012
Table 4-9. Major Fires within Close Proximity to Paso Robles
Table 5-1. Critical Facilities
Table 5-2. Exposure Analysis – Population and Residential Buildings
Table 5-3. Exposure Analysis – Critical Facilities Dam Failure Inundation
Table 5-4. Exposure Analysis – Critical Facilities Earthquake: Ground Shaking
Table 5-5. Exposure Analysis – Critical Facilities Expansive Soils
Table 5-6. Exposure Analysis – Critical Facilities Flood
Table 5-7. Exposure Analysis – Critical Facilities Hazardous Materials (Transportation Corridor)
Table 5-8. Exposure Analysis – Critical Facilities Hazardous Materials (Fixed Incidents)
Table 5-9. Exposure Analysis – Critical Facilities Land Subsidence
Table 5-10. Exposure Analysis – Critical Facilities Landslide
Table 5-11. Exposure Analysis – Critical Facilities Wildfire
Table 6-1. Human and Technical Resources for Hazard Mitigation
Table 6-2. Financial Resources for Hazard Mitigation
Table 6-4. Current, Ongoing, and Completed Hazard Mitigation Projects and Programs
Table 7-1. Mitigation Goals
Table 7-2. Review of 2005 LHMP Mitigation Action Plan
Table 7-3. New and Updated Potential Mitigation Actions
Table 7-4. Priority Project Criteria (HMA Program Requirements)
Table 7-5. 2016 LHMP Mitigation Action Plan

# Table of Contents

---

## List of Figures

- B-1 Site Location Map
- B-2 Dam Failure Inundation
- B-3 Historical Earthquakes
- B-4A Regional Seismic Shaking
- B-4B Localized Seismic Shaking
- B-5 Expansive Soils
- B-6 Flood Insurance Rate Map
- B-7 Hazardous Materials
- B-8 Land Subsidence Susceptibility
- B-9 Landslide Susceptibility
- B-10 Historical Wildfires
- B-11 Fire Severity Zones
- B-12 Population Density
- B-13 Residential Building Density
- B-14A Critical Facilities
- B-14B Critical Facilities: Education

## Appendices

- Appendix A FEMA Documentation
- Appendix B Figures
- Appendix C Public Outreach
- Appendix D Plan Maintenance

## Acronyms

- ANSI American National Standards Institute
- CADA California Department of Agriculture
- CADEMA California Department of Emergency and Military Affairs
- CalFIRE California Department of Forestry and Fire
- Cal OES California Office of Emergency Services
- CARS California Revised Statutes
- CDC Centers for Disease Control and Prevention
- CEQA California Environmental Quality Act
- CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

# Table of Contents

---

CFR	Code of Federal Regulations
CGS	California Geologic Survey
DMA 2000	Disaster Mitigation Act of 2000
EHS	Extremely Hazardous Substance
EnSo	El Niño-Southern oscillation
EPA	Environmental Protection Agency
FIRM	Flood Insurance Rate Map
GIS	Geographic Information System
EPCRA	Emergency Planning and Community Right to Know Act
FEMA	Federal Emergency Management Agency
FMA	Flood Mitigation Assistance
FTE	Full-Time Equivalent
HAZMAT	Hazardous Material
HAZUS-99	Hazards United States 1999
HAZUS-MH	Hazards United States Multi-Hazard
HMA	Hazard Mitigation Assistance
HMGP	Hazard Mitigation Grant Program
HMP	Hazards Mitigation Plan
InSAR	Interferometric Synthetic Aperture Radar
km	kilometers
LAFCO	Local Agency Formation Commission
LEPC	Local Emergency Planning Committee
LHMP	Local Hazards Mitigation Plan
MMI	Modified Mercalli Intensity
Mw	Magnitude
NCDC	National Climatic Data Center
NESDIS	National Environmental Satellite, Data and Information Service
NFIP	National Flood Insurance Program
NID	National Inventory of Dams
NOAA	National Oceanic and Atmospheric Administration
NRC	National Response Center
NSF	National Science Foundation
NWS	National Weather Service

# Table of Contents

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PDM	Pre-Disaster Mitigation
PGA	Peak Ground Acceleration
POC	point-of-contact
FCP	Repetitive Flood Claims Program
RL	repetitive loss
SRLP	Severe Repetitive Loss Program
SERC	State Emergency Response Commission
SFHA	Special Flood Hazard Area
SOI	Sphere of Influence
SRL	severe repetitive loss
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USGS	United States Geological Survey
WUI	Wildland/Urban Interface



## 1.1 OVERVIEW

This section provides a brief overview of the topic, an introduction to hazard mitigation planning, a brief description of the Disaster Mitigation Act of 2000, grant programs with mitigation plan requirements, and the 2016 Local Hazard Mitigation Plan.

The City of Paso Robles (the City) has developed this Local Hazard Mitigation Plan (hereinafter referred to as the 2016 LHMP) to assess risks posed by natural and human-caused hazards and to develop a mitigation strategy for reducing the City’s risks. The City has prepared the 2016 LHMP in accordance with the requirements of the Disaster Mitigation Act of 2000 (DMA 2000). The 2016 LHMP supersedes the 2005 LHMP.

## 1.2 HAZARD MITIGATION PLANNING

As defined in Title 44 of the Code of Federal Regulations (CFR), Subpart M, Section 206.401, hazard mitigation is “any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards.” As such, hazard mitigation is any work to minimize the impacts of any type of hazard event before it occurs. Hazard mitigation aims to reduce losses from future disasters. It is a process in which hazards are identified and profiled, the people and facilities at risk are analyzed, and mitigation actions to reduce or eliminate hazard risk are developed. The implementation of the mitigation actions, which include short and long-term strategies that may involve planning, policy changes, programs, projects, and other activities, is the end result of this process.

## 1.3 DISASTER MITIGATION ACT OF 2000

In recent years, hazard mitigation planning has been driven by a new federal law known as the Disaster Mitigation Act of 2000 (DMA 2000). On October 30, 2000, Congress passed the DMA 2000 (Public Law 106-390), which amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (Stafford Act) (Title 42 of the United States Code [USC] Section 5121 et seq.) by repealing the act’s previous mitigation planning section (409) and replacing it with a new mitigation planning section (322). This new section emphasized the need for state, tribal, and local entities to closely coordinate mitigation planning and implementation efforts. This new section also provided the legal basis for the Federal Emergency Management Agency’s (FEMA’s) mitigation plan requirements for mitigation grant assistance.

To implement these planning requirements, FEMA published an Interim Final Rule in the Federal Register on February 26, 2002 (FEMA 2002) (44 CFR Part 201). The tribal planning requirements were updated in 44 CFR Part 201.7 in 2009. The local mitigation planning requirements are identified in their appropriate sections throughout the 2016 LHMP and also within the FEMA Plan Review Tool located in **Appendix A, FEMA Documentation**.

## 1.4 GRANT PROGRAMS WITH MITIGATION PLAN REQUIREMENTS

Currently, five grant programs within FEMA’s Hazard Mitigation Assistance program are available to participating jurisdictions that have FEMA-approved Hazard Mitigation Plans (HMPs) and are members of the National Flood Insurance Program (NFIP). Two of the grant programs are authorized under the Stafford Act and DMA 2000, and the remaining three are

authorized under the National Flood Insurance Act and the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act.

## 1.4.1 Stafford Act Grant Programs

**Hazard Mitigation Grant Program:** The Hazard Mitigation Grant Program (HMGP) provides grants to state, local, and Tribal entities 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. Projects must provide a long-term solution to a problem (for example, elevation of a home to reduce the risk of flood damage rather than buying sandbags and pumps to fight the flood). Also, a project's potential savings 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, or is in danger of, repetitive damage. The amount of funding available for the HMGP under a particular disaster declaration is limited. The cost-sharing for this grant is 75 percent federal and 25 percent nonfederal.

**Pre-Disaster Mitigation Program:** The Pre-Disaster Mitigation (PDM) Program provides funds to state, local, and Tribal entities for hazard mitigation planning and the implementation of mitigation projects before a disaster. PDM grants are awarded on a nationally competitive basis. Like HMGP funding, the potential savings of a PDM project must be more than the cost of implementing the project, and 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 total amount of PDM funding available is appropriated by Congress on an annual basis. The cost-sharing for this grant is 75 percent federal and 25 percent nonfederal, although cost-sharing of 90 percent federal and 10 percent nonfederal is available in certain situations.

## 1.4.2 National Flood Insurance Act Grant Programs

**Flood Mitigation Assistance (FMA) Grant Program:** The goal of the FMA Grant Program is to reduce or eliminate flood insurance claims under the NFIP. This program places particular emphasis on mitigating repetitive loss (RL) properties. The primary source of funding for this program is the National Flood Insurance Fund. Grant funding is available for three types of grants: Planning, Project, and Technical Assistance. Project grants, which use the majority of the program's total funding, are awarded to local entities to apply mitigation measures to reduce flood losses to properties insured under the NFIP. Cost-sharing for this grant is 75 percent federal and 25 percent nonfederal, although cost-sharing of 90 percent federal and 10 percent nonfederal is available in certain situations to mitigate severe repetitive loss (SRL) properties. As of the development of this plan, there are no RL or SRL properties located in Paso Robles.

**Repetitive Flood Claims Program:** The Repetitive Flood Claims 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. All Repetitive Flood Claims grants are eligible for up to 100 percent federal assistance.

**Severe Repetitive Loss Program:** The SRL Program provides funding to reduce or eliminate the long-term risk of flood damage to residential structures insured under the NFIP. Structures considered for mitigation must have had at least four NFIP claim payments over \$5,000 each,

when at least two such claims have occurred within any 10-year period, and the cumulative amount of such claim payments exceeds \$20,000; or for which at least two separate claims payments have been made with the cumulative amount of the building portion of such claims exceeding the value of the property, when two such claims have occurred within any 10-year period. The cost-sharing ratio for this grant is 75 percent federal and 25 percent nonfederal.

## 1.5 COMMUNITY PROFILE

### 1.5.1 Location and Geography

As shown in **Appendix B, Figure B-1**, Paso Robles is located in northern San Luis Obispo County, California. It is 19.4 square miles (12,534.7 acres) and 24 miles inland from the Pacific Ocean. It is located at 35°37'36"N 120°41'24"W, which is approximately halfway between the cities of Los Angeles and San Francisco. Paso Robles is considered to be in the most northern area of Southern California.

Paso Robles is bordered on the south and west by the rugged mountainous ridges of the Santa Lucia Coastal Range, to the east by the low hills of the La Panza and Temblor Ranges, and to the north by the low hills and flat-topped mesas of the Diablo Range. The highest elevations in the vicinity are located in the Santa Lucia Coastal Range where many peaks are 2,000 to 3,400 feet above mean sea level. Substantial ridgelines are distributed throughout the western, southern, and eastern portions of the City. The Mediterranean climate of the region and coastal influence produce moderate temperatures year round, with rainfall concentrated in the winter months.

Within the City limits, the Salinas River, U.S. Highway 101 and the Union Pacific Railroad divides the City east to west at the center of the City. The City is bounded by steep hills and canyons on the west, and open rolling hills to the east. Suburban residential development frames the City on the southern and eastern edges, with lower density residential development to the north and west of the City. Agricultural uses both north and south of the City eventually give way to the unincorporated communities of Templeton and San Miguel, approximately 5 miles south and 9 miles north, respectively.

### 1.5.2 Government

Paso Robles was organized, formed and incorporated under the laws of the State of California on March 11, 1889. It has a “Council-Manager” general law form of government where the City Manager is appointed by the City Council and is the Chief Executive Officer of the Municipal Corporation. The City Council acts as the board of directors of the municipal corporation and meets in a public forum where citizens may participate in the governmental process.

The City Council consists of five members elected at-large, on a non-partisan basis. Residents elect the Mayor and four Council members, making each accountable to the entire citizenry. Council members serve four-year overlapping terms. The mayor is directly elected and serves a two-year term. The City Council establishes City policies, approves ordinances and resolutions, makes land use decisions, approves agreements and contracts, hears appeals on decisions made by City staff or advisory committees, and sets utility rates. The Mayor and City Council members receive a monthly stipend set by resolution.

The City Manager is the Chief Executive Officer of the City. The City Manager is appointed by the City Council to enforce city laws, to direct the operations of city government, to prepare and

manage the municipal budget, and to implement the policies and programs initiated by the City Council. The City Manager is responsible to the City Council, and directs departments and operations.

The City Attorney is appointed by the City Council and works under contract to the City. The City Attorney is the legal advisor for the council. He or she provides general legal advice on all aspects of city business and represents the City in legal actions.

The City Clerk is an elected official. The City Clerk is charged with responsibility of maintaining records of council actions, permanent records of all city transactions and documents, and coordinating the city's elections. The Deputy City Clerk is an appointed staff position that assists the City Clerk in carrying out all duties.

The City Treasurer is an elected position responsible for the custody and investment of all city funds. The City Treasurer is also responsible for administrating the City budget.

Boards, commissions and special committees composed of local citizens are frequently appointed by the City Council to advise the City Council in one or more aspects of city government. Typical advisory committees include Parks & Recreation, Streets and Utilities, Airport, and Youth and Senior Citizens. The Planning Commission implements Council development and land use policy, and makes recommendations for policy revisions.

One of the major investments the City makes is the City's work force. City employees perform the day-to-day functions necessary to provide services to the community. Department heads administer specific functions of city government and are responsible to the City Manager. Such positions are Public Works Director, Community Development Director, Library and Recreation Services Director, Administrative Services Director, and Police and Fire Chiefs.

### 1.5.3 Demographics

According to the 2010 U.S. Census, Paso Robles had a population of 29,793 people. The racial makeup of Paso Robles was the following: 23,158 (77.7 percent) White persons; 622 (2.1 percent) African Americans; 593 (2.0 percent) Asians; 297 (1.0 percent) Native Americans; 56 (0.2 percent) Pacific Islanders; 3,916 (13.1 percent) persons from other races; and 1,151 (3.9 percent) persons from two or more races. Hispanic or Latino of any race made up 10,275 people (34.5 percent).

The 2010 Census also reported that the population was spread out as follows: 7,829 people (26.3 percent) under the age of 18; 10,697 people (35.9 percent) aged 18 to 44; 7,271 people (24.4 percent) aged 45 to 64; and 3,996 people (13.4 percent) who were 65 years of age or older. The median age was 35.3 years.

The U.S. Census Bureau and California State Department of Finance records also show that Paso Robles has experienced a 0.7 percent – 1.0 percent growth rate annually since the 2010 U.S. Census. As such, the 2013 projected population for Paso Robles is 30,500 people. The City's 2003 General Plan estimates that Paso Robles will meet its population planning threshold of 44,000 people in 2025.

### 1.5.4 Economy

The Paso Robles economy has a concentration of activity in the manufacturing sector that many communities in the Tri-Counties do not have. The City is one of the few areas in the region

where manufacturing still accounts for a sizable fraction of employment. In 2001, manufacturing was 23.2 percent of the economy in Paso Robles. By comparison, manufacturing in San Luis Obispo County as a whole is approximately 8.0 percent.

As with economic growth, job growth has been relatively persistent in the City of Paso Robles. Based on data for 2001, an estimated 5,200 jobs have been created since 1992. Employment growth slowed from 3.5 percent in 2002 to negative 0.8 percent in 2003. However the Economic Update forecasts a quick return to growth, 2.0 percent in 2004 and 2.3 percent in 2005. The Paso Robles area average salary growth increased from 1.2 in 2002 to 3.3 in 2003. Growth of 3.1 percent is forecasted for 2004, and 3.6 percent growth in 2005. The first quarter of 2013 was \$341,839, an 11.4-percent increase from first quarter 2012, (Paso Robles Daily News, 2013).

As the leading agricultural business in the county, the area's wine industry attracts more than half a million visitors to San Luis Obispo County annually. A 2007 study of the Paso Robles and Greater San Luis Obispo County Wine and Wine Grape industries have an annual impact of \$1.8 billion on the state and local economy. This has helped the economy enjoy approximately \$113 million annually in tourism expenditures.

### 1.5.5 Development Trends and Land Use

According to the 2003 General Plan Land Use Element (revised in December 2012) approximately 78.1 percent (8,639 acres) of the City's total land area is developed as residential, commercial, mixed use and industrial land, and public facilities uses. The remaining land is made up of 2,448 acres of agriculture (7.3 percent) and parks and open space (14.5 percent).

**Table 1-1** shows the potential land use categories for the 2025 build-out population of 44,000 persons as identified in the 2003 General Plan. However, as noted in the revised Land Use Element, it is expected that an additional 20 years (2045) or longer will be needed to reach the 44,000 persons build-out population.

Given the expected population, the City plans to focus on its opportunity for infill development within the City limits. The City may consider general plan amendments to increase the numbers of dwelling units to accommodate the build-out population, and the number of acres of residential land use would increase from 4,300 acres to 5,228 acres. However, land already designated for commercial and industrial development is projected to be more than adequate to accommodate the demands associated with the planned for population growth.

**Table 1-1. 2003 General Plan Land Use Element  
(2012 Revision), Development Potential**

Land Use Category	Acreage	Percent
Residential	5,228	41.2
Commercial	1,271	10.0
Business Park/Industrial	1,721	13.5
Other / Public Facilities	1,947	15.3
Agriculture / Open Space	2,572	20.0
<b>Total</b>	<b>12,739</b>	<b>100</b>

## 1.6 DESCRIPTION OF THE HAZARD MITIGATION PLAN

The remainder of the 2016 LHMP consists of the sections and appendices described below.

### 1.6.1 Section 2: Record of Adoption

Section 2 addresses the adoption of the 2016 LHMP. The adoption resolution is provided in **Appendix A, FEMA Documentation**.

### 1.6.2 Section 3: Planning Process

Section 3 describes the planning process. Specifically, this section describes major milestones achieved during the plan update process and identifies key stakeholders, including members of the Planning Committee. This section also includes a description of the Planning Committee meetings held as part of the plan update process. Additionally, this section documents public outreach activities (attached as **Appendix C, Public Outreach**) and discusses the review and incorporation of relevant plans, reports, and other appropriate information.

### 1.6.3 Section 4: Hazard Analysis

Section 4 describes the process through which the Planning Committee reviewed and re-selected the hazards to be profiled in the 2016 LHMP. The hazard analysis includes the nature, history, location, extent, and probability of future events for each hazard. Location and historical hazard figures are provided in **Appendix B, Figures**.

### 1.6.4 Section 5: Vulnerability Analysis

Section 5 identifies the methodology for analyzing potentially vulnerable assets—population, residential building stock, and critical facilities such as emergency response, government, and education facilities. This information was compiled by assessing the potential impacts from each hazard using Geographic Information System (GIS) data. The resulting information identifies the

full range of hazards that Paso Robles could face and the potential social impacts, damages, and economic losses.

### 1.6.5 Section 6: Capability Assessment

Section 6 includes the component of a capability assessment. The capability assessment evaluates the human and technical, financial, and legal and regulatory resources available for hazard mitigation. It also describes current, ongoing, and completed mitigation projects and programs, including the City's participation in the National Flood Insurance Program (NFIP).

### 1.6.6 Section 7: Mitigation Strategy

Section 7 provides a blueprint for reducing the potential losses identified in the vulnerability analysis. The Planning Committee reviewed the 12 mitigation actions selected in the 2005 LHMP's mitigation action plan and also developed new mitigation actions based on the updated vulnerability analysis. Finally, the Planning Team created a new prioritized mitigation action plan of the most relevant and fundable mitigation projects.

### 1.6.7 Section 8: Plan Maintenance

Section 8 describes the formal plan maintenance process to ensure that the 2016 LHMP remains an active and applicable document. The plan maintenance process consists of monitoring, evaluating, and updating the plan; monitoring mitigation projects and closeout procedures; implementing the plan through existing planning mechanisms; and achieving continued public involvement. Forms to assist in plan maintenance are found in **Appendix D, Plan Maintenance**.

### 1.6.8 Section 9: References

Section 9 includes references used to develop this document.

### 1.6.9 Appendices

The following appendices follow the main body of the plan:

- Appendix A FEMA Documentation
- Appendix B Figures
- Appendix C Public Outreach
- Appendix D Plan Maintenance

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**2.1 OVERVIEW**

This section describes the prerequisite requirements for consideration of the 2016 LHMP by FEMA.

**2.2 ADOPTION DOCUMENTATION**

The requirements for the adoption of the 2016 LHMP by the participating local governing body, as stipulated in the DMA 2000 is described below.

**Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans**

**Element E: Plan Adoption**

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))

The City of Paso Robles meets the requirements of Section 409 of the Stafford Act and Section 322 of the DMA 2000. The City’s governing body has adopted the 2016 LHMP by resolution. A scanned copy of each resolution is to be included in **Appendix A, FEMA Documentation.**

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### 3.1 OVERVIEW

This section summarizes how the plan was updated and who was involved in this process; documents public outreach and stakeholder involvement efforts; and summarizes the review and incorporation of existing plans, studies, and reports used to update the LHMP. Additional information regarding public outreach efforts is discussed below and provided in more detail in **Appendix C, Public Outreach**.

### 3.2 SUMMARY OF PLANNING PROCESS

The requirements for the planning process, including how the plan was revised to reflect changes in development, progress in local mitigation efforts, and changes in priorities, as stipulated in DMA 2000 and its implementing regulations, are described below.

#### Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans

##### 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))

#### Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans

##### Element D: Plan Review, Evaluation, and Implementation

D1. Was the Plan revised to reflect changes in development? (Requirement § 201.6(d)(3))

#### 3.2.1 Major Milestones of the Planning Process

The 2016 LHMP update process occurred over a 20-month period from July 2012 to March 2014 (the review process extended through January 2016). The Planning Committee members that participated in this process are identified in **Table 3-1**.

The following milestones were achieved during this plan update process:

- **July 2012:** The Point-of-contact (POC) re-established the Planning Committee (**Table 3-1**).
- **September 2012:** The consultant met with the Planning Committee to discuss the objectives of the 2016 LHMP planning process and the DMA 2000 requirements; what additional hazards to include in the 2016 LHMP; why national emphasis was being placed on reducing potential future disaster losses; and types of mitigation funding available and example projects.
- **October 2012:** The LHMP POC invited the general public and interested stakeholders to attend a public workshop (Section 3.3.2).
- **December 2012 – September 2013:** The consultant prepared the draft hazard profiles (**Section 4.3**), capability assessment (**Section 6.2**), and plan maintenance section (**Section 8**).

- **November 2013:** The Planning Committee reviewed the draft hazard analysis (**Section 4**) and draft vulnerability analysis (**Section 5**).
- **December 2013:** The consultant reviewed the mitigation actions selected in the 2005 LHMP mitigation action plan to determine whether these projects had been completed, deleted or deferred to reflect progress in mitigation efforts (**Section 7.2**). The consultant then developed a draft list of potential mitigation actions and an updated ranking process based on the 2013 Hazard Mitigation Assistance (HMA) Unified Guidance). The Planning Committee reviewed the draft list and proposed ranking criteria.
- **January 2014:** The consultant prepared the Initial Draft 2016 LHMP for the Planning Committee to review.
- **February 2014:** The consultant incorporated comments from the Planning Committee’s review of the Initial Draft 2016 LHMP and prepared the Final Draft 2016 LHMP for a two-week stakeholder and public comment period.
- **March 2014:** The consultant and the LHMP POC submitted the Final 2016 LHMP submitted to the California Office of Emergency Services (Cal OES) for a review.

**Table 3-1. 2016 LHMP Planning Committee**

Department or Agency	Name
Planning Manager/POC	Susan DeCarli
Community Development Director	Ed Gallagher
Mayor	Duane Picanco
City Manager	Jim App
Action Police Chief, Police Department	Robert Burton
Public Works Director	Doug Monn
Fire Chief, Fire Department	Ken Johnson

**3.2.2 Changes in Development**

From 2007 – 2013, the City grew from 28,000 people to 30,450 people; an average annual growth rate of 1.28 percent. Much of the development to support this growth occurred as infill or in planned subdivisions. In fact, since the 2005 LHMP, the City completed only one annexation in - the Linne Road (Our Town) Annexation in 2005. This annexation of 31 acres (59 parcels) within the unincorporated area of the county to the east of Paso Robles increased the City Limits to 19.9 square miles (12,739 acres). The updated City Limits are reflected in the hazard analysis (**Section 4**) and vulnerability analysis (**Section 5**) of this plan.

The 2016 LHMP also addresses changes in development by including the City’s current Sphere of Influence (SOI). The SOI was established by the Local Agency Formation Commission (LAFCO) of the County of San Luis Obispo. The LAFCO-designated SOI for Paso Robles identifies the probable corporate boundaries and service area for the City for a 20-year period. Per state law, the expansion of the City’s corporate boundaries into its SOI cannot occur until LAFCO approves an application for annexation. The current SOI, updated in February 2013,

includes nine subareas around the City; the combined area of these subareas is 550.9 acres (0.9 square miles). The SOI is addressed in the hazard analysis (Section 4) and vulnerability analysis (Section 5) of this plan.

**3.3 STAKEHOLDER INVOLVEMENT AND PUBLIC OUTREACH**

The requirements for public outreach and stakeholder involvement, as stipulated in DMA 2000 and its implementing regulations, are described below.

**Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans**

Element A: Planning Process
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involve 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))
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement § 201.6(b)(1))

**3.3.1 Stakeholder Involvement**

The LHMP POC developed a list of stakeholders to provide input during planning process. The stakeholders, whom are listed in **Table 3-2**, were invited by the LHMP POC to participate at the public workshop and also comment on the Final Draft 2016 LHMP in February 2014. The stakeholder agencies that attended the public workshop October 18, 2012, are listed with a “\*” next their agency names. Specific names of the attendees are on file with the LHMP POC.

**Table 3-2. Stakeholders**

Agency / Organization
California Department of Forestry and Fire*
California Department of Transportation
California Highway Patrol*
Camp Roberts*
Cuesta College, North County
The Event Center
Paso Robles City Council
Paso Robles Joint Unified School District
Paso Robles Municipal Airport*
San Luis Obispo County Sheriff’s Department

\* Attended public workshop on 10/18/12.

### 3.3.2 Public Outreach

The City of Paso Robles and the consultant held a public workshop for the 2016 LHMP update on October 18, 2012. The public was notified of the public workshop through a City issued News Release and a story in the North SLO County News (**Appendix C, Public Information**). The workshop included a brief overview of the DMA 2000 and the benefits of pre-disaster mitigation planning. The public discussed additional hazards to be included in the plan as well as new mitigation actions to be included in the strategy. A list of those whom attended this workshop are on file with the LHMP POC.

The public was also invited to comment on the Final Draft 2016 LHMP in February 2014. The City issued a press release (**Appendix C, Public Information**) and the plan was uploaded to the City's website: <http://www.prcity.com/government/LHMP-Plan.asp> along with contact information to submit questions and comments. The LHMP POC did not receive any comments during this review period.

## 3.4 INCORPORATION OF EXISTING PLANS AND OTHER RELEVANT INFORMATION

The requirements for the reviewing and incorporating existing plans, studies, reports, and technical information, as stipulated in DMA 2000 and its implementing regulations, are described below.

### Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans

#### Element A: Planning Process

A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement § 201.6(b)(3))

During the planning process, the consultant reviewed and incorporated information from existing plans, studies, and reports. Key information sources integrated into this document are listed below; additional references are provided in **Section 9, References**.

- *City of Paso Robles General Plan (2003)*: The goals and policies in this document provided guidance for the mitigation strategies identified in the 2016 LHMP. The hazards identified provided supplementary information for the hazard profiles.
- *San Luis Obispo County General Plan (1980-2009)*: The County's General Plan was used to gather information on areas adjacent to the City (i.e., future planning areas that have not been incorporated into the City, etc.) and other demographic information.
- *Draft State of California Multi-Hazard Mitigation Plan (2013)*: This plan, prepared by California Office of Emergency Services (Cal OES), was consulted to ensure that the hazard profiles and mitigation strategy in the 2016 LHMP are consistent with state hazard profiles and the state's mitigation strategy.
- *National Oceanic and Atmospheric Administration, National Climatic Data Center*: This website (<http://www.ncdc.noaa.gov/>) was utilized to find information and detailed descriptions for climate, extreme events, and statistical weather for the City of Paso Robles.

**4.1 OVERVIEW**

A hazards analysis includes identifying, screening, and then profiling each hazard. The hazards 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 include technological hazards. Technological hazards are generally accidental or result from events with unintended consequences (for example, an accidental hazardous materials release).

Local mitigation planning requirements specify that this hazards analysis consist of the following two steps:

- Hazard identification and screening
- Hazard profiles

**4.2 HAZARD IDENTIFICATION AND SCREENING**

As the initial step in this hazards analysis, the Planning Committee reviewed the list of hazards identified in the 2005 LHMP and presented in **Table 4-1** and considered the following factors:

- Is the hazard included in the 2005 LHMP?
- Is the hazard included in the 2003 City of Paso Robles General Plan?
- Is the hazard included in the 2010 State of California Multi-Hazard Mitigation Plan?
- Has the hazard occurred in San Luis Obispo County and been declared a Presidential or State emergency or disaster in the past 40 years?

The results of the screening are presented in **Table 4-1**.

**Table 4-1. Paso Robles Hazards Screening**

Hazard	Include in 2016 LHMP?	Explanation
Avalanche	No	Not located within a snow and mountain area
Coastal/Bluff Erosion	No	Not located along the coast
Coastal Storm	No	Not located on the coast
Dam Failure Inundation	Yes	Located within the Salinas Dam Inundation Zone
Drought	Yes	Ongoing drought is a problem within the State of California
Earthquake	Yes	Historic earthquakes and proximity to the San Andreas fault
Expansive Soils	Yes	Known in parts of Paso Robles
Extreme Heat	Yes	Historic events, 110 degrees plus experience
Flood	Yes	Historic events, mapped floodplain
Freeze / Extreme Cold	Yes	Concerns about frost and ice
Hailstorm	No	Low experience/low probability

**Table 4-1. Paso Robles Hazards Screening**

Hazard	Include in 2016 LHMP?	Explanation
Hurricane	No	No experience/low probability
Land Subsidence	Yes	Experienced following earthquakes
Landslide	Yes	Experienced following heavy rains
Tornado	No	No experience/low probability
Tsunami	No	Not located on the coast
Volcano	No	Not located within a volcanic area
Wildfire	Yes	Historic events within the region
Windstorm	No	No significant historic events
Other: Hazardous Materials (Hazmat)	Yes	Hazmat facilities are located within Paso Robles. Major transportation routes such as US-101 and Union Pacific Railroad tracks transect within City limits

Based on the above analysis, the Planning Committee determined that all hazards identified in the 2005 LHMP should be included in the 2016 LHMP. In addition, it was decided that two additional hazards, dam failure inundation and freeze/extreme cold, should be profiled in the 2016 LHMP based on hazard location (dam failure inundation) and hazard occurrence (freeze/extreme cold).

As such, the following 11 hazards are profiled in the 2016 LHMP.

- Dam Failure Inundation
- Drought
- Earthquake
- Expansive Soils
- Extreme Heat
- Flood
- Freeze / Extreme Cold
- Hazardous Materials
- Land Subsidence
- Landslide
- Wildfire

**4.3 HAZARD PROFILES**

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



**Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans**

**Element B: Hazard Identification and Risk Assessment**

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)(ii))

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))

The hazards selected by the Planning Committee were profiled based on existing available information. The hazard profiling consists of describing the nature of the hazard, disaster history, location of hazard, and extent and probability of future events. The sources of information are listed in **Section 9, References**, of this document.

The hazards profiled for Paso Robles are presented below in alphabetical order. The order does not signify level of risk.

**4.3.1 Dam Failure Inundation**

**Nature:** Dam failure involves unintended releases or surges of impounded water resulting in downstream flooding. The high velocity, debris-laden wall of water released from dam failure results in the potential for human casualties, economic loss, lifeline disruption, and environmental damage. While dam failure may involve the total collapse of a dam, this is not always the case as damaged spillways, overtopping from prolonged rainfall, or other problems, including the unintended consequences from normal operations, can result in a hazardous situation being created. Due to the lack of advance warning, failures from natural events, such as earthquakes, or landslides, may be particularly severe.

Dam failure may be caused by a variety of natural events, human-caused events, or a combination thereof. Dam failure usually occurs when the spillway capacity is inadequate and water overtops the dam or when internal erosion through the dam foundation occurs (also known as piping). Factors contributing to dam failure events are structural deficiencies from poor initial design or construction, lack of maintenance or repair, or the gradual weakening of the dam through the normal aging process.

**History:** There have been no recorded dam failures affecting Paso Robles.

**Location:** The Salinas Dam, shown in **Appendix B, Figure B-2**, is located southeast of the town of Santa Margarita in San Luis Obispo County; approximately 21 miles from Paso Robles. As shown in the figure, a portion of the City is located along the Salinas River and is within the Salinas Dam inundation area.

**Extent:** The Salinas Dam can currently store up to 23,843-acre feet of water. The failure of the Salinas Dam would flood an area of 1.07 square miles along the Salinas River within the City limits. An additional 0.01 square miles within the SOI would be flooded due to failure as well. The depth of flooding due to the failure of this dam is unknown.

The United States Army Corps of Engineers has assigned a Dam Safety Action Classification IV to the Salinas Dam. The classification gives the dam a “priority” ranking, which means that the

dam is “inadequate, with low risk such that the combination of life, economic, or environmental consequences with a probability of failure is low.”

**Probability of Future Events:** Based on a lack of previous occurrence, the probability of the Salinas Dam failing is unknown. However, a collapse and structural failure of a dam may be caused by a severe winter storm, earthquake, design flaws, or internal erosion.

### 4.3.2 Drought

**Nature:** Drought is a normal, recurrent feature of virtually all climatic zones, including areas of both high and low rainfall, although characteristics will vary significantly from one region to another. There is no universally accepted quantitative definition of drought. Generally, the term is applied to periods of less than average or normal precipitation over a period of time sufficiently prolonged to cause a serious hydrological imbalance resulting in biological losses and/or economic losses. Drought differs from normal aridity, which is a permanent feature of the climate in areas of low rainfall. Drought is the result of a natural decline in the expected precipitation over an extended period of time, typically one or more seasons in length. Other climatic characteristics, such as high temperature, high wind, and low relative humidity, impact the severity of drought conditions.

Four common definitions for drought are provided as follows:

- Meteorological drought is defined solely on the degree of dryness, expressed as a departure of actual precipitation from an expected average or normal amount based on monthly, seasonal, or annual time scales.
- Hydrological drought is related to the effects of precipitation shortfalls on stream flows and reservoir, lake, and groundwater levels.
- Agricultural drought is defined principally in terms of soil moisture deficiencies relative to water demands of plant life, usually crops.
- Socioeconomic drought associates the supply and demand of economic goods or services with elements of meteorological, hydrologic, and agricultural drought. Socioeconomic drought occurs when the demand for water exceeds the supply as a result of weather-related supply shortfall. It may also be referred to as a water management drought.

A drought’s severity depends on numerous factors, including duration, intensity, and geographic extent as well as regional water supply demands by humans and vegetation. Due to its multi-dimensional nature, drought is difficult to define in exact terms and also poses difficulties in terms of comprehensive risk assessments.

Drought differs from other natural hazards in three ways. First, the onset and end of a drought are difficult to determine due to the slow accumulation and lingering of effects of an event after its apparent end. Second, the lack of an exact and universally accepted definition adds to the confusion of its existence and severity. Third, in contrast with other natural hazards, the impact of drought is less obvious and may be spread over a larger geographic area. These characteristics have hindered the preparation of drought contingency or mitigation plans by many governments.

The effects of drought increase with duration as more moisture-related activities are impacted. Non-irrigated croplands are most susceptible to precipitation shortages. Rangeland and irrigated agricultural crops may not respond to moisture shortage as rapidly, but yields during periods of

drought can be substantially affected. During periods of severe drought, lower moisture in plant and forest fuels create an increased potential for devastating wildfires. In addition, lakes, reservoirs, and rivers can be subject to water shortages that impact recreational opportunities, irrigated crops, and availability of water supplies for activities such as fire suppression and human consumption, and natural habitats of animals. Insect infestation can also be a particularly damaging impact from severe drought conditions.

**History:** Drought is a cyclic part of the climate of California, occurring in both summer and winter, with an average recurrence interval between 3 and 10 years. Recent droughts in California history are listed in **Table 4-2** below.

**Table 4-2. Recent Droughts in California**

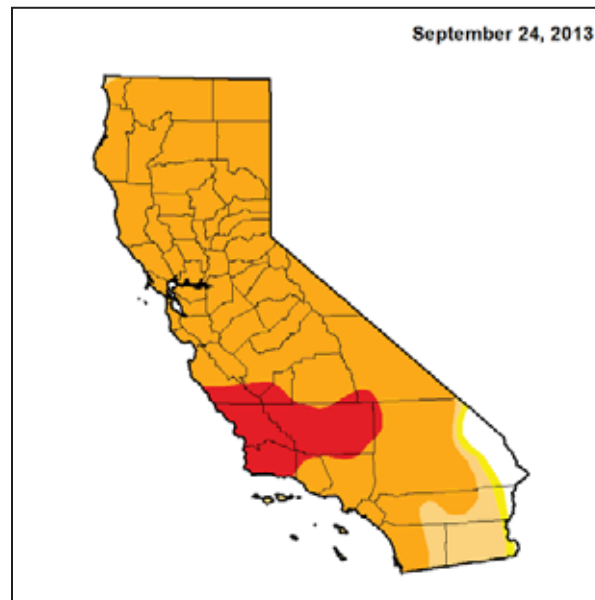
Year(s)	Areas Affected	Disaster Proclamation
1917-1921	Statewide except central Sierra Nevada and north coast	No
1922-1926	Statewide except central Sierra Nevada	No
1928-1937	Statewide	No
1943-1951	Statewide	No
1959-1962	Statewide	No
1976-1977	Statewide, except for southwestern deserts	Statewide disaster proclamation
1987-1992	Statewide	No
2007-2009	Statewide, particularly the central coast	Statewide disaster proclamation
2012-2014	Statewide	Statewide disaster proclamation (2014)

Source: Paulson, R.W., Chase, E.B., Roberts, R.S., and Moody, D.W., Compilers, National Water Summary 1988-89 Hydrologic Events and Floods and Droughts: U.S. Geological Survey Water-Supply Paper 2375; Cal OES, 2007.

The State of California is in the midst of the third year of at the time of the writing of this LHMP. According to University of California, Berkeley, Professor B. Lynn Ingram, California is “on track for having the worst drought in 500 years.”

**Extent:** The National Drought Mitigation Center produces drought monitor maps for the United States. It classifies drought into five categories, with D0 being the least severe with “abnormally dry” conditions and D4 being the most severe with “exceptional drought conditions.” In August 2013, the center reclassified San Luis Obispo County to have the fourth highest ranking of D3, “extreme drought” conditions, while much of the State remained at a D2 ranking of “severe drought” conditions.

Figure 4-1. Drought Monitor Map for September 2013



Source: National Drought Mitigation Center, 2013.

**Probability of Future Events:** The ability to reliably predict drought conditions at seasonal or annual timescales is very limited. According to the California Department of Water Resources, the status of El niño-Southern oscillation (EnSo) conditions is presently the only factor that can offer some predictability to the onset of drought. Strong la niña (warm) conditions of EnSo tend to favor a drier outlook for California, therefore, based on previous la niña conditions, drought conditions may exist in Paso Robles every 3 to 10 years.

### 4.3.3 Earthquake

**Nature:** An earthquake is a sudden motion or trembling caused by a release of strain accumulated within or along the edge of the earth's tectonic plates. The effects of an earthquake can be felt far beyond the site of its occurrence. Earthquakes usually occur without warning and can cause massive damage and extensive casualties in a few seconds. Common effects of earthquakes are ground motion and shaking, surface fault ruptures, and ground failure. Ground motion is the vibration or shaking of the ground during an earthquake. When a fault ruptures, seismic waves radiate, causing the ground to vibrate. The severity of the vibration increases with the amount of energy released and decreases with distance from the causative fault or epicenter. Soft soils can amplify ground motions.

In addition to ground motion, several secondary natural hazards can occur from earthquakes, such as the following:

- **Surface Faulting** is the differential movement of two sides of a fault at the earth's surface. Displacement along faults, both in terms of length and width, varies but can be significant (e.g., up to 20 feet), as can the length of the surface rupture (e.g., up to 200 miles). Surface faulting can cause severe damage to linear structures, including railways, highways, pipelines, tunnels and dams.

- **Liquefaction** occurs when seismic waves pass through saturated granular soil, distorting its granular structure, and causing some of the empty spaces between granules to collapse. Pore water pressure may also increase sufficiently to cause the soil to behave like a fluid for a brief period and cause deformations. Liquefaction causes lateral spreads (horizontal movements of commonly 10 to 15 feet, but up to 100 feet), flow failures (massive flows of soil, typically hundreds of feet, but up to 12 miles), and loss of bearing strength (soil deformations causing structures to settle or tip). Liquefaction can cause severe damage to property.
- **Landslides/Debris Flows** occur as a result of horizontal seismic inertia forces induced in the slopes by the ground shaking. The most common earthquake-induced landslides include shallow, disrupted landslides such as rock falls, rockslides, and soil slides. Debris flows are created when surface soil on steep slopes becomes totally saturated with water. Once the soil liquefies, it loses the ability to hold together and can flow downhill at very high speeds, taking vegetation and/or structures with it. Slide risks increase after an earthquake during a wet winter.

The severity of an earthquake can be expressed in terms of intensity and magnitude. Intensity measures the strength of shaking produced by the earthquake at a certain location. Intensity is determined from effects on people, human structures, and the natural environment. Magnitude is the measure of the earthquake “strength”, the energy released at the source of the earthquake.

The two most common measures of earthquake intensity used in the U.S. are the Modified Mercalli Intensity (MMI) Scale and peak ground acceleration (PGA) which measures earthquake intensity by quantifying how hard the earth shakes in a given location. Magnitude is measured by the amplitude of the earthquake waves recorded on a seismograph using a logarithmic scale. The following table presents intensities that are typically observed at locations near the epicenter of earthquakes of different magnitudes with interpretations of perceived shaking and potential damage to the built environment (**Table 4-3**).

Table 4-3. Magnitude/Intensity/Ground-Shaking Comparisons

Magnitude	Instrumental Intensity	PGA (% g)	Perceived Shaking	Potential Damage
0 – 4.3	I	<0.17	Not Felt	None
	II-III	0.17 – 1.4	Weak	
4.3 – 4.8	IV	1.4 – 3.9	Light	
	V	3.9 – 9.2	Moderate	Very light
4.8 – 6.2	VI	9.2 – 18	Strong	Light
	VII	18 – 34	Very Strong	Moderate
6.2 – 7.3	VIII	34 – 65	Violent	Moderate to Heavy
	IX	65 – 124	Very Violent	Heavy
	X	124 +	Extreme	Very Heavy
7.3 – 8.9	XI			
	XII			

Source: Wikipedia - Peak Ground Acceleration: [http://en.wikipedia.org/wiki/Peak\\_ground\\_acceleration](http://en.wikipedia.org/wiki/Peak_ground_acceleration)

**History:** Historically, most of the earthquakes that have occurred near Paso Robles have originated from movement along the San Andreas Fault, which is located approximately 38 miles northeast of the City limits. While no large earthquakes greater than  $M_w$  5.0 have occurred recently within the City limits, a number of relatively large earthquakes outside Paso Robles have caused damage within the County of San Luis Obispo and neighboring counties. These earthquakes are discussed below and shown in **Appendix B, Figure B-3**.

- **Bryson,  $M_w$  6.2, November 22, 1952:** The location of the Bryson earthquake is not well determined, owing to the sparseness of instrumentation at that time. The 1952 Bryson epicenter was generally believed to have been located less than 10 miles northwest of the 2003 San Simeon earthquake.
- **Coalinga,  $M_w$  6.5, May 2, 1983:** The Coalinga earthquake injured 94 people and caused an estimated \$10 million in property damage. Older buildings, family housing, and apartment buildings were damaged. Most new buildings and public buildings had only minor or superficial damage. Some public utilities required attention to broken or leaking water, sewer, and gas pipelines. Electricity and telephone services had temporary interruption.
- **San Simeon,  $M_w$  6.5, December 22, 2003 (Presidential disaster declaration):** The San Simeon earthquake injured 47 people and 2 lives were lost. FEMA and Cal OES reported on May 5, 2004 and estimated \$44 million in damage to public entities. The epicenter was 6.8 miles northeast of San Simeon, at a depth of 7.6 kilometers (km) (35.706N 121.102W) located in San Luis Obispo County 24 miles east-northeast of Paso Robles. This area has low population density and most of the severe damage occurred in Paso Robles, where unreinforced masonry buildings and historic buildings were severely damaged; one building collapsed, and 20 buildings were severely damaged. Countywide, 290 homes and 190 commercial structures were damaged. Structural damage was also noted in the City of Atascadero and in unincorporated areas of the county. The hospital in Templeton had the

largest recorded ground motion of 0.48%g, indicating rupture directivity to the southeast from this earthquake. Local, state and federal disasters were declared. Repair costs from ground displacements were related mainly to the damage to highways from seismic compression, and to houses and infrastructure from lateral spreading. The San Simeon earthquake was a reverse event, where one side of the fault overrides the other side on an inclined fault plane, whereas the Bryson earthquake was a strike-slip first-motion mechanism.

- **Parkfield, Mw 6.0, September 28, 2004:** The Parkfield earthquake struck Central California near the town of Parkfield (approximately 30 miles northeast of Paso Robles). The quake caused no injuries or property damage in Paso Robles or Parkfield. However, in 1984 the United States Geological Survey (USGS) predicted that a Magnitude 6 earthquake would occur on the San Andreas Fault near Parkfield within five years of 1988. The prediction was based on a sequence of six similar earthquakes that occurred every 22 years (on average) from 1857 to 1966. Although the 2004 Parkfield earthquake occurred over a decade later than predicted, its magnitude and behavior fulfilled the prediction.

**Location:** Paso Robles is located near several major active faults. These fault or fault segments, as well as their distance from Paso Robles, maximum moment magnitude, length, and slip rate, are listed in **Table 4-4** and shown in **Appendix B, Figure B-4**.

**Table 4-4. Major Active Faults**

<b>Fault</b>	<b>Nearest Communities</b>	<b>Maximum Moment Magnitude</b>	<b>Fault Length (miles)</b>	<b>Potential Annual Slip Rate (millimeters)</b>
San Luis Range (South Margin)	San Luis Obispo	7.0	40	0.2
Los Osos	Los Osos	6.8	27	0.5
Hosgri	San Simeon	7.3	107	2.5
Rinconada	Paso Robles	7.3	117	1.0
Casmalia (Orcutt Frontal Fault)	Guadalupe	6.5	18	0.25
Lions Head	Point Sal	6.6	25	.02
San Juan	Shandon	7.0	42	1.0
Los Alamos	Los Olivos	6.8	17	0.7
San Andreas (Cholame)	Cholame	6.9	39	34
San Andreas (Mojave)	Mojave Desert	7.8	214	34
San Andreas (Parkfield Segment)	Parkfield	6.7	23	34
North Channel Slope	Santa Barbara	7.1	37	2.0

**Extent:** The strength of an earthquake’s ground movement can be measured by peak ground acceleration (PGA). PGA measures the rate in change of motion relative to the established rate of acceleration due to gravity (g = 980 centimeters per second, per second). PGA is used to project the risk of damage from future earthquakes by showing earthquake ground motions that have a specified probability (e.g., 10 percent, 5 percent, or 2 percent) of being exceeded in 50 years. The

ground motion values are used for reference in construction design for earthquake resistance and can also be used to assess the relative hazard between sites when making economic and safety decisions.

In 2008, the USGS updated the 2002 National Seismic Hazard Maps displaying earthquake ground motions for various probability levels across the United States. The updated maps incorporate new findings on earthquake ground shaking, faults, and seismicity and are currently applied in seismic provisions of building codes, insurance rate structures, risk assessments, and other public policy. **Appendix B, Figure B-4** shows the PGA values in Paso Robles for the two percent probability of exceedance in 50 years. Severe earthquake hazard areas are defined as areas with ground accelerations of 30-60%g and violent earthquake hazard areas have ground accelerations of over 160%g.

As noted above, Paso Robles falls within the severe to violent range of the scale. Within the City limits, there is 11.30 square miles of extreme ground shaking potential and an additional 8.29 square miles of high ground shaking potential. Within the SOI, there is 0.26 square miles of extreme ground shaking potential and 0.51 square miles of high ground shaking potential. These areas that reach the top end of the scale are often near major active faults. On average, these areas experience stronger earthquake shaking more frequently, with intense shaking that can damage even strong, modern buildings.

**Probability of Future Events:** In 2007 the Working Group on California Earthquake Probabilities, a multi-disciplinary collaboration of scientists and engineers, assigned individual probabilities to specific known major faults in the State. For the South San Andreas Fault (which includes the Parkfield segment and is the fault most likely to affect Paso Robles), the Working Group on California Earthquake Probabilities assigned a 30-year probability of 59.0 percent for an  $M \geq 6.7$  event.

#### 4.3.4 Expansive Soils

**Nature:** Expansive soils are naturally occurring materials found in low-lying regions and flood plains. Expansive soils are easily recognized by large surface cracks that form when they are dry and contracted. Expansive soils can cause damage to structure foundations. The effects can be dramatic if expansive soils supporting structures are allowed to become too wet or too dry. Patios, driveways and walkways may crack and heave as the underlying expansive soils become wet and swell. Sometimes the cracking and heaving appear temporary as the soils dry and shrink back to their original position. However, footings can behave differently. The concentrated weight of the structure will inhibit the soil's upward expansion. Outward expansion on the other hand may continue. The footings will not be returned to their original position as the soils dry and shrink. Instead, they can "ooze" down to a slightly lower level. This process can accumulate if the wetting and drying is allowed to continue season after season, year after year.

Summer or drought conditions can cause expansive soil problems around homes. Expansive soils can affect homes with suspended wood floors as well as those with concrete slab floors. Most of the movement occurs at the outside walls of a building, but the inside of a house can move if water finds its way under the house when it rains, through landscape watering or through a plumbing leak.

Much of California is underlain by expansive soils. However, expansive soil doesn't cause problems unless poorly designed structures are built on it. A house built on expansive soil will



probably move if the foundation was not designed to take this soil type into account. Movement occurs because the soils expand so forcefully, the foundation actually moves. Different parts of the house can move at different rates and distances, thus cracking the foundation. Significant cracks often appear at the corners of windows and doors, in walls, garage slabs, walkways, and driveways. Doors and windows may become jammed. The integrity, design, value and use of a home could be affected. During extreme drought conditions, even homes that are not normally affected by expansive soil problems may experience slight cracking.

**History:** Based upon the available information collected during a USGS study detected the presence of three areas of subsidence, located generally in the northeast portion of the City, indicating ground surface displacement from 0.6 to 2.1 inches. The southern and northeastern areas appeared to coincide with an area of water level decline of over 60 feet (USGS, 2001).

**Location:** Appendix B, Figure B-5 displays the concentration of expansive soils with high shrink-swell potential. These soils are primarily located within the central, eastern, and northeastern portions of the City Paso Robles on the surrounding hillsides, and in areas along the Salinas River, Huerhuero Creek, and several unnamed creeks.

**Extent:** The soil types that correspond to the high shrink-swell potential in Paso Robles include the Arbuckle-Positas complex (soil type 104), Arbuckle-San Ysidro complex (soil type 106), and Rincon clay loam (soil types 187 and 188). These soils have a linear extensibility, which refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state, of 3.5-11.8 inches. There is 1.32 square miles of high shrink-swell potential in the City limits. An additional 7.63 square miles of moderate shrink-swell potential is also located within City limits as well as 0.54 square miles of the same hazard area within the SOI.

**Probability of Future Events:** The biggest problem in expansive soil areas is that of differential water content. Therefore the annual cycle of wetting during the wet season and drying during the dry season can cause soils to shrink and swell in Paso Robles each year. In addition, this problem can be compounded by people using swimming pools, sprinklers, and leaky pipes.

### 4.3.5 Extreme Heat

**Nature:** According to the National Weather Service (NWS), extreme heat occurs when temperatures reach high levels or when the combination of heat and humidity causes the air to become oppressive and stifling. Generally, extreme heat is considered to be 10 degrees (°) F above a county's mean temperature over an extended period of time. However, extreme heat can manifest itself in several ways:

- During a period of time of sweltering humidity, which reaches levels commonly associated with moist tropical regions, stress on the body can be exacerbated when atmospheric conditions cause pollutants to be trapped near the ground.
- In an excessively dry condition, strong winds and blowing dust can worsen the situation.
- When there is a rise in the heat index, the body's perception of the "apparent" temperature is based on both the air's real temperature and the amount of moisture present in the air. Humidity and mugginess make the temperature seem higher than it is. In high humidity, an 85 °F day may be perceived as having reached 95 °F.

During heat or extreme heat, local NWS offices can issue heat-related messages as conditions warrant, including:

- **Excessive Heat Outlook:** when the potential exists for an excessive-heat event in the next three to seven days. The NWS will provide an indication of areas where people and animals may need to take precautions against the heat. It is based on a combination of temperature and humidity over a certain number of days. An outlook is used to indicate that a heat event may develop. It is intended to provide information to those who need considerable lead time to prepare for the event, such as public utilities, emergency management personnel, and public health officials.
- **Excessive Heat Watch:** when conditions are favorable for an excessive heat event in the next 12 to 48 hours. The term “watch” is used when the risk of a heat wave has increased, but its occurrence and timing are still uncertain. It is intended to provide enough lead time so those who need to set their plans in motion can do so, such as cities that have excessive-heat event mitigation plans. Also, a watch notice is issued when heat indices in excess of 105 °F during the day, combined with nighttime low temperatures of 80 °F, or higher, are forecast to occur for two consecutive days.
- **Excessive Heat Warning/Advisory:** when an excessive heat event is expected in the next 36 hours. These warnings are issued when an excessive heat event is occurring, is imminent, or has a very high probability of occurrence. The warning is issued when these conditions are present: a heat index of at least 100 °F for more than three hours per day for two consecutive days, or a heat index of more than 115 °F for any period of time. The warning is used for conditions posing a threat to life or property. An advisory is for less-serious conditions, but still cause significant discomfort or inconvenience and, if caution is not taken, could lead to a threat to life and/or property.

**History:** Based upon the available information from the NWS, the all-time record high temperature of 117 °F in Paso Robles was recorded on August 13, 1933. The second highest temperature of 115 °F was recorded at the Municipal Airport on July 20, 1960 and June 15, 1961.

**Location:** When an excessive heat event occurs, it is likely to affect all of Paso Robles.

**Extent:** The hottest months are July and August; with average high temperature of 91.2 °F in July and 91.7 °F in August. Temperatures in excess of 100°F are not uncommon during these months.

**Probability of Future Events:** According to the NWS, Paso Robles can expect an average of 86.7 days annually with highs of 90 °F or higher.

## 4.3.6 Flood

**Nature:** Flooding is a general and temporary condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties from overflow of inland or tidal waters, from unusual and rapid accumulation or runoff of surface waters from any source, or from mudflow. Simply put, a flood is an excess of water on land that is normally dry. Floods can be caused by the overflow of excess water from a stream, river, lake, reservoir, or coastal body of water onto adjacent floodplains. Floodplains are lowlands adjacent to water bodies that

are subject to recurring floods. Floods are natural events that are considered hazards only when people and property are affected. Other possible causes of floods are as follows:

- Unusual and rapid accumulation or runoff of surface waters from any source
- Mudflow, which is defined as “a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water”
- Collapse or subsidence of land along the shore of a lake or similar body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels that result in a flood as defined above

In Paso Robles, two types of flooding occur: riverine flooding, also known as overbank flooding, due to excessive rainfall, and localized flooding.

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. Flooding in steep, mountainous areas is usually confined, strikes with less warning time, and has a short duration. Larger rivers typically have longer, more predictable flooding sequences and broad floodplains.

Localized flooding may occur outside of recognized drainage channels or delineated floodplains due to a combination of locally heavy precipitation, increased surface runoff, and inadequate facilities for drainage and stormwater conveyance. Such events frequently occur in flat areas and in urbanized areas with large impermeable surfaces. Local drainage may result in “nuisance flooding,” in which streets or parking lots are temporarily closed and minor property damage occurs.

For purposes of this plan, stormwater refers to water that collects on the ground surface or is carried in the stormwater system when it rains. In events where the amount of runoff is too great for the system, or if the stormwater system is disrupted by vegetation or other debris that blocks inlets or pipes, excess water remains on the surface. This water may “pond” in low-lying areas, often in street intersections; or enter nearby structures. Stormwater ponding, a form of localized flooding, not only creates flood problems, but also creates a pollution problem, as stormwater can pick up debris, chemicals, dirt, and other pollutants from the impervious surfaces.

**History:** The most serious flood events on record for Paso Robles occurred during storms in the early months of 1969, 1973, 1978, 1995, 2001, 2004-2005, 2005-2006, and 2010-2011.

The January 1969 storm delivered the most rainfall with totals ranging from 12 to 21 inches in the region. During this flood event, the Salinas River reached a discharge of over 28,000 cubic foot per second (ft<sup>3</sup>/s) and reached a stage of 23.8 feet from flood marks (almost 5 feet above the river’s flood stage), which resulted in water flooding into the 50-year and 100-year flood zone. The San Luis Obispo Telegram-Tribune of January 25, 1969 described the Salinas River as “on a rampage.” Hundreds of people were evacuated and homes were destroyed along the North and South River Roads in Paso Robles. Only 1 month later, another series of storms delivered an additional 6 inches of rain to the area.

On January 18, 1973, rainstorms flooded Paso Robles again. High winds cut the City’s power, and the water in Lake Nacimiento approached the maximum capacity. Streets were flooded and sewer pump lift stations were inundated. Sand bagging the culvert at 23rd and Vine Streets

required a full crew to prevent flooding damages to nearby homes. City street crews kept constantly on the move unclogging drains and barricading some areas.

On February 13, 1978, a weekend of rain resulted in major flooding throughout the region. While not as severe as the 1969 flood event, widespread flooding of nearby farmlands was reported.

The next severe flood event occurred in 1995. This event through the most recent large flood event (2011) is shown in **Table 4-5** below.

**Table 4-5. Major Disaster Declarations for Floods, 1995-2011**

Date	Description
January 1995	On January 9 and 10, the region was subjected to an intense winter storm that produced over 6 inches of rain in some areas. A major Disaster Declaration was declared for all but one county throughout California on January 10, 1995.
January – March 1995	A second powerful winter storm brought heavy rain, heavy snow and strong winds throughout much of California from mid-January to mid-March. On January 13, a Major Disaster Declaration was declared for nearly half the counties in California.
December 1996 – January 1997	A series of subtropical storms hit California from late December through early January resulting in one of the wettest Decembers on record. On January 4, 1997, a Major Disaster Declaration was declared for half of the counties in California, including San Luis Obispo County.
February 1998	El niño conditions led to extensive flooding throughout California. A Major Disaster Declaration was declared for more than 30 counties, including San Luis Obispo County.
January 2001 – March 2001	A powerful and slow-moving storm brought heavy rain, strong winds and snow to Central and Southern California. Across San Luis Obispo and Santa Barbara counties, rainfall totals ranged from 2 to 6 inches over coastal and valley areas and 6 to 13 inches in the mountains. Numerous flooding events were recorded in San Luis Obispo County All three counties were declared Major Disaster Declarations on March 1, 2001.
December 2004 – January 2005	A powerful Pacific storm brought heavy rain, snow, flash flooding, high winds and landslides to Central and Southern California. During the multi-day event, rainfall totals ranged from 3 to 10 inches over coastal areas with up to 32 inches in the mountains. A Major Disaster Declaration was declared on February 4, 2005 for multiple counties, including San Luis Obispo.
December 2005 – January 2006	A winter rainstorm starting over the New Year caused severe flooding across Central and Northern California. Over two dozen counties, including San Luis Obispo, were declared Major Disaster Declarations on February 3, 2006.
December 2010 – January 2011	A powerful Pacific storm brought severe winter storms, flooding, and debris and mud flows throughout much of California during the period of December 17, 2010, to January 4, 2011. On January 26, 2011, 10 counties, including San Luis Obispo County, were declared Major Disasters.

Source: Public Review Draft 2013 State of California Multi-Hazard Mitigation Plan, 2013.

In addition, the USGS has recorded historical crests for the Salinas River at Paso Robles, as shown in **Table 4-6**. The flood categories in feet for this location of the Salinas River include: Major Flood Stage (37 feet); Moderate Flood Stage (33 feet); Flood Stage (29 feet); and Action Stage (23 feet).

**Table 4-6. Top Five Recorded Historical Crests for the Salinas River at Paso Robles**

Crest (feet)	Date	Flood Categories
23.80	1/25/1969	Action Stage
22.99	3/10/1995	Not applicable
18.80	1/14/1993	Not applicable
18.79	1/10/1995	Not applicable
16.52	1/24/1995	Not applicable

Source: National Weather Service. 2013.

**Location:** The 2012 Digital Flood Insurance Rate Maps for San Luis Obispo County (**Appendix B, Figure B-6**) identifies the 100-year and 500-year floodplains for the following flooding sources:

- Zone A which is the 1 percent annual chance of flood hazard area. Zone A include the floodplains of Huerhuero Creek, Dry Creek, and the Salinas River.
- Zone B which is the 0.2 percent annual chance of flood hazard area. The floodplain boundaries for the 500-year flood include the northwest area of the City to the west of the Salinas River and east of the Salinas River between Creston Road to the south and Union Road to the north.

**Extent:** Floods are described in terms of their extent (including the horizontal area affected and the vertical depth of floodwaters) and the related probability of occurrence. Flood studies often use historical records, such as stream-flow gages, to determine the probability of occurrence for floods of different magnitudes. The probability of occurrence is expressed in percentages as the chance of a flood of a specific extent occurring in a given year.

The following factors contribute to the frequency and severity of riverine flooding:

- Rainfall intensity and duration
- Antecedent moisture conditions
- Watershed conditions, including steepness of terrain, soil types, amount and type of vegetation, and density of development
- The existence of attenuating features in the watershed, including natural features such as swamps and lakes and human-built features such as dams
- The existence of flood control features, such as levees and flood control channels
- Velocity of flow
- Availability of sediment for transport, and the erodibility of the bed and banks of the watercourse

The magnitude of flooding that is used as the standard for floodplain management in the United States is a flood with a probability of occurrence of 1 percent 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 (0.2 percent probability of occurrence in any given year), is the system of Flood Insurance Rate Maps (FIRM) prepared by FEMA. These maps are used to support the NFIP.

As shown in **Appendix B, Figure B-6**, the November 16, 2012 FIRMs for Paso Robles show 100-year floodplain boundaries for identified flood hazards. These areas are also referred to as Special Flood Hazard Areas and are the basis for flood insurance and floodplain management requirements. The FIRMs also show floodplain boundaries for the 500-year flood, which is the flood having a 0.2 percent chance of occurrence in any given year. Within the City limits, 1.50 square miles are in the 100-year floodplain. And an additional 4.08 square mile area within the City limits is in the 500-year floodplain. Within the SOI, 0.06 square miles is within the 100-year floodplain.

**Probability of Future Events:** Paso Robles has regular flooding problems associated with severe winter storms. Based on previous events, Paso Robles can expect to experience flooding during the winter every one to four years.

#### 4.3.7 Freeze/Extreme Cold

**Nature:** Winter storms can bring heavy rain or snow, high winds, extreme cold, and ice storms. In California, winter storms begin with cyclonic weather systems in the North Pacific Ocean or the Aleutian Islands that can cause massive low pressure storm systems to sweep across the western states. Winter storms plunge southward from arctic regions and drop heavy amounts of snow and ice. The severity of winter storms is generally minor. However, a heavy accumulation of ice can create hazardous conditions. Additionally, a large winter storm event can also cause exceptionally high rainfall that persists for days, resulting in heavy flooding.

The focus of winter storms in this section will be on freeze / extreme cold (15 °F – 32 °F).

**History:** The NWS reports that the lowest temperature on record for Paso Robles was 8 °F on December 22, 1990. Another notable freeze / extreme cold event occurred on January 13-15, 2007, when a very cold arctic storm brought freezing temperatures and some gusty offshore winds to the area. Widespread freezing conditions were reported across agricultural areas of San Luis Obispo County, including Paso Robles. The crop damage in San Luis Obispo County was estimated to be around \$25 million. Across the agricultural areas of San Luis Obispo, Santa Barbara, Ventura and Los Angeles Counties, the freezing overnight temperatures caused nearly \$350 million in crop damage. On March 13, 2007, 12 counties, including San Luis Obispo County, were declared Major Disaster areas.

**Location:** All of Paso Robles is subject to potential freeze conditions (32 °F). In particular, agricultural areas are sensitive to freeze conditions. Agricultural uses within the City limits are concentrated north of Highway 46 East and north of the City's Airport.

**Extent:** Winters in Paso Robles are often very cool and moist, with daytime temperatures reaching into the low 50s °F. However, mornings and nights tend to very frigid in December and January, with low temperatures reaching as low as 25 °F.

**Probability of Future Events:** According to the NWS, there are 64 days annually with low temperatures of 32 °F or lower.

## 4.3.8 Hazardous Materials

Hazardous materials are substances that may have negative effects on health or the environment. Exposure to hazardous materials may cause injury, illness, or death. Effects may be felt over seconds, minutes, or hours (short-term effects) or not emerge until days, weeks, or even years after exposure (long-term effects). Also, some substances are harmful after a single exposure of short duration, but others require long episodes of exposure or repeated exposure over time to cause harm.

The toxicity of a specific substance is one important factor in determining the risk it poses, but other factors can be just as important, if not more so. Factors affecting the severity of an accidental release include:

- Toxicity
- Quantity
- Dispersal characteristics
- Location of release in relation to population and sensitive environmental areas
- Efficacy of response and recovery actions

Hazardous materials can be found almost everywhere in our society. Paints, solvents, adhesives, gasoline, household cleaners, batteries, pesticides and herbicides, and even medicines are all potential sources of hazardous materials. This plan does not focus on the hazards contained in everyday products, but rather on the hazards associated with potential releases of hazardous substances from transportation corridors (mobile incident) and fixed facilities (fixed incident) within the City.

Hazardous materials are generally classified by their primary health effects on humans. Some common types include the following:

- Anesthetics and narcotics are substances that depress the central nervous system.
- Asphyxiants are substances that interfere with normal breathing and can cause suffocation.
- Explosives are substances that pose a risk of exploding; fires and chemical effects may also be a danger.
- Flammable materials are substances that catch fire easily, though they may also pose other dangers, such as explosion or chemical effects.
- Irritants cause burns or irritation to body tissues such as eyes, nose, throat, lungs, or skin.

### 4.3.8.1 Mobile Incident

**Nature:** Mobile incidents include those that occur on a roadway or a railroad. Mobile incident-related releases are dangerous because they can occur anywhere, including close to human populations, assets and utilities, or environmentally sensitive areas. Mobile incident-related

releases can also be more difficult to mitigate because of the great area over which any given incident might occur and the potential distance of the incident site from response resources.

**History:** The National Response Center's (NRC) Internet-based query system of non-Privacy Act data shows that since October 1998, ten mobile incidents have been reported; causes include equipment failure, operator error, dumping, trespasser, and transportation accident. These incidents are listed in **Table 4-7**.

**Table 4-7. Hazardous Material Mobile Incidents in Paso Robles, 1998-2013**

Year	Location	Incident Cause	Material
1998	US 101 Mile Marker 212.54	Operator Error	Not Applicable-Railroad Non-Release
1999	Ramada Drive & US Route 101	Other	Not Applicable-Railroad Non-Release
2000	US 101 Mile Marker 211	Unknown	Not Applicable-Railroad Non-Release
2005	Mobile Gas Station (Golden Hill Rd.)	Dumping	Gasoline and Oil
2006	Running Deer Ranch Area	Transportation Accident	Oil and Chip Sealer
2007	Union Pacific Railroad	Transportation Accident	Not Applicable-Railroad Non-Release
2009	US 101 Mile Marker 213.25	Unknown	Not Applicable-Railroad Non-Release
2010	Between 12 <sup>th</sup> St. and 13 <sup>th</sup> St.	Trespasser	Not Applicable-Railroad Non-Release
2012	24 <sup>th</sup> St. Overpass	Trespasser	Not Applicable-Railroad Non-Release
2013	Arco Station (Ysabel St.)	Equipment Failure	Gasoline

Source: National Response Center, 2013.

**Location:** In Paso Robles, a mobile hazardous material event is most likely to occur along major transportation routes, which includes State Route 46 and US Highway 101, and the railroad tracks. **Appendix B, Figure B-7** illustrates the most susceptible transportation corridors, including a ¼-mile buffer. Trucks and rail cars that use these transportation corridors commonly carry a variety of hazardous materials, including gasoline, other petroleum products, and other chemicals known to cause human health problems, including fertilizers, pesticides, and industrial chemicals.

**Extent:** Comprehensive information on the probability and magnitude of a hazardous material event along transportation corridors is not available. Wide variations among the characteristics of hazardous material sources and among the materials themselves make such an evaluation difficult. As such, the extent of a hazardous material mobile incident is unknown.

**Probability of Future Events:** Based on most recent occurrences (the past 15 years, 1998-2013), it is likely that a minor hazardous materials event due to a mobile accident will occur every two years.



### 4.3.8.2 Fixed Incident

**Nature:** The release of hazardous substances from stationary sources can be caused by human error, equipment failure, intentional dumping, acts of terrorism, or natural phenomena. Earthquakes pose a particular risk, because they can damage or destroy facilities containing hazardous substances. The threat posed by a hazardous-material event can be amplified by restricted access, reduced fire suppression and spill containment capability, and even complete cutoff of response personnel and equipment.

Unless exempted, facilities that use, manufacture, or store hazardous materials in the United States fall under the regulatory requirements of the Emergency Planning and Community Right to Know Act (EPCRA) of 1986. Under EPCRA regulations, hazardous materials that pose the greatest risk for causing catastrophic emergencies are identified as Extremely Hazardous Substances (EHS). These chemicals are identified by the EPA in the List of Lists – Consolidated List of Chemicals Subject to the Emergency Planning and Community Right-to-Know Act (EPCRA) and Section 112 of the Clean Air Act.

**History:** According to the NRC, there have been eight reported fixed incidents in Paso Robles since 1996. These events were caused by dumping, equipment failure, and other or unknown causes. These incidents are listed in **Table 4-8**. The incident reports did not include the amount or volume of material released.

**Table 4-8. Hazardous Material Fixed Incidents in Paso Robles, 1996-2012**

Year	Location	Incident Cause	Material
1996	7000 State Highway 46 E	Equipment Failure	Ammonia
1997	Thomas Guide, Page 494, Grid F-7	Unknown	Toluene Diisocyanate
1997	3115 Propeller Drive	Unknown	Carbon Dioxide
1999	7000 State Highway 46 E	Equipment	Ammonia
1999	7000 State Highway 46 E	Other	Ammonia
2005	Mobile Gas Station (Golden Hill Rd.)	Dumping	Oil
2012	3075 Blue Rock Rd.	Dumping	Sodium Hydroxide, Muriatic Acid
2012	1120 Ramada Dr.	Dumping	Wastewater

Source: National Response Center, 2013.

**Location:** Facilities using reportable quantities of EHS are required to file an annual EPA Tier II Material Inventory Report. The report shows that there are seven such facilities. **Appendix B, Figure B-7** shows the location of the EHS facilities; areas at risk of hazardous material events include any areas within a ¼-mile radius of any designated facility.

**Extent:** Comprehensive information on the magnitude of a hazardous material event at fixed locations is not available. While a total of eight EHS facilities have been identified in Paso Robles, wide variations among the characteristics of hazardous material sources and among the materials themselves make an evaluation of the magnitude of an event difficult. Additionally, the extent of a release is also based on factors such as equipment maintenance, operator training, the

potential of natural phenomena to disrupt handling and storage of the materials and potential weather distribution patterns. As such, the extent of a hazardous material fixed incident is unknown.

**Probability of Future Events:** Comprehensive information on probability of a hazardous material event at fixed locations is not available. Similar to extent, the probability of a release is based on factors such as equipment maintenance, operator training, and the potential of natural phenomena to disrupt handling and storage of the materials. Based on previous event history, it is likely an incident will occur within Paso Robles from a fixed hazardous material event once every two years.

#### 4.3.9 Land Subsidence

**Nature:** In the western part of the United States, agricultural and urban areas that depend on aquifer groundwater pumping are prone to land subsidence. Nonrecoverable land subsidence occurs when declining water levels lead to inelastic water compaction. A lesser amount of subsidence occurs with the recoverable compression of coarse-grained sands and gravel deposits. A common feature that accompanies subsidence is earth fissures, which are tension cracks in the sediment above the water table. Land subsidence can be caused by actions other than overdrafting of water. Mining, hydrocompaction, and underground fluid withdrawal (water, oil, or other fluid) can cause this hazard and result in land surface displacements and fissures.

**History:** While there is no direct correlation of the measured land subsidence with change in groundwater levels over a long period in time, some of the areas of land subsidence within the City limits appear to correspond with areas of significant groundwater level decline between the spring and fall of 1997.

**Location:** As shown in **Appendix B, Figure B-8**, Paso Robles has 1.90 square miles of subsidence-prone areas along the Salinas River and Huerhuero Creek, as well as in the east and especially, southeast portions of the City.

**Extent:** Interferometric Synthetic Aperture Radar (InSAR) has been used in the area to remotely map land-surface displacements. This technology uses radar images taken from satellites that are used to create maps of change in land surface elevation. The studies done in the area show that an area three miles northeast of Paso Robles has shown a downward displacement from 0.6 to 2.1 inches.

**Probability of Future Events:** It is unknown if future subsidence events will occur as Paso Robles has not experienced a history of major subsidence events and standards to determine the probability have not yet been developed.

#### 4.3.10 Landslide

**Nature:** Landslide is a general term for the dislodging and fall of a mass of soil or rocks along a sloped surface or the dislodged mass itself. The term is used for varying phenomena, including mudflows, mudslides, debris flows, rock falls, rock slides, debris avalanches, debris slides, and slump-earth flows. Landslides may result from a wide range of combinations of natural rock, soil, or artificial fill. The susceptibility of hillside and mountainous areas to landslides depends on variations in geology, topography, vegetation, and weather. Landslides may also occur because of indiscriminate development of sloping ground or the creation of cut-and-fill slopes in areas of unstable or inadequately stable geologic conditions.

Additionally, landslides often occur together with other natural hazards, thereby exacerbating conditions, as described below:

- Shaking due to earthquakes can trigger events ranging from rock falls and topples to massive slides.
- Intense or prolonged precipitation that causes flooding can also saturate slopes and cause failures leading to landslides.
- Wildfires can remove vegetation from hillsides, significantly increasing runoff and landslide potential.
- Landslides into a reservoir can indirectly compromise dam safety; a landslide can even affect the dam itself.

Another type of landslide occurs in areas cut by perennial streams. As floodwaters erode its channel banks, the river has undercut clay-rich sedimentary rocks along its south bank, thereby destabilizing the ground and causing the ground above it to slide.

**History:** In the past twenty years, there have been two notable landslide events in Paso Robles. In 1995 a landslide on a hillside west of Olive Street (just north of Hilltop Drive) slid into the back of two homes after a series of winter storms. The hillside area that slid was approximately 150 wide by 40 feet high, and the slope of the hillside was about 30 percent.

December 22, 2003, numerous small landslides occurred as a result of the San Simeon Earthquake. Particularly noticeable, was a landslide along State Routes 46 and 41, east and west of downtown. The larger surficial slides were observed in the Franciscan Formation along State Route 46. Surficial slides were also observed along River Road in Paso Robles.

**Location:** In general, young sedimentary and poorly consolidated rocks of Pleistocene and Pliocene age in upslope areas are more susceptible to erosion and land sliding than older igneous and sedimentary rocks. Accordingly, as shown in **Appendix B, Figure B-9**, the low hills east and west of the Salinas River within the City limits that are underlain by Pliocene and Pleistocene sands and gravels of the Paso Robles Formation are susceptible to potential landslides. The weak sandstones and shale of the Monterey Formation, which outcrop in the steep elevations west of the Paso Robles, are subject to the greatest landslide potential.

**Extent:** The National Landslide Hazards Map from the USGS classifies areas for their incidence and susceptibility to landslides. **Appendix B, Figure B-9** shows that within the City limits, there is moderate landslide susceptibility of 1.5-15.0 percent over 9.52 square miles. An additional 0.43 miles within the SOI is susceptible to the same hazard. However, the data used to create this map are not suitable for local planning because the data are highly generalized, owing to the small scale and the scarcity of precise landslide information for much of the country. Instead, these data are intended for geographic display and analysis at the national level, and for large regional areas.

**Probability of Future Events:** While Paso Robles has a low to moderate incidence and susceptibility to landslides, the USGS data used to develop these susceptibility maps are not highly localized. Based on past history, it is assumed that the probability of future landslides is low, only occurring during or after severe winter storms or after a large earthquake event (based upon historic events, severe winter storms occur on average every six years, and over the next 30 years there is a 59% probability of an earthquake event).

### 4.3.11 Wildfire

**Nature:** A wildfire is an uncontrolled fire spreading through vegetative fuels, exposing and possibly consuming structures. They often begin unnoticed and spread quickly. Wildfires can be human-caused through acts such as arson, campfires, or the improper burning of debris, or can be caused by natural events such as lightning. Wildfires can be categorized into four types:

- **Wildland fires** occur mainly in areas under federal control, such as national forests and parks, and are fueled primarily by natural vegetation. Generally, development in these areas is nonexistent, except for roads, railroads, power lines, and similar features.
- **Interface or intermix fires** occur in areas where both vegetation and structures provide fuel. These are also referred to as Wildland/Urban Interface (WUI) fires.
- **Firestorms** occur during extreme weather (e.g., high temperatures, low humidity, and high winds) with such intensity that fire suppression is virtually impossible. These events typically burn until the conditions change or the fuel is exhausted.
- **Prescribed fires and prescribed natural fires** are intentionally set or natural fires that are allowed to burn for beneficial purposes.

The following three factors contribute significantly to wildfire behavior and can be used to identify wildfire hazard areas.

- **Topography:** As slope increases, the rate of wildfire spread increases. South-facing slopes are also subject to more solar radiation, making them drier and thereby intensifying wildfire behavior. However, ridge tops may mark the end of wildfire spread because fire spreads more slowly or may even be unable to spread downhill.
- **Fuel:** Wildfires spread based on the type and quantity of available flammable material, referred to as the fuel load. The basic characteristics of fuel include size and shape, arrangement and moisture content.
- **Weather:** The most variable factor affecting wildfire behavior is weather. Important weather variables are temperature, humidity, wind, and lightning. Weather events ranging in scale from localized thunderstorms to large fronts can have major effects on wildfire occurrence and behavior. Extreme weather, such as high temperatures and low humidity, can lead to extreme wildfire activity. By contrast, cooling and higher humidity often signals reduced wildfire occurrence and easier containment. Wind has probably the largest impact on a wildfire's behavior, and is also the most unpredictable. Winds supply the fire with additional oxygen, further dry potential fuel, and push fire across the land at a quicker pace. Also, since the mid-1980s, earlier snowmelt and associated warming due to global climate change has been associated with longer and more severe wildfire seasons in the western United States.

The frequency and severity of wildfires is also dependent upon other hazards, such as lightning, drought, and infestations (e.g., Pine Bark Beetle). These hazards combine with the three other wildfire contributors noted above (topography, fuel, weather) to present an on-going and significant hazard across much of California.

If not promptly controlled, wildfires may grow into an emergency or disaster. Even small fires can threaten lives, resources, and destroy improved properties. It is also important to note that in

In addition to affecting people, wildfires may severely affect livestock and pets. Such events may require the emergency watering/feeding, shelter, evacuation, and even burying of animals.

Wildfires can have serious effects on the local environment, beyond the removal of vegetation. Soil exposed to intense heat may lose its capability to absorb moisture and support life. Exposed soils erode quickly and enhance siltation of rivers and streams, thereby enhancing flood potential, harming aquatic life, and degrading water quality. Lands stripped of vegetation are also subject to increased debris flow hazards, as described above. Wildfires can also greatly affect the air quality of the surrounding area.

**History:** Records from California Department of Forestry and Fire (CalFIRE) show that since 1913, there have been over 700 wildfires in the area (**Appendix B, Figure B-10**). Ten of these fires within a 25-mile radius of Paso Robles city limits have been greater than 10,000 acres (**Table 4-9**). These records also show that only two wildfires have occurred within City limits. In 1994, 200-acres of vegetation burned and in July 2013, 65-acres of vegetation burned before it was contained.

**Table 4-9. Major Fires within Close Proximity to Paso Robles**

Date	Name	Size (Acres)
1996	Highway 58	106,969
1985	Las Pilitas	84,271
1921	Unknown	63,910
1960	Weferling	51,451
1994	Highway 41	50,729
1953	Sam Jones	35,455
1950	Pilitas #1	22,845
1928	Unknown	18,128
1931	Unknown	17,959
1929	Unknown	16,280

Source: CalFIRE, 2013.

**Location:** **Appendix B, Figure B-11** illustrates the wildland fire hazard areas based upon CalFIRE’s Fire Severity Zone Maps. Within the Local Responsibility Area, the central, western, and southern areas of Paso Robles are located within a high fire hazard severity zone while the northeastern portion of the City is located within a moderate fire hazard severity zone. The City is located within close proximity to a State Responsibility Area with a high fire hazard ranking.

**Extent:** CalFIRE’s Fire Severity Zone Maps consider wildland fuels, topography (especially the steepness of the slopes), weather (temperature, humidity, and wind), area burn frequency and severity, and production of burning fire brands (embers) and how far they move, and how receptive the landing site is to new fires. As such, the model shows that 6.40 square miles within the City limits is located within high fire hazard severity area while an additional 3.59 square

miles within the City limits within moderate fire hazard severity area. Within the SOI, 0.54 square miles are located within a high fire hazard severity area.

**Probability of Future Events:** Based previous occurrences, the Central Coast region is likely experience one major (10,000-acre plus) wildfire every 10 years. Smaller wildfires, such as agricultural/grass fires in Paso Robles, are likely to be experienced within this area on an annual basis.

## 5.1 OVERVIEW

A vulnerability analysis predicts the extent of exposure that may result from a hazard event of a given intensity in a given area. The analysis provides quantitative data that may be used to identify and prioritize potential mitigation measures by allowing communities to focus attention on areas with the greatest risk of damage.

This vulnerability analysis consists of the following five steps:

- Asset inventory
- Methodology
- Data limitations
- Exposure analysis
- RL properties
- Summary of impacts

## 5.2 ASSET INVENTORY

Assets that were included in the 2016 LHMP's vulnerability analysis are as follows and shown in **Appendix B, Figures B-11 through B-14B. Table 5-1** lists the specific critical facilities and infrastructure by category, name and location.

- Population of 29,795 within the City limits and an additional 174 people within the SOI
- Residential building stock of 11,427 units within the City limits and an additional 75 units within the SOI
- Critical facilities and infrastructure:
  - Community facilities, including community centers, fairgrounds, parks, and the museum
  - Education facilities, including the community college, an administration building, and the Paso Robles Joint Unified School District schools
  - Emergency response facilities, including police and fire stations
  - Government facilities, including the City Hall, City Hall Annex, City Library, and an administration building
  - Health care facilities, including medical clinics
  - Public Works and Utilities facilities and public utilities, including wastewater facilities, reservoirs, and the landfill and proposed water tank in the City limit exclave
  - Transportation facilities, including the airport, bus and train station, and bridges

Table 5-1. Critical Facilities

Category	Type	Name	Address
Community	Community Center	Paso Robles Library Study Center (First 5 Campus)	3600 Oak St., Suite 101
Community	Community Center	Senior Center	270 Scott St.
Community	Community Center	Veteran's Memorial Building	240 Scott St.
Community	Fairgrounds	Paso Robles Event Center	2198 Riverside Ave.
Community	Park	Barney Schwartz Park	2970 Union Rd.
Community	Park	Centennial Park	600 Nickerson Dr.
Community	Park	City Park & Historical Building	Between 11th and 12 <sup>th</sup> St./Spring and Pine St.
Community	Park	George Stephan Oak Park Community Center	3050 Park St.
Community	Park	Lawrence Moore Park	155 Riverbank Ln.
Community	Park	Paso Robles Municipal Pool	530 28 <sup>th</sup> St.
Community	Park	Robbins Field	6th St. and Park St.
Community	Park	Sherwood Forest	Corner of Scott St. and Creston Rd.
Community	Park	Sherwood Park	Corner of Scott St. and Creston Rd.
Community	Park/Museum	Pioneer Park/Pioneer Museum	2030 Riverside Ave.
Education	Community College	Cuesta College North County Campus	2800 Buena Vista Dr.
Education	District Administration	North County Learning Center	504 28 <sup>th</sup> St.
Education	Paso Robles Joint Unified School District	Bauer-Speck Elementary	401 17th St.
Education	Paso Robles Joint Unified School District	Culinary Arts Academy	1900 Golden Hill Rd.
Education	Paso Robles Joint Unified School District	Daniel Lewis Middle	900 Creston Rd.
Education	Paso Robles Joint Unified School District	George H. Flamson Middle	2405 Spring St.
Education	Paso Robles Joint Unified School District	Georgia Brown Elementary	525 36th St.
Education	Paso Robles Joint Unified School District	Independence High School	812 Niblick Dr.
Education	Paso Robles Joint Unified School District	Kermit King Elementary	700 Schoolhouse Cir.
Education	Paso Robles Joint Unified School District	Liberty High (Continuation)	810 Niblick Rd.



Table 5-1. Critical Facilities

Category	Type	Name	Address
Education	Paso Robles Joint Unified School District	Little Pepers Special Education	1804 Chestnut St.
Education	Paso Robles Joint Unified School District	Paso Robles High	801 Niblick Rd.
Education	Paso Robles Joint Unified School District	Paso Robles Independent Study Center	2405 Spring St.
Education	Paso Robles Joint Unified School District	Pat Butler Elementary	700 Nicklaus St.
Education	Paso Robles Joint Unified School District	Virginia Peterson Elementary	2501 Beechwood Dr.
Education	Paso Robles Joint Unified School District	Winifred Pifer Elementary	1350 Creston Rd.
Emergency Response	Fire Station	Paso Robles Fire Department Fire Station 1 (Public Safety Center)	900 Park St.
Emergency Response	Fire Station	Paso Robles Fire Department, Fire Station 3 (Airport Fire Station)	3125 Buena Vista Dr.
Emergency Response	Fire Station	Paso Robles Fire Dept. Fire Station 2	235 Santa Fe Ave.
Emergency Response	Police Station	Paso Robles Police Department (Public Safety Center)	900 Park St.
Government	Government	City Hall and City Library	1000 Spring St.
Government	Government	City Hall Annex, Administrative Services	821 Pine St.
Government	Government	Maintenance Division	625 Riverside Dr.
Health Care	Clinic	Community Health Center	416 Spring St., Ste. 201
Health Care	Clinic	Community Health Centers N. County Pediatrics	500 First St.
Public Works and Utilities	Administrative	Paso Robles Water Yard	1240 Paso Robles St.
Public Works and Utilities	Landfill	Paso Robles Landfill	9000 Highway 46
Public Works and Utilities	Proposed Reservoir	Proposed Paso Robles Water Tank	Cumbre Rd. & Ladera Ln.
Public Works and Utilities	Reservoir	Paso Robles Water Reservoir (West Side)	21st St.
Public Works and Utilities	Reservoir	Paso Robles Water Tank (Golden Hill Reservoir)	1198 Rolling Hills Rd.
Public Works and Utilities	Substation	PG&E Substation	Niblick Rd & S. River St.

**Table 5-1. Critical Facilities**

Category	Type	Name	Address
Public Works and Utilities	Wastewater Treatment Plant	City of Paso Robles Wastewater Division Treatment Plant	3200 Sulphur Springs Rd.
Transportation	Airport	Paso Robles Municipal Airport Terminal	4900 Wing Wy.
Transportation	Airport Complex	City of Paso Robles Airport Complex	4912 Wing Wy.
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Not Applicable
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Not Applicable
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Not Applicable
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Not Applicable
Transportation	Bridge	Niblick Road Salinas River Bridge and Highway 101 Overpass	Not Applicable
Transportation	Bridge	13th Street Bridge Highway 101 Overpass	Not Applicable
Transportation	Bridge	13th Street Salinas River Bridge	Not Applicable
Transportation	Bridge	24th St Bridge	Not Applicable
Transportation	Bridge	Ramp/Connector 101 - Bridge	Not Applicable
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Not Applicable
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Not Applicable
Transportation	Bridge	Ramp/Connector 46 - Bridge	Not Applicable
Transportation	Bridge	State Route 46 Huerhuero Creek Bridge Westbound	Not Applicable
Transportation	Bridge	State Route 46 Salinas River Bridge	Not Applicable
Transportation	Bridge	State Route 46 Huerhuero Creek Bridge Eastbound	Not Applicable
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Not Applicable
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Not Applicable
Transportation	Bus and Train Station	North County Transportation Center	800 Pine St.

**5.3 METHODOLOGY**

A conservative exposure-level analysis was conducted to assess the risks associated with the identified hazards. This analysis is a simplified assessment of the potential effects of the hazards on values at risk without consideration of the probability or level of damage.

Population was derived from 2010 Census information, then a combination of spatial overlay and proportional analysis was used to determine the number of people located where hazards are likely to occur.

Using 2010 Census block level residential building information, a combination of spatial overlay and proportional analysis was used to determine the number of residential buildings located where hazards are likely to occur.

Parcel boundaries of the critical facilities were compared to locations where hazards are likely to occur. If any portion of an asset fell within a hazard area, it was counted as impacted. In some instances, the parcel boundary of a critical facility fell within two hazard area categories. In such case, the critical facility is listed for each hazard area category.

For each critical facility located within a hazard area, exposure was calculated by assuming the worst-case scenario (that is, the asset would be completely destroyed and would have to be replaced). The aggregate exposure, in terms of replacement value or insurance coverage, for each category of structure or facility was calculated. A similar analysis was used to evaluate the proportion of the population at risk. However, the analysis simply represents the number of people at risk; no estimate of the number of potential injuries or deaths was prepared.

## 5.4 DATA LIMITATIONS

The vulnerability estimates provided herein use the best data currently available, and the methodologies applied result in an approximation of risk. These estimates may be used to understand relative risk from hazards and potential losses. However, uncertainties are inherent in any loss estimation methodology, arising in part from incomplete scientific knowledge concerning hazards and their effects on the built environment as well as the use of approximations and simplifications that are necessary for a comprehensive analysis.

Additionally, replacement values and/or insured values are not included for residential buildings and critical facilities due to incomplete data.

Due to a combination of a lack of adequate information, the lack of a standard methodology for a quantitative vulnerability analysis, and limited GIS capabilities, vulnerability results have not been prepared for the following hazards: drought; extreme heat; and freeze/extreme cold. Thus, a quantitative vulnerability analysis has been prepared for the following hazards:

- Dam failure inundation
- Earthquake (ground shaking)
- Expansive soils
- Hazardous materials (transportation corridors and fixed incidents)
- Land subsidence
- Landslide
- Wildfire

**5.5 EXPOSURE ANALYSIS**

Vulnerable population and existing structures, including residential buildings and critical facilities, at risk to each identified hazard are listed in **Tables 5-2 through 5-11**.

**Table 5-2. Exposure Analysis – Population and Residential Buildings**

Hazard	Hazard Area	Jurisdiction	Population Count	Residential Building Count
Dam Failure Inundation	Salinas Dam Inundation	City Limits	160	54
	Salinas Dam Inundation	SOI	3	1
Earthquake (Ground Shaking)	High Ground Shaking	City Limits	15,103	5,933
	High Ground Shaking	SOI	131	56
	Extreme Ground Shaking	City Limits	14,692	5,494
	Extreme Ground Shaking	SOI	43	19
Expansive Soils	Moderate Shrink-Swell	City Limits	13,076	5,255
	Moderate Shrink-Swell	SOI	120	51
	High Shrink-Swell	City Limits	4,267	1,430
Flood	500-Year Floodplain	City Limits	18,061	6,912
	500-Year Floodplain	SOI	1	0
	100-Year Floodplain	City Limits	496	188
	100-Year Floodplain	SOI	6	3
Hazardous Materials	Transportation Corridor – ¼ Mile	City Limits	5,965	2,128
	Transportation Corridor – ¼ Mile	SOI	32	14
	EHS Facility – ¼ Mile	City Limits	1,830	780
	EHS Facility – ¼ Mile	SOI	6	2
Land Subsidence	High Land Subsidence Susceptibility	City Limits	3,541	1,267
Landslide	Moderate Landslide Susceptibility	City Limits	13,767	5,169
	Moderate Landslide Susceptibility	SOI	122	52
	Very High Liquefaction Susceptibility	City Limits	129	45
	Very High Liquefaction Susceptibility	SOI	2	1
Wildfire Severity	Moderate Wildfire Severity Zone	City Limits	4,475	1,754
	Moderate Wildfire Severity Zone	SOI	1	0
	High Wildfire Severity Zone*	SOI	115	49

**Table 5-3. Exposure Analysis – Critical Facilities  
Dam Failure Inundation**

Category	Type	Name	Hazard Area
Community	Park	Lawrence Moore Park	Salinas Dam Inundation
Public Works and Utilities	Administrative	Paso Robles Water Yard	Salinas Dam Inundation
Public Works and Utilities	Wastewater Treatment Plant	City of Paso Robles Wastewater Division Treatment Plant	Salinas Dam Inundation
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Salinas Dam Inundation
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Salinas Dam Inundation
Transportation	Bridge	Niblick Road Salinas River Bridge and Highway 101 Overpass	Salinas Dam Inundation
Transportation	Bridge	13th Street Salinas River Bridge	Salinas Dam Inundation
Transportation	Bridge	Ramp/Connector 101 - Bridge	Salinas Dam Inundation
Transportation	Bridge	Ramp/Connector 46 - Bridge	Salinas Dam Inundation
Transportation	Bridge	State Route 46 Salinas River Bridge	Salinas Dam Inundation

**Table 5-4. Exposure Analysis – Critical Facilities  
Earthquake: Ground Shaking**

Category	Type	Name	Hazard Area
Community	Community Center	Paso Robles Library Study Center (First 5 Campus)	Extreme Ground Shaking
Community	Community Center	Senior Center	Extreme Ground Shaking
Community	Community Center	Veteran's Memorial Building	Extreme Ground Shaking
Community	Fairgrounds	Paso Robles Event Center	Extreme Ground Shaking
Community	Park	Barney Schwartz Park	High Ground Shaking
Community	Park	Centennial Park	High Ground Shaking
Community	Park	Paso Robles Municipal Pool	High Ground Shaking
Community	Park	Barney Schwartz Park	Extreme Ground Shaking
Community	Park	City Park & Historical Building	Extreme Ground Shaking
Community	Park	George Stephan Oak Park Community Center	Extreme Ground Shaking
Community	Park	Lawrence Moore Park	Extreme Ground Shaking
Community	Park	Paso Robles Municipal Pool	Extreme Ground Shaking
Community	Park	Robbins Field	Extreme Ground Shaking
Community	Park	Sherwood Forest	Extreme Ground Shaking
Community	Park	Sherwood Park	Extreme Ground Shaking
Community	Park/Museum	Pioneer Park/Pioneer Museum	Extreme Ground Shaking
Education	Community College	Cuesta College North County Campus	Extreme Ground Shaking
Education	District Administration	North County Learning Center	High Ground Shaking
Education	Paso Robles Joint Unified School District	Bauer-Speck Elementary	High Ground Shaking
Education	Paso Robles Joint Unified School District	Daniel Lewis Middle	High Ground Shaking
Education	Paso Robles Joint Unified School District	George H. Flamson Middle	High Ground Shaking
Education	Paso Robles Joint Unified School District	Georgia Brown Elementary	High Ground Shaking
Education	Paso Robles Joint Unified School District	Little Pepers Special Education	High Ground Shaking
Education	Paso Robles Joint Unified School District	Paso Robles High	High Ground Shaking
Education	Paso Robles Joint Unified School District	Pat Butler Elementary	High Ground Shaking

**Table 5-4. Exposure Analysis – Critical Facilities  
Earthquake: Ground Shaking**

Category	Type	Name	Hazard Area
Education	Paso Robles Joint Unified School District	Virginia Peterson Elementary	High Ground Shaking
Education	Paso Robles Joint Unified School District	Winifred Pifer Elementary	High Ground Shaking
Education	Paso Robles Joint Unified School District	Culinary Arts Academy	Extreme Ground Shaking
Education	Paso Robles Joint Unified School District	George H. Flamson Middle	Extreme Ground Shaking
Education	Paso Robles Joint Unified School District	Georgia Brown Elementary	Extreme Ground Shaking
Education	Paso Robles Joint Unified School District	Independence High School	Extreme Ground Shaking
Education	Paso Robles Joint Unified School District	Kermit King Elementary	Extreme Ground Shaking
Education	Paso Robles Joint Unified School District	Liberty High (Continuation)	Extreme Ground Shaking
Education	Paso Robles Joint Unified School District	Paso Robles High	Extreme Ground Shaking
Education	Paso Robles Joint Unified School District	Paso Robles Independent Study Center	Extreme Ground Shaking
Education	Paso Robles Joint Unified School District	Winifred Pifer Elementary	Extreme Ground Shaking
Emergency Response	Fire Station	Paso Robles Fire Department Fire Station 1 (Public Safety Center)	Extreme Ground Shaking
Emergency Response	Fire Station	Paso Robles Fire Department, Fire Station 3 (Airport Fire Station)	Extreme Ground Shaking
Emergency Response	Fire Station	Paso Robles Fire Dept. Fire Station 2	Extreme Ground Shaking
Emergency Response	Police Station	Paso Robles Police Department (Public Safety Center)	Extreme Ground Shaking
Government	Government	City Hall and City Library	Extreme Ground Shaking
Government	Government	City Hall Annex, Administrative Services	Extreme Ground Shaking
Government	Government	Maintenance Division	Extreme Ground Shaking
Health Care	Clinic	Community Health Centers N. County Pediatrics	High Ground Shaking
Health Care	Clinic	Community Health Center	Extreme Ground Shaking

**Table 5-4. Exposure Analysis – Critical Facilities  
Earthquake: Ground Shaking**

Category	Type	Name	Hazard Area
Health Care	Clinic	Community Health Centers N. County Pediatrics	Extreme Ground Shaking
Public Works and Utilities	Administrative	Paso Robles Water Yard	Extreme Ground Shaking
Public Works and Utilities	Landfill	Paso Robles Landfill	Extreme Ground Shaking
Public Works and Utilities	Proposed Reservoir	Proposed Paso Robles Water Tank	High Ground Shaking
Public Works and Utilities	Reservoir	Paso Robles Water Reservoir (West Side)	High Ground Shaking
Public Works and Utilities	Reservoir	Paso Robles Water Tank (Golden Hill Reservoir)	High Ground Shaking
Public Works and Utilities	Substation	PG&E Substation	High Ground Shaking
Public Works and Utilities	Substation	PG&E Substation	Extreme Ground Shaking
Public Works and Utilities	Wastewater Treatment Plant	City of Paso Robles Wastewater Division Treatment Plant	Extreme Ground Shaking
Transportation	Airport	Paso Robles Municipal Airport Terminal	Extreme Ground Shaking
Transportation	Airport Complex	City of Paso Robles Airport Complex	High Ground Shaking
Transportation	Airport Complex	City of Paso Robles Airport Complex	Extreme Ground Shaking
Transportation	Bridge	State Route 46 Huerhuero Creek Bridge Westbound	High Ground Shaking
Transportation	Bridge	State Route 46 Huerhuero Creek Bridge Eastbound	High Ground Shaking
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Extreme Ground Shaking
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Extreme Ground Shaking
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Extreme Ground Shaking
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Extreme Ground Shaking
Transportation	Bridge	Niblick Road Salinas River Bridge and Highway 101 Overpass	Extreme Ground Shaking
Transportation	Bridge	13th Street Bridge Highway 101 Overpass	Extreme Ground Shaking
Transportation	Bridge	13th Street Salinas River Bridge	Extreme Ground Shaking



**Table 5-4. Exposure Analysis – Critical Facilities  
Earthquake: Ground Shaking**

Category	Type	Name	Hazard Area
Transportation	Bridge	24th St Bridge	Extreme Ground Shaking
Transportation	Bridge	Ramp/Connector 101 - Bridge	Extreme Ground Shaking
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Extreme Ground Shaking
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Extreme Ground Shaking
Transportation	Bridge	Ramp/Connector 46 - Bridge	Extreme Ground Shaking
Transportation	Bridge	State Route 46 Huerhuero Creek Bridge Westbound	Extreme Ground Shaking
Transportation	Bridge	State Route 46 Salinas River Bridge	Extreme Ground Shaking
Transportation	Bridge	State Route 46 Huerhuero Creek Bridge Eastbound	Extreme Ground Shaking
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Extreme Ground Shaking
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Extreme Ground Shaking
Transportation	Bus and Train Station	North County Transportation Center	Extreme Ground Shaking

**Table 5-5. Exposure Analysis – Critical Facilities  
Expansive Soils**

Category	Category	Category	Category
Community	Community Center	Paso Robles Library Study Center (First 5 Campus)	Moderate Shrink-Swell
Community	Community Center	Senior Center	High Shrink-Swell
Community	Community Center	Veteran's Memorial Building	High Shrink-Swell
Community	Park	Centennial Park	Moderate Shrink-Swell
Community	Park	City Park & Historical Building	Moderate Shrink-Swell
Community	Park	George Stephan Oak Park Community Center	Moderate Shrink-Swell
Community	Park	Paso Robles Municipal Pool	Moderate Shrink-Swell
Community	Park	Robbins Field	Moderate Shrink-Swell
Community	Park	Sherwood Forest	High Shrink-Swell
Community	Park	Sherwood Park	High Shrink-Swell
Education	Community College	Cuesta College North County Campus	Moderate Shrink-Swell
Education	District Administration	North County Learning Center	Moderate Shrink-Swell
Education	Paso Robles Joint Unified School District	Bauer-Speck Elementary	Moderate Shrink-Swell
Education	Paso Robles Joint Unified School District	Daniel Lewis Middle	Moderate Shrink-Swell
Education	Paso Robles Joint Unified School District	George H. Flamson Middle	Moderate Shrink-Swell
Education	Paso Robles Joint Unified School District	Georgia Brown Elementary	Moderate Shrink-Swell
Education	Paso Robles Joint Unified School District	Kermit King Elementary	Moderate Shrink-Swell
Education	Paso Robles Joint Unified School District	Little Pepers Special Education	Moderate Shrink-Swell
Education	Paso Robles Joint Unified School District	Paso Robles High	Moderate Shrink-Swell
Education	Paso Robles Joint Unified School District	Paso Robles Independent Study Center	Moderate Shrink-Swell
Education	Paso Robles Joint Unified School District	Winifred Pifer Elementary	Moderate Shrink-Swell
Education	Paso Robles Joint Unified School District	Daniel Lewis Middle	High Shrink-Swell
Education	Paso Robles Joint Unified School District	Independence High School	High Shrink-Swell

**Table 5-5. Exposure Analysis – Critical Facilities  
Expansive Soils**

Category	Category	Category	Category
Education	Paso Robles Joint Unified School District	Liberty High (Continuation)	High Shrink-Swell
Education	Paso Robles Joint Unified School District	Paso Robles High	High Shrink-Swell
Education	Paso Robles Joint Unified School District	Winifred Pifer Elementary	High Shrink-Swell
Emergency Response	Fire Station	Paso Robles Fire Department Fire Station 1 (Public Safety Center)	Moderate Shrink-Swell
Emergency Response	Fire Station	Paso Robles Fire Department, Fire Station 3 (Airport Fire Station)	Moderate Shrink-Swell
Emergency Response	Fire Station	Paso Robles Fire Dept. Fire Station 2	Moderate Shrink-Swell
Emergency Response	Police Station	Paso Robles Police Department (Public Safety Center)	Moderate Shrink-Swell
Government	Government	City Hall and City Library	Moderate Shrink-Swell
Government	Government	City Hall Annex, Administrative Services	Moderate Shrink-Swell
Government	Government	Maintenance Division	Moderate Shrink-Swell
Health Care	Clinic	Community Health Center	Moderate Shrink-Swell
Health Care	Clinic	Community Health Centers N. County Pediatrics	Moderate Shrink-Swell
Public Works and Utilities	Landfill	Paso Robles Landfill	Moderate Shrink-Swell
Public Works and Utilities	Reservoir	Paso Robles Water Reservoir (West Side)	Moderate Shrink-Swell
Public Works and Utilities	Reservoir	Paso Robles Water Tank (Golden Hill Reservoir)	Moderate Shrink-Swell
Public Works and Utilities	Reservoir	Paso Robles Water Tank (Golden Hill Reservoir)	High Shrink-Swell
Public Works and Utilities	Substation	PG&E Substation	Moderate Shrink-Swell
Public Works and Utilities	Wastewater Treatment Plant	City of Paso Robles Wastewater Division Treatment Plant	Moderate Shrink-Swell
Transportation	Airport Complex	City of Paso Robles Airport Complex	Moderate Shrink-Swell
Transportation	Airport Complex	City of Paso Robles Airport Complex	High Shrink-Swell

**Table 5-5. Exposure Analysis – Critical Facilities  
Expansive Soils**

Category	Category	Category	Category
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Moderate Shrink-Swell
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Moderate Shrink-Swell
Transportation	Bridge	Niblick Road Salinas River Bridge and Highway 101 Overpass	Moderate Shrink-Swell
Transportation	Bridge	13th Street Salinas River Bridge	Moderate Shrink-Swell
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Moderate Shrink-Swell
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Moderate Shrink-Swell
Transportation	Bus and Train Station	North County Transportation Center	Moderate Shrink-Swell

**Table 5-6. Exposure Analysis – Critical Facilities  
Flood**

Category	Type	Name	Hazard Area
Community	Community Center	Paso Robles Library Study Center (First 5 Campus)	500-Year Floodplain
Community	Community Center	Senior Center	500-Year Floodplain
Community	Community Center	Veteran's Memorial Building	500-Year Floodplain
Community	Community Center	Senior Center	100-Year Floodplain
Community	Community Center	Veteran's Memorial Building	100-Year Floodplain
Community	Fairgrounds	Paso Robles Event Center	500-Year Floodplain
Community	Fairgrounds	Paso Robles Event Center	100-Year Floodplain
Community	Park	Centennial Park	500-Year Floodplain
Community	Park	City Park & Historical Building	500-Year Floodplain
Community	Park	George Stephan Oak Park Community Center	500-Year Floodplain
Community	Park	Lawrence Moore Park	500-Year Floodplain
Community	Park	Paso Robles Municipal Pool	500-Year Floodplain
Community	Park	Robbins Field	500-Year Floodplain
Community	Park	Sherwood Forest	500-Year Floodplain
Community	Park	Sherwood Park	500-Year Floodplain
Community	Park	Barney Schwartz Park	100-Year Floodplain
Community	Park	Lawrence Moore Park	100-Year Floodplain
Community	Park	Sherwood Forest	100-Year Floodplain
Community	Park	Sherwood Park	100-Year Floodplain
Community	Park/Museum	Pioneer Park/Pioneer Museum	500-Year Floodplain
Community	Park/Museum	Pioneer Park/Pioneer Museum	100-Year Floodplain
Education	District Administration	North County Learning Center	500-Year Floodplain
Education	Paso Robles Joint Unified School District	Bauer-Speck Elementary	500-Year Floodplain
Education	Paso Robles Joint Unified School District	Daniel Lewis Middle	500-Year Floodplain
Education	Paso Robles Joint Unified School District	George H. Flamson Middle	500-Year Floodplain
Education	Paso Robles Joint Unified School District	Georgia Brown Elementary	500-Year Floodplain
Education	Paso Robles Joint Unified School District	Independence High School	500-Year Floodplain

**Table 5-6. Exposure Analysis – Critical Facilities  
Flood**

Category	Type	Name	Hazard Area
Education	Paso Robles Joint Unified School District	Liberty High (Continuation)	500-Year Floodplain
Education	Paso Robles Joint Unified School District	Little Peppers Special Education	500-Year Floodplain
Education	Paso Robles Joint Unified School District	Paso Robles High	500-Year Floodplain
Education	Paso Robles Joint Unified School District	Paso Robles Independent Study Center	500-Year Floodplain
Education	Paso Robles Joint Unified School District	Pat Butler Elementary	500-Year Floodplain
Education	Paso Robles Joint Unified School District	Winifred Pifer Elementary	500-Year Floodplain
Emergency Response	Fire Station	Paso Robles Fire Department Fire Station 1 (Public Safety Center)	500-Year Floodplain
Emergency Response	Fire Station	Paso Robles Fire Dept. Fire Station 2	500-Year Floodplain
Emergency Response	Police Station	Paso Robles Police Department (Public Safety Center)	500-Year Floodplain
Government	Government	City Hall and City Library	500-Year Floodplain
Government	Government	City Hall Annex, Administrative Services	500-Year Floodplain
Government	Government	Maintenance Division	500-Year Floodplain
Health Care	Clinic	Community Health Center	500-Year Floodplain
Health Care	Clinic	Community Health Centers N. County Pediatrics	500-Year Floodplain
Public Works and Utilities	Administrative	Paso Robles Water Yard	500-Year Floodplain
Public Works and Utilities	Administrative	Paso Robles Water Yard	100-Year Floodplain
Public Works and Utilities	Reservoir	Paso Robles Water Tank (Golden Hill Reservoir)	500-Year Floodplain
Public Works and Utilities	Substation	PG&E Substation	500-Year Floodplain
Public Works and Utilities	Wastewater Treatment Plant	City of Paso Robles Wastewater Division Treatment Plant	500-Year Floodplain
Public Works and Utilities	Wastewater Treatment Plant	City of Paso Robles Wastewater Division Treatment Plant	100-Year Floodplain
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	500-Year Floodplain

**Table 5-6. Exposure Analysis – Critical Facilities  
Flood**

Category	Type	Name	Hazard Area
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	500-Year Floodplain
Transportation	Bridge	Niblick Road Salinas River Bridge and Highway 101 Overpass	500-Year Floodplain
Transportation	Bridge	13th Street Bridge Highway 101 Overpass	500-Year Floodplain
Transportation	Bridge	13th Street Salinas River Bridge	500-Year Floodplain
Transportation	Bridge	24th St Bridge	500-Year Floodplain
Transportation	Bridge	Ramp/Connector 101 - Bridge	500-Year Floodplain
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	500-Year Floodplain
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	500-Year Floodplain
Transportation	Bridge	Ramp/Connector 46 - Bridge	500-Year Floodplain
Transportation	Bridge	State Route 46 Salinas River Bridge	500-Year Floodplain
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	500-Year Floodplain
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	500-Year Floodplain
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	100-Year Floodplain
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	100-Year Floodplain
Transportation	Bridge	Niblick Road Salinas River Bridge and Highway 101 Overpass	100-Year Floodplain
Transportation	Bridge	13th Street Bridge Highway 101 Overpass	100-Year Floodplain
Transportation	Bridge	13th Street Salinas River Bridge	100-Year Floodplain
Transportation	Bridge	Ramp/Connector 101 - Bridge	100-Year Floodplain
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	100-Year Floodplain
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	100-Year Floodplain
Transportation	Bridge	Ramp/Connector 46 - Bridge	100-Year Floodplain
Transportation	Bridge	State Route 46 Huerhuero Creek Bridge Westbound	100-Year Floodplain
Transportation	Bridge	State Route 46 Salinas River Bridge	100-Year Floodplain
Transportation	Bridge	State Route 46 Huerhuero Creek Bridge Eastbound	100-Year Floodplain
Transportation	Bus and Train Station	North County Transportation Center	500-Year Floodplain

**Table 5-7. Exposure Analysis – Critical Facilities  
Hazardous Materials (Transportation Corridor)**

Category	Type	Name	Hazard Area
Community	Community Center	Paso Robles Library Study Center (First 5 Campus)	EHS Transportation Corridor – ¼ Mile
Community	Fairgrounds	Paso Robles Event Center	EHS Transportation Corridor – ¼ Mile
Community	Park	Barney Schwartz Park	EHS Transportation Corridor – ¼ Mile
Community	Park	City Park & Historical Building	EHS Transportation Corridor – ¼ Mile
Community	Park	George Stephan Oak Park Community Center	EHS Transportation Corridor – ¼ Mile
Community	Park	Lawrence Moore Park	EHS Transportation Corridor – ¼ Mile
Community	Park	Paso Robles Municipal Pool	EHS Transportation Corridor – ¼ Mile
Community	Park	Robbins Field	EHS Transportation Corridor – ¼ Mile
Community	Park/Museum	Pioneer Park/Pioneer Museum	EHS Transportation Corridor – ¼ Mile
Education	Paso Robles Joint Unified School District	George H. Flamson Middle	EHS Transportation Corridor – ¼ Mile
Education	Paso Robles Joint Unified School District	Georgia Brown Elementary	EHS Transportation Corridor – ¼ Mile
Education	Paso Robles Joint Unified School District	Paso Robles Independent Study Center	EHS Transportation Corridor – ¼ Mile
Emergency Response	Fire Station	Paso Robles Fire Department Fire Station 1 (Public Safety Center)	EHS Transportation Corridor – ¼ Mile
Emergency Response	Police Station	Paso Robles Police Department (Public Safety Center)	EHS Transportation Corridor – ¼ Mile
Government	Government	City Hall and City Library	EHS Transportation Corridor – ¼ Mile
Government	Government	City Hall Annex, Administrative Services	EHS Transportation Corridor – ¼ Mile
Government	Government	Maintenance Division	EHS Transportation Corridor – ¼ Mile
Health Care	Clinic	Community Health Center	EHS Transportation Corridor – ¼ Mile
Health Care	Clinic	Community Health Centers N. County Pediatrics	EHS Transportation Corridor – ¼ Mile



**Table 5-7. Exposure Analysis – Critical Facilities  
Hazardous Materials (Transportation Corridor)**

Category	Type	Name	Hazard Area
Public Works and Utilities	Administrative	Paso Robles Water Yard	EHS Transportation Corridor – ¼ Mile
Public Works and Utilities	Landfill	Paso Robles Landfill	EHS Transportation Corridor – ¼ Mile
Public Works and Utilities	Wastewater Treatment Plant	City of Paso Robles Wastewater Division Treatment Plant	EHS Transportation Corridor – ¼ Mile
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	EHS Transportation Corridor – ¼ Mile
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	EHS Transportation Corridor – ¼ Mile
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	EHS Transportation Corridor – ¼ Mile
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	EHS Transportation Corridor – ¼ Mile
Transportation	Bridge	Niblick Road Salinas River Bridge and Highway 101 Overpass	EHS Transportation Corridor – ¼ Mile
Transportation	Bridge	13th Street Bridge Highway 101 Overpass	EHS Transportation Corridor – ¼ Mile
Transportation	Bridge	13th Street Salinas River Bridge	EHS Transportation Corridor – ¼ Mile
Transportation	Bridge	24th St Bridge	EHS Transportation Corridor – ¼ Mile
Transportation	Bridge	Ramp/Connector 101 - Bridge	EHS Transportation Corridor – ¼ Mile
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	EHS Transportation Corridor – ¼ Mile
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	EHS Transportation Corridor – ¼ Mile
Transportation	Bridge	Ramp/Connector 46 - Bridge	EHS Transportation Corridor – ¼ Mile
Transportation	Bridge	State Route 46 Huerhuero Creek Bridge Westbound	EHS Transportation Corridor – ¼ Mile
Transportation	Bridge	State Route 46 Salinas River Bridge	EHS Transportation Corridor – ¼ Mile
Transportation	Bridge	State Route 46 Huerhuero Creek Bridge Eastbound	EHS Transportation Corridor – ¼ Mile
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	EHS Transportation Corridor – ¼ Mile

**Table 5-7. Exposure Analysis – Critical Facilities  
Hazardous Materials (Transportation Corridor)**

Category	Type	Name	Hazard Area
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	EHS Transportation Corridor – ¼ Mile
Transportation	Bus and Train Station	North County Transportation Center	EHS Transportation Corridor – ¼ Mile
Community	Community Center	Paso Robles Library Study Center (First 5 Campus)	EHS Transportation Corridor – ¼ Mile

**Table 5-8. Exposure Analysis – Critical Facilities  
Hazardous Materials (Fixed Incidents)**

Category	Type	Name	Hazard Area
Community	Community Center	Senior Center	EHS Facility – ¼ Mile
Community	Community Center	Veteran's Memorial Building	EHS Facility – ¼ Mile
Community	Park	City Park & Historical Building	EHS Facility – ¼ Mile
Community	Park	Sherwood Forest	EHS Facility – ¼ Mile
Community	Park	Sherwood Park	EHS Facility – ¼ Mile
Education	Paso Robles Joint Unified School District	Bauer-Speck Elementary	EHS Facility – ¼ Mile
Education	Paso Robles Joint Unified School District	George H. Flamson Middle	EHS Facility – ¼ Mile
Emergency Response	Fire Station	Paso Robles Fire Department, Fire Station 3 (Airport Fire Station)	EHS Facility – ¼ Mile
Public Works and Utilities	Substation	PG&E Substation	EHS Facility – ¼ Mile
Transportation	Airport	Paso Robles Municipal Airport Terminal	EHS Facility – ¼ Mile
Transportation	Airport Complex	City of Paso Robles Airport Complex	EHS Facility – ¼ Mile
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	EHS Facility – ¼ Mile
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	EHS Facility – ¼ Mile
Transportation	Bridge	Niblick Road Salinas River Bridge and Highway 101 Overpass	EHS Facility – ¼ Mile

**Table 5-9. Exposure Analysis – Critical Facilities  
Land Subsidence**

Category	Type	Name	Hazard Area
Community	Community Center	Senior Center	High Land Subsidence Susceptibility
Community	Community Center	Veteran's Memorial Building	High Land Subsidence Susceptibility
Community	Park	Barney Schwartz Park	High Land Subsidence Susceptibility
Community	Park	Sherwood Forest	High Land Subsidence Susceptibility
Community	Park	Sherwood Park	High Land Subsidence Susceptibility
Education	Community College	Cuesta College North County Campus	High Land Subsidence Susceptibility
Education	Paso Robles Joint Unified School District	Daniel Lewis Middle	High Land Subsidence Susceptibility
Education	Paso Robles Joint Unified School District	Virginia Peterson Elementary	High Land Subsidence Susceptibility
Public Works and Utilities	Landfill	Paso Robles Landfill	High Land Subsidence Susceptibility
Transportation	Airport Complex	City of Paso Robles Airport Complex	High Land Subsidence Susceptibility
Transportation	Bridge	State Route 46 Huerhuero Creek Bridge Westbound	High Land Subsidence Susceptibility
Transportation	Bridge	State Route 46 Huerhuero Creek Bridge Eastbound	High Land Subsidence Susceptibility

**Table 5-10. Exposure Analysis – Critical Facilities  
Landslide**

Category	Type	Name	Hazard Area
Community	Park	Barney Schwartz Park	Moderate Landslide Susceptibility
Community	Park	Centennial Park	Moderate Landslide Susceptibility
Education	Paso Robles Joint Unified School District	Culinary Arts Academy	Moderate Landslide Susceptibility
Education	Paso Robles Joint Unified School District	Daniel Lewis Middle	Moderate Landslide Susceptibility
Education	Paso Robles Joint Unified School District	Georgia Brown Elementary	Moderate Landslide Susceptibility
Education	Paso Robles Joint Unified School District	Independence High School	Moderate Landslide Susceptibility
Education	Paso Robles Joint Unified School District	Kermit King Elementary	Moderate Landslide Susceptibility
Education	Paso Robles Joint Unified School District	Liberty High (Continuation)	Moderate Landslide Susceptibility
Education	Paso Robles Joint Unified School District	Paso Robles High	Moderate Landslide Susceptibility
Education	Paso Robles Joint Unified School District	Pat Butler Elementary	Moderate Landslide Susceptibility

**Table 5-11. Exposure Analysis – Critical Facilities  
Wildfire**

Category	Type	Name	Hazard Area
Community	Community Center	Paso Robles Library Study Center (First 5 Campus)	Moderate Severity Zone
Community	Community Center	Paso Robles Library Study Center (First 5 Campus)	High Fire Severity Zone
Community	Fairgrounds	Paso Robles Event Center	Moderate Severity Zone
Community	Fairgrounds	Paso Robles Event Center	High Fire Severity Zone
Community	Park	Centennial Park	Moderate Severity Zone
Community	Park	Lawrence Moore Park	Moderate Severity Zone
Community	Park	Paso Robles Municipal Pool	Moderate Severity Zone
Community	Park	Barney Schwartz Park	High Fire Severity Zone
Education	Community College	Cuesta College North County Campus	High Fire Severity Zone
Education	District Administration	North County Learning Center	High Fire Severity Zone
Education	Paso Robles Joint Unified School District	North County Learning Center	Moderate Severity Zone
Education	Paso Robles Joint Unified School District	Bauer-Speck Elementary	Moderate Severity Zone
Education	Paso Robles Joint Unified School District	Culinary Arts Academy	Moderate Severity Zone
Education	Paso Robles Joint Unified School District	George H. Flamson Middle	Moderate Severity Zone
Education	Paso Robles Joint Unified School District	Kermit King Elementary	Moderate Severity Zone
Education	Paso Robles Joint Unified School District	Little Pepers Special Education	Moderate Severity Zone
Education	Paso Robles Joint Unified School District	Paso Robles High	Moderate Severity Zone
Education	Paso Robles Joint Unified School District	Pat Butler Elementary	Moderate Severity Zone
Education	Paso Robles Joint Unified School District	Virginia Peterson Elementary	Moderate Severity Zone
Education	Paso Robles Joint Unified School District	Winifred Pifer Elementary	Moderate Severity Zone
Education	Paso Robles Joint Unified School District	Bauer-Speck Elementary	High Fire Severity Zone
Education	Paso Robles Joint Unified School District	George H. Flamson Middle	High Fire Severity Zone

**Table 5-11. Exposure Analysis – Critical Facilities  
Wildfire**

Category	Type	Name	Hazard Area
Education	Paso Robles Joint Unified School District	Georgia Brown Elementary	High Fire Severity Zone
Education	Paso Robles Joint Unified School District	Pat Butler Elementary	High Fire Severity Zone
Education	Paso Robles Joint Unified School District	Virginia Peterson Elementary	High Fire Severity Zone
Education	Paso Robles Joint Unified School District	Winifred Pifer Elementary	High Fire Severity Zone
Health Care	Clinic	Community Health Centers N. County Pediatrics	High Fire Severity Zone
Public Works and Utilities	Landfill	Paso Robles Landfill	Moderate Severity Zone
Public Works and Utilities	Landfill	Paso Robles Landfill	High Fire Severity Zone*
Public Works and Utilities	Landfill	Paso Robles Landfill	High Fire Severity Zone
Public Works and Utilities	Proposed Reservoir	Proposed Paso Robles Water Tank	High Fire Severity Zone*
Public Works and Utilities	Proposed Reservoir	Proposed Paso Robles Water Tank	High Fire Severity Zone
Public Works and Utilities	Reservoir	Paso Robles Water Tank (Golden Hill Reservoir)	Moderate Severity Zone
Public Works and Utilities	Reservoir	Paso Robles Water Reservoir (West Side)	High Fire Severity Zone*
Public Works and Utilities	Reservoir	Paso Robles Water Reservoir (West Side)	High Fire Severity Zone
Public Works and Utilities	Reservoir	Paso Robles Water Tank (Golden Hill Reservoir)	High Fire Severity Zone
Public Works and Utilities	Wastewater Treatment Plant	City of Paso Robles Wastewater Division Treatment Plant	Moderate Severity Zone
Public Works and Utilities	Wastewater Treatment Plant	City of Paso Robles Wastewater Division Treatment Plant	High Fire Severity Zone
Transportation	Airport	Paso Robles Municipal Airport Terminal	Moderate Severity Zone
Transportation	Airport Complex	City of Paso Robles Airport Complex	Moderate Severity Zone
Transportation	Airport Complex	City of Paso Robles Airport Complex	High Fire Severity Zone

**Table 5-11. Exposure Analysis – Critical Facilities  
Wildfire**

Category	Type	Name	Hazard Area
Transportation	Bridge	Niblick Road Salinas River Bridge and Highway 101 Overpass	Moderate Severity Zone
Transportation	Bridge	Ramp/Connector 101 - Bridge	Moderate Severity Zone
Transportation	Bridge	Ramp/Connector 46 - Bridge	Moderate Severity Zone
Transportation	Bridge	State Route 46 Huerhuero Creek Bridge Eastbound	Moderate Severity Zone
Transportation	Bridge	State Route 46 Huerhuero Creek Bridge Westbound	Moderate Severity Zone
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Moderate Severity Zone
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Moderate Severity Zone
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Moderate Severity Zone
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	Moderate Severity Zone
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	High Fire Severity Zone*
Transportation	Bridge	Niblick Road Salinas River Bridge and Highway 101 Overpass	High Fire Severity Zone
Transportation	Bridge	Ramp/Connector 101 - Bridge	High Fire Severity Zone
Transportation	Bridge	Ramp/Connector 46 - Bridge	High Fire Severity Zone
Transportation	Bridge	State Route 46 Huerhuero Creek Bridge Eastbound	High Fire Severity Zone
Transportation	Bridge	State Route 46 Huerhuero Creek Bridge Westbound	High Fire Severity Zone
Transportation	Bridge	State Route 46 Salinas River Bridge	High Fire Severity Zone
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	High Fire Severity Zone
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	High Fire Severity Zone
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	High Fire Severity Zone
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	High Fire Severity Zone
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	High Fire Severity Zone
Transportation	Bridge	U.S. Highway 101 NB/SB Bridge	High Fire Severity Zone

\* State Responsibility Area

**5.6 REPETITIVE LOSS PROPERTIES**

The requirements for addressing RL properties, as stipulated in DMA 2000 and its implementing regulations, are described below.

**Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans**

**Element B: Hazard Identification and Risk Assessment**

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

Per FEMA’s SQANet, there are no RL properties in Paso Robles. Therefore, RL properties are not included in the vulnerability analysis.

**5.7 SUMMARY OF IMPACTS**

The requirements for describing each hazard’s impact on a community as well as an overall summary of the community’s vulnerability, as stipulated in DMA 2000 and its implementing regulations, are described below.

**Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans**

**Element B: Hazard Identification and Risk Assessment**

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))

A summary of impacts (i.e., percentage at risk) for the population, residential buildings, and critical facilities and infrastructure for each identified hazard in the 2016 LHMP is provided below.

- **Dam Failure Inundation:** The failure of the Salinas Dam would flood an area of 1.07 square miles (5.5 percent) along the Salinas River within the City limits. This hazard area includes 160 people (0.5 percent), 54 residential buildings (0.5 percent), and 10 critical facilities (6.6 percent). Within the SOI, there are three people and one residential building located in the dam failure inundation zone.
- **Earthquake:** Within the City limits, there are 11.30 square miles (58.2 percent) of extreme ground shaking potential and an additional 8.29 square miles of high ground shaking potential (42.7 percent). Within the SOI, there are 0.35 square miles (38.8 percent) of extreme ground shaking potential and 0.51 square miles (56.8 percent) of high ground shaking potential. The extreme ground shaking hazard area of the City limits includes 14,692 people (49.3 percent) and 5,494 residential buildings (48.1 percent) while the high ground shaking hazard area of the City limits includes 15,103 people (50.7 percent) and 5,933 residential buildings (51.9 percent). 100 percent of the critical facilities are located within the extreme and high ground shaking hazard areas of the City limits. Within the SOI, there are 43 people (24.9 percent) and 19 residential buildings (24.8 percent) that are located in the extreme ground shaking hazard area. An additional 131 people (75.1 percent) and 56



residential buildings (75.2 percent) are located in the high ground shaking hazard area within the SOI.

- **Expansive Soils:** There are 1.32 square miles of high shrink-swell potential in the City limits. An additional 7.63 square miles of moderate shrink-swell potential is also located within City limits as well as 0.54 square miles of the same hazard area within the SOI. Within the City limits there are 4,267 people (14.3 percent) and 1,430 residential buildings (12.5 percent) located in the high expansive soil hazard area with an additional 13,076 people (43.9 percent) and 5,255 residential buildings (46.0 percent) located in moderate expansive soil hazard area. 46 critical facilities (69.6 percent) are located in either the high or moderate shrink swell potential areas. Within the SOI, there are 120 people (69.0 percent) and 51 structures (68.3 percent) located within the moderate expansive soil area.
- **Flood:** Within the City limits, 1.50 square mile area (7.5 percent) is in the 100-year floodplain. 496 people (1.7 percent) live in and 188 residential buildings (1.6 percent) are located in this hazard area. And an additional 4.08 square mile area (37.7 percent) within the City limits is in the 500-year floodplain, which includes 18,061 people (60.6 percent) and 6,912 residential buildings (60.5 percent). Also within the Special Flood Hazard Area (SFHA) are 16 facilities in the 100-year flood zone and 37 facilities. Within the SOI, 0.06 square miles are within the 100-year floodplain, which includes six people (3.4 percent) and three residential buildings (4.5 percent).
- **Hazardous Materials:** There are 4.64 square miles of hazardous transport corridors (23.9 percent) and an additional 0.42 square miles (46.5 percent) of the same hazardous area in the SOI. Within the City limits this includes 5,965 people (20.0 percent), 2,127 residential buildings (18.6 percent), and 40 critical facilities (60 percent). In the SOI, this includes 32 people (18.3 percent) and 14 residential buildings (3.3 percent). There are additional 1,830 people (6.1 percent), 780 residential buildings (19.2 percent), and 14 critical facilities (21.2 percent) located within a ¼-mile buffer of an EHS facility. In the SOI, this includes six people (3.3 percent) and two residential buildings (3.3 percent).
- **Land Subsidence:** Within the City limit, 1.90 square miles (9.8 percent) are susceptible to high land subsidence. 3,541 people (11.9 percent) live in and 1,267 residential buildings (11.1 percent) and 12 critical facilities (18.1 percent) are located within this hazard area.
- **Landslide:** Within the City limits, there is moderate landslide susceptibility across 9.52 square miles (49.1 percent), which includes 13,767 people (46.2 percent), 5,169 residential buildings (45.2 percent), and 16 critical facilities (24.2 percent). An additional 0.43 square miles (48.2 percent) of moderate landslide susceptibility are located within the SOI. This area includes 122 people (70.1 percent) and 52 residential buildings (68.7 percent).
- **Wildfire:** 6.40 square miles (33.0 percent) of City limits is located within high fire hazard severity area (and includes 8,660 people, 3,383 residential structures, and 16 critical facilities) while an additional 3.59 square miles (18.5 percent) of the City limits within moderate fire hazard severity area (and includes 4,475 people, 1,754 residential buildings, and 22 critical facilities). Within the SOI, 0.54 square miles (60.3 percent) is located within a high fire hazard severity area and includes seven people and three residential buildings).

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**6.1 OVERVIEW**

A capability assessment identifies and evaluates the human and technical, financial, and legal and regulatory resources available for hazard mitigation and describes the current, ongoing, and recently completed mitigation projects.

**6.2 CAPABILITY ASSESSMENT**

The requirements for a capability assessment, as stipulated in the DMA 2000 and its implementing regulations, are described below.

**Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans**

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))
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)(i))

The human and technical, financial, and legal and regulatory resources are discussed in each table below. In addition, this capability assessment lists the current, ongoing, and completed mitigation projects and programs. It also addresses the City’s ability to expand on and improve the existing policies and programs as they relate to hazard mitigation (**Table 6-3**).

**Table 6-1** and **Table 6-4** as well as the following text discusses the City’s participation in the NFIP and continued compliance with the NFIP.

Paso Robles joined the NFIP in September 1981. Participation in the NFIP is based on an agreement between a local community and the federal government that states that if a community adopts and enforces a floodplain management ordinance to reduce future flood risks to new construction in the SFHA, then the government will make flood insurance available. As a participant of the NFIP, the City’s Floodplain Administrator within the Community Development Department (Engineering Division) enforces the Floodplain Management Ordinance. As of 2014, the City’s Floodplain Administer oversees 44 flood insurance policies-in-force. The Floodplain Administrator also reviews and ensures that new development proposals do not increase flood risk, and that new developments are not located below the 100-year flood level. Finally, the Floodplain Administrator is responsible for planning and managing flood risk reduction projects throughout the City.

In addition to the above activities, the Floodplain Administrator participates in FEMA/DWR’s Community Assisted Visits, which occur on a 3-5 year cycle. In 2007-2008, the City hired consultants to update the Floodplain Management Ordinance to comply with the new NFIP regulations. The City approved the changes to the ordinance on October 7, 2008.

**Table 6-1. Human and Technical Resources for Hazard Mitigation**

Staff/Personnel Resources	Department or Agency	Principal Activities Related to Hazard Mitigation
Planner and technical staff with knowledge of land development, land management practices, and human-caused and natural hazards.	Community Development Department (Planning Division)	<p>Develops and maintains the General Plan, including the Safety Element.</p> <p>Develops area plans based on the General Plan, to provide more detailed guidance for the development of more specific areas.</p> <p>Reviews private development projects and proposed capital improvements projects and other physical projects involving property for consistency and conformity with the General Plan.</p> <p>Anticipates and acts on the need for new plans, policies, and Code changes.</p> <p>Applies the approved plans, policies, code provisions, and other regulations to proposed land uses.</p>
Engineer(s), Building Inspectors/Code Enforcement Officers or other professional(s) and technical staff trained in construction requirements and practices related to existing and new buildings.	Community Development Department (Building Division)	Oversees the effective, efficient, fair, and safe enforcement of the California Building Code.
Engineer(s), construction project managers, and supporting technical staff.	Community Development Department (Engineering Division)	Provides direct or contract civil, structural, and mechanical engineering services, including contract, project, and construction management.
Engineer(s), project manager(s), technical staff, equipment operators, and maintenance and construction staff.	Department of Public Works	Maintains and operates of a wide range of local equipment and facilities as well as providing assistance to members of the public. These include providing sufficient clean fresh water, reliable sewer services, street maintenance, storm drainage systems, street cleaning, street lights and traffic signals.
Floodplain Administrator	Community Development Department (Engineering Division)	Reviews and ensures that new development proposals do not increase flood risk, and that new developments are not located below the 100-year flood level. In addition, the Floodplain Administrator is responsible for planning and managing flood risk reduction projects throughout the City.

**Table 6-1. Human and Technical Resources for Hazard Mitigation**

<b>Staff/Personnel Resources</b>	<b>Department or Agency</b>	<b>Principal Activities Related to Hazard Mitigation</b>
Emergency Manager	Department of Emergency Services	Coordinates local response and relief activities within the Emergency Operation Center, and works closely with county, state, and federal partners to support planning and training and to provide information and coordinate assistance.
Procurement Services Manager	City Manager	Provides a full range of municipal financial services and administers several licensing measures.

**Table 6-2. Financial Resources for Hazard Mitigation**

Type	Subtype	Administrator	Purpose	Amount
Local	General Fund		Program operations and specific projects.	Variable.
	General Obligation (GO) Bonds	City Treasurer	GO Bonds are appropriately used for the construction and/or acquisition of improvements to real property broadly available to residents and visitors. Such facilities include, but are not limited to, libraries, hospitals, parks, public safety facilities, and cultural and educational facilities.	Variable.
	Lease Revenue Bonds	City Treasurer	Lease revenue bonds are used to finance capital projects that (1) have an identified budgetary stream for repayment (e.g., specified fees, tax receipts, etc.), (2) generate project revenue but rely on a broader pledge of general fund revenues to reduce borrowing costs, or (3) finance the acquisition and installation of equipment for the local jurisdiction’s general governmental purposes.	Variable.
	Public-Private Partnerships	Variable	Includes the use of local professionals, business owners, residents, and civic groups and trade associations, generally for the study of issues and the development of guidance and recommendations.	Project-specific.
State	Wildfire Emergency and Mitigation Funds	CAL FIRE	Administers funding from FEMA, BLM, and U.S. Forest Service for wildfire emergency and mitigation funding, except for HMGP and PDM grant programs.	Project-specific.
	Earthquake Mitigation Funds	California Seismic Safety Commission	Allocates FEMA money for earthquake mitigation efforts.	Project-specific.

**Table 6-2. Financial Resources for Hazard Mitigation**

Type	Subtype	Administrator	Purpose	Amount
State (cont.)	Wildfire Mitigation Funds	California Fire Safe Council	Administers state and federal money for wildfire mitigation efforts and promotes a grass-roots movement to protect the built-environment.	Project-specific.
	All-Hazard	Cal OES	Provide support and pass-through funding for activities to mitigate all-hazards.	Project-specific.
Federal	Hazard Mitigation Grant Program (HMGP)	FEMA	Supports pre- and post-disaster mitigation plans and projects.	Available to California communities after a Presidentially declared disaster has occurred in California. Grant award based on specific projects as they are identified by eligible applicants.
	Pre-Disaster Mitigation (PDM) grant program	FEMA	Supports pre-disaster mitigation plans and projects.	Available on an annual basis as a nationally competitive grant. Grant award based on specific projects as they are identified (no more than \$3M federal share for projects).
	Flood Mitigation Assistance (FMA) grant program	FEMA	Mitigates repetitively flooded structures and infrastructure.	Available on an annual basis, distributed to California communities by California OES. Grant award based on specific projects as they are identified.
	Assistance to Firefighters Grant (AFG) Program	FEMA/ U.S. Fire Administration (USFA)	Provides equipment, protective gear, emergency vehicles, training, and other resources needed to protect the public and emergency personnel from fire and related hazards.	Available to fire departments and nonaffiliated emergency medical services providers. Grant awards based on specific projects as they are identified.
	Community Block Grant Program Entitlement Communities Grants	U.S. Department of Housing and Urban Development (HUD)	Acquisition of real property, relocation and demolition, rehabilitation of residential and non-residential structures, construction of public facilities and improvements, such as water and sewer facilities, streets, neighborhood centers, and the conversion of school buildings for eligible purposes.	Available to entitled cities. Grant award based on specific projects as they are identified.

**Table 6-2. Financial Resources for Hazard Mitigation**

Type	Subtype	Administrator	Purpose	Amount
Federal (cont.)	Community Action for a Renewed Environment (CARE)	U.S. Environmental Protection Agency (EPA)	Through financial and technical assistance offers an innovative way for a community to organize and take action to reduce toxic pollution (i.e., storm water) in its local environment. Through CARE, a community creates a partnership that implements solutions to reduce releases of toxic pollutants and minimize people’s exposure to them.	Competitive grant program. Grant award based on specific projects as they are identified.
	Clean Water State Revolving Fund (CWSRF)	EPA	The CWSRF is a loan program that provides low-cost financing to eligible entities within state and tribal lands for water quality projects, including all types of non-point source, watershed protection or restoration, estuary management projects, and more traditional municipal wastewater treatment projects.	CWSRF programs provided more than \$5 billion annually to fund water quality protection projects for wastewater treatment, non-point source pollution control, and watershed and estuary management.
	Public Health Emergency Preparedness (PHEP) Cooperative Agreement	Department of Health and Human Services’ Centers for Disease Control and Prevention	Funds are intended to upgrade state and local public health jurisdictions’ preparedness and response to bioterrorism, outbreaks of infectious diseases, and other public health threats and emergencies.	Competitive grant program. Grant award based on specific projects as they are identified. Madera would participate through the County’s Public Health Department.
	Homeland Security Preparedness Technical Assistance Program (HSPTAP)	FEMA/DHS	Build and sustain preparedness technical assistance activities in support of the four homeland security mission areas (prevention, protection, response, recovery) and homeland security program management.	Technical assistance services developed and delivered to state and local homeland security personnel. Grant award based on specific projects as they are identified.



**Table 6-3. Legal and Regulatory Resources for Hazard Mitigation**

Regulatory Tool	Name	Description Effects on Hazard Mitigation, Expansion Opportunities	Hazards Addressed	Emergency Management Phase	Affects Development in Hazard Areas?
Plans	City of El Paso de Robles General Plan (2003)	Includes policies, goals and objectives regarding its physical development over a 20-year period (2025). The Safety Element identifies critical facilities and addresses seismic and geologic hazards. The Safety Element may be expanded to include additional hazards, such flood and wildfire hazards.	Earthquake, Fire, Flood	Mitigation & Preparedness	Yes
	City of El Paso de Robles Growth Emergency Services Growth Management Plan (2000)	Includes an evaluation fire and emergency services and a series of options to meet projected needs in 2020. This plan may be expanded to include the newly adopted SOI.	Fire	Mitigation, Preparedness, & Response	Yes
	City of Paso Robles Urban Water Management Plan (2011)	Helps guide the City’s water management efforts to the year 2025. The Plan also projects supply and demand to the year 2035as to address expansion.	Drought	Mitigation	Yes
	City of Paso Robles Storm Water Quality Management Program (SWQMP) (2005)	Outlines a five year plan to improve the quality of storm water through Best Management Practices which educates residents, businesses, contractors, and City staff about eliminating and reducing the amount of pollutants in storm water. The SWQMP is required by the National Pollutant Discharge Elimination System Phase II regulations.	Storm water	Mitigation & Preparedness	Yes
	City of Paso Robles Emergency Operations Plan (2004)	Serves as the basis for effective response to any hazard that threatens the City; facilitates integration of mitigation into response and recovery activities; and facilitate coordination with the State and Federal Government during catastrophic disaster situations that necessitate implementation of the National Response Framework.	All	Response and Recovery	No
	Redevelopment Implementation Plan for the City of Paso Robles (2010-2014)	Outlines goals and objectives, projects, programs, and expenditures of redevelopment funds during the five year period covered by the Implementation Plan. The Plan addresses seismically unsafe buildings and buildings prone to	Earthquake	Mitigation	Yes

**Table 6-3. Legal and Regulatory Resources for Hazard Mitigation**

Regulatory Tool	Name	Description Effects on Hazard Mitigation, Expansion Opportunities	Hazards Addressed	Emergency Management Phase	Affects Development in Hazard Areas?
		repetitive flooding.			
Policies	City of Paso Robles Municipal Code (2011)	Includes the 2010 Editions of the California Building Code, Fire Code, Plumbing Code, Mechanical Code, Electrical Code, and all secondary publications.	Fire, Earthquake	Mitigation & Preparedness	Yes
	Floodplain Management Ordinance (2008)	Outlines how the City will comply with the standards for participation in the NFIP. The City updated the ordinance most recently in 2008.	Flood	Mitigation	Yes
	Storm Water Management Ordinance (2013)	Describes policies to reduce pollutants in storm water discharge and prohibiting non-storm water discharges into the storm water drains.	Storm water	Mitigation	Yes

**Table 6-4. Current, Ongoing, and Completed Hazard Mitigation Projects and Programs**

Status (Current, Ongoing, or Completed)	Project / Program Name	Description	Year(s)
Completed	Seismic Mitigation Program	This program was developed to repair public facilities and assist owners of unreinforced masonry buildings to prepare of upgrade seismic strengthening plans.	2004 – 2007
Ongoing	NFIP	As a participant of the NFIP, the City enforces the Floodplain Management Ordinance and participates in FEMA’s Community Assisted Visits, which occur on a 3-5 year cycle. In 2007-2008, the City hired consultants to update the Floodplain Management Ordinance to address issues raised by DWR during a Community Assisted Visit. As noted in Table 6-1, the Community Development Department serves as the Floodplain Administrator. The City may participate in the Community Rating System program in the future.	1981 - present
Ongoing	SWQMP	The City is enrolled in the Phase II SWQMP. Control measures in this program include: public education and public participation; construction site storm water runoff control; post-construction storm water management; illicit discharge detection and elimination; and pollution prevention.	2005 - present
Ongoing	Weed Abatement Program	This program is designed to keep the city fire-safe by ensuring that yards and larger land parcels are cleared of combustible weeds and debris. Each year, owners of these properties must have all weeds mowed or otherwise removed to lessen the fire hazard from June 1 thru November 1. Can be expanded to include more stringent measures as needed.	2010 - present
Completed	Salinas River Parkway Grant	This program was created to protect, restore and enhance the water quality, riparian habitat, flood control, and groundwater recharge values of property along the Upper Salinas River. The project protected and improved a 1.5 mile stretch of the Salinas River within the City limits.	2005 - 2010

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**7.1 OVERVIEW**

A mitigation strategy includes the identification of mitigation goals and actions that will reduce the risks of each hazard and vulnerability to the local population and built environment for each local participant.

Per the local mitigation planning requirements, this mitigation strategy consists of the following steps:

- Update of local hazard mitigation goals
- Review of the 2005 LHMP mitigation action plan
- Identification of new and updated mitigation actions
- Prioritization of 2016 LHMP mitigation actions
- Implementation of the 2016 LHMP mitigation actions

**7.2 UPDATE OF LOCAL HAZARD MITIGATION GOALS**

The requirements for developing local hazard mitigation goals, as stipulated in DMA 2000 and its implementing regulations, are described below.

**Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans**

**Element C: Mitigation Strategy**

C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement § 201.6(c)(3)(i))

Mitigation goals are defined as general guidelines that explain what a community wants to achieve in terms of hazard and loss prevention. Goal statements are typically long-range, policy-oriented statements representing community-wide vision. **Table 7-1** shows the updated mitigation goals that were developed to reduce or avoid long-term vulnerability to hazards.

**Table 7-1. Mitigation Goals**

Goal Number	Goal Description
1	Minimize loss of life, injury, and damage to property, the economy, and the environment from the hazards identified in the 2016 LHMP.
2	Build and enhance local mitigation capabilities to reduce the hazards identified in the 2016 LHMP. This will help ensure individual safety, reduce damage to public buildings and guarantee continuity of emergency services.

**7.3 REVIEW OF THE 2005 LHMP MITIGATION ACTION PLAN**

The requirements for showing progress in local mitigation efforts, as stipulated in DMA 2000 and its implementing regulations, are described below.

**Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans**

**Element D: Plan Review, Evaluation, and Implementation**

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

During the 2016 LHMP update process, the consultant and the LHMP POC reviewed the 2005 LHMP mitigation action plan to determine which mitigation actions had been completed, deleted, deferred, or are ongoing. Mitigation actions are activities, measures, and/or projects that help achieve the goals of a mitigation plan. The results of this review, shown in **Table 7-2**, show the progress in local mitigation efforts over the past nine years.

**Table 7-2. Review of 2005 LHMP Mitigation Action Plan**

No.	Description	Status	Include in the 2016 LHMP?
1.B.1	Continue to implement and improve the City’s Uniform Building Codes relative to fire safety and flood safety, and investigate, and implement if feasible, new measures to avoid impacts in landslide-prone areas and in potential subsidence areas.	Ongoing	Yes (Modify mitigation action to address zoning requirements for landslide and subsidence prone areas)
2.A.1	Continue to seek PDM and HMGP funds.	Ongoing / As Needed	No (This action funds mitigation projects but is not a mitigation project itself)
2.A.3	Continue and maintain relationships with Cal OES and the County of San Luis Obispo Office of Emergency Services.	Ongoing	No (Ongoing collaboration but not necessary as a mitigation action)
4.A.1	Continue efforts toward water infrastructure improvements of channels, storm drains, diversions, and retention basins in the City for flood protection.	Ongoing	No (Modify action to address similar projects in the City’s Capital Improvement Projects)
4.A.2	Encourage bridge or culvert construction where roads are in locations susceptible to flooding.	Ongoing	No (Specific projects identified in the City’s Capital Improvement Projects will be included instead)
4.B.3	Continue the production of an updated storm drain atlas for the City’s Storm Drain Master Plan that identifies potential hazards, solutions, budgets, and priorities.	Completed	No, project is already completed.
5.A.1	Ensure that subdivision regulations for new subdivisions allow for adequate fire apparatus access.	Completed / Ongoing	No (Addressed in the City’s Zoning Code / Street Design Criteria)
5.A.2	Ensure that the building codes for new residential construction prohibit the use of untreated wood shake roofs and encourage the installation of a spark arresting system on the chimneys of new homes with wood burning fireplaces.	Completed / Ongoing	No (Addressed in Ordinance No. 988 N.S.)
5.A.3	Investigate, and implement if feasible and appropriate, mandate the installation of fire extinguishing sprinklers in new homes and substantial renovations.	Ongoing	No (The California Building Code requires automated sprinklers for buildings in excess of 5,000 square feet)

**Table 7-2. Review of 2005 LHMP Mitigation Action Plan**

No.	Description	Status	Include in the 2016 LHMP?
6.C.1	Post water conservation messages and newspaper articles relative to the City’s water resources on the City’s website.	Completed	No (The City implemented a water conservation website <a href="http://www.prcity.com/government/departments/publicworks/water/conservation/index.asp">http://www.prcity.com/government/departments/publicworks/water/conservation/index.asp</a> )
7.A.1	Continue to enforce provisions of Ordinance 878 N.S., which requires that all commercial unreinforced masonry buildings be retrofitted by January 2007.	Ongoing	No (This action is an existing ordinance)

**7.4 IDENTIFICATION OF NEW AND UPDATED POTENTIAL MITIGATION ACTIONS**

The requirements for the identification of mitigation actions, as stipulated in DMA 2000 and its implementing regulations, are described below.

**Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans**

**Element C: Mitigation Strategy**

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))

The review process of the 2005 LHMP mitigation action plan revealed that the majority of the mitigation actions identified in the 2005 LHMP mitigation action plan were not suitable to be included in the 2016 LHMP for the following reasons:

- Mitigation actions were ineligible for FEMA funding
- Mitigation actions were not well defined
- Mitigation actions focused too much on continued compliance and/or maintenance

As such, the consultant, with input from the LHMP POC and various members of the Planning Committee and City staff, developed a handful of new mitigation actions based on the 2016 LHMP’s vulnerability analysis and capability assessment and City’s Capital Improvement Projects. Particular attention was paid to well-defined, stand-alone projects.

As shown in **Table 7-3**, for each potential mitigation action, the following information is listed: mitigation action description; mitigation action category (which includes: local plans and regulations; structure and infrastructure projects; natural systems protection; and education and awareness program); hazard(s) addressed; and type of development affected by mitigation action.

Table 7-3. New and Updated Potential Mitigation Actions

No.	Description	Mitigation Category	Hazard Addressed	New or Existing Construction
1	Integrate the hazard analysis and mitigation strategy into the General Plan's Safety Element.	Local Plans and Regulations	All	Not Applicable
2	Develop a public outreach program that informs property owners located in the dam inundation areas about voluntary flood insurance.	Education and Awareness	Dam Failure	Existing (Residential buildings located within dam inundation areas)
3	Develop a drought contingency plan to provide an effective and systematic means of assessing drought conditions, develop mitigation actions and programs to reduce risks in advance of drought, and develop response options that minimize hardships during drought.	Local Plans and Regulations, Natural Systems Protection.	Drought	New/Existing
4	Develop measures to achieve a higher level of irrigation efficiency with respect to plant water requirements, through assistance programs to customers.	Local Plans and Regulations	Drought	New/Existing
5	Initiate an extreme heat public awareness and educational campaign to discuss the dangers of extreme heat, steps each individual can personally take during periods of extreme heat and ways to reduce energy consumption during periods of extreme heat.	Education and Awareness	Extreme Heat	Not Applicable
6	Acquire, relocate, elevate, and/or floodproof public works critical facilities that are located within the 100-year floodplain.	Structure and Infrastructure Projects	Flood	Existing (Critical facilities located within the 100-year floodplain)
7	Reinforce roads from flooding through protection activities, including elevating the road and installing/widening culverts beneath the road or upgrading storm drains.	Structure and Infrastructure Projects	Flood	Existing
8	Develop a public outreach program that educates property owners about voluntary flood insurance (targeted at areas that historically flood, but are not acknowledged on FEMA flood insurance rate maps)	Education and Awareness	Flood	Existing
9	Partner with propane companies and regulating agencies to secure tanks located in special flood hazard areas.	Education and Awareness	Flood	Not Applicable



**Table 7-3. New and Updated Potential Mitigation Actions**

No.	Description	Mitigation Category	Hazard Addressed	New or Existing Construction
10	Establish local zoning regulations that require the stabilization of landslide-prone areas and land subsidence hazard areas before new development can occur, through stability improvement measures such as the inclusion of interceptor drains, in-situ soil piles, drained earth buttresses, and subdrains.	Local Plans and Regulations	Landslide, Land Subsidence	New (Any future residential or non-residential construction in landslide-prone areas)
11	Create a new vegetation management program that provides vegetation management services to elderly, disabled, or low-income property owners who lack the resources to remove flammable vegetation from around their homes.	Awareness and Education, Natural Systems Protection	Wildfire	Existing (Residential buildings in high wildfire severity zones)
12	Implement a fuel modification program for new construction by requiring builders and developers to submit their plans, complete with proposed fuel modification zones, to the local fire department for review and approval prior to beginning construction.	Local Plans and Regulations	Wildfire	New (Residential and non-residential buildings located within high wildfire severity zones)
13	Create a GIS-based pre-application review for new construction and major remodels in hazard areas, such high wildfire severity zones, moderate landslide susceptibility areas, and dam failure inundation zones.	Local Plans and Regulations	All	New / Existing
14	Increase participation in the NFIP by entering the Community Rating System program which through enhanced floodplain management activities would allow property owners to receive a discount on their flood insurance.	All	Weather-Related Hazards (flood)	New/Existing (Residential structures and critical facilities which are located within the 100-year floodplain)
15	Continue to monitor the manufacture, storage, and transport of hazardous materials by working with environmental health and public safety agencies to identify effective mitigation actions or requirements that will help reduce the risk of incidents, including the spread of released materials.	Awareness and Education	Hazardous Materials	Existing

**7.5 PRIORITIZATION OF THE 2016 LHMP MITIGATION ACTIONS**

The requirements for the prioritization of mitigation actions, as stipulated in DMA 2000 and its implementing regulations, are described below.

**Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans**

**Element D: Plan Review, Evaluation, and Implementation**

D3. Was the plan revised to reflect changes in priorities? (Requirement § 201.6(d)(3))

**Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans**

**Element C: Mitigation Strategy**

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))

After the list of potential mitigation actions had been developed, the Planning Committee determined which potential mitigation actions should be included in the 2016 LHMP mitigation action plan. For this process, projects that met the HMA program requirements (**Table 7-4**) were selected as a priority because these projects have greatest chance of leading to enhanced project scoping and development and prevention of HMA funding delays. Projects listed in **Table 7-4** that were not selected as priority projects in **Table 7-5** may be considered at a later date for implementation if the priority projects have been completed or deferred and as additional funding sources become available.

**Table 7-4. Priority Project Criteria (HMA Program Requirements)**

Requirement	Description
Mitigation Planning	Links the existing mitigation plan, particularly the vulnerability analysis and capability assessment, to project scoping.
Technical Feasibility and Effectiveness	Conforms with accepted engineering practices, established codes, standards, modeling techniques, or best practices. Effective mitigation measures funded under HMA should provide a long-term or permanent solution.
Floodplain Management and Protection of Wetlands	Conforms to 44 CFR Part 9, which incorporates the requirements of Executive Order (EO) 11988 ( <i>Floodplain Management</i> ) and EO 11990 ( <i>Protection of Wetlands</i> ).
Environmental Planning and Historic Review and Compliance	Complies with all environmental and historic preservation (EHP) laws and with 44 CFR Part 10.
Cost Effectiveness	Is cost-effective or be in the interest of the NFIF.
Cost Review	Is reasonable in costs compared to the probable benefits.
General Program Requirements	Is an eligible activity, including: property acquisition and structure demolition; property demolition and structure relocation; structure elevation; mitigation reconstruction; dry floodproofing of historic residential structures; dry floodproofing of nonresidential structures; minor localized flood reduction projects; structural retrofitting of existing buildings; non-structural retrofitting of existing buildings and facilities; infrastructure retrofit; soil stabilization; wildfire mitigation; post-disaster code enforcement

**7.6 2016 LHMP MITIGATION ACTION PLAN**

Mitigation actions selected for the mitigation action plan (**Table 7-5**) are all considered priority projects by the LHMP POC and Planning Committee. As noted above, priority projects are projects that meet the HMA Guidance program requirements identified in **Table 7-4**. Emphasis in this process was placed on cost-effectiveness and technical feasibility and effectiveness.

The following information has been included for mitigation action listed in **Table 7-5**: mitigation action number and description; facility to be mitigated (if known and/or applicable); department/agency to oversee the implementation of the mitigation action; and implementation timeframe. FEMA HMA grant funding, including PDM and HMGP, has been identified as the funding source for all 5 priority projects identified in **Table 7-5**.

**Table 7-5. 2016 LHMP Mitigation Action Plan**

No.	Description	Facility to be Mitigated (if Known and/or Applicable)	Department or Agency	Timeframe
3	Develop a drought contingency plan to provide an effective and systematic means of assessing drought conditions, develop mitigation actions and programs to reduce risks in advance of drought, and develop response options that minimize hardships during drought.	Not applicable		1 Year
6	Acquire, relocate, elevate, and/or flood-proof public works critical facilities that are located within the 100-year floodplain.	Water Division Corp Yard	Public Works Department	3-5 Years
7	Reinforce roads from flooding through protection activities, including elevating the road and installing/widening culverts beneath the road or upgrading storm drains.	23 <sup>rd</sup> & Vine Streets Paso Robles Street 12 <sup>th</sup> Street	Public Works Department	3-5 Years
11	Create a new vegetation management program that provides vegetation management services to elderly, disabled, and/or low-income property owners who lack the resources to remove flammable vegetation from around their homes.	Residential properties owned by the elderly, disabled, and/or low-income	Community Development Department	Ongoing, to be conducted on an annual basis
12	Implement a fuel modification program for new construction by requiring builders and developers to submit their plans, complete with proposed fuel modification zones, to the Community Development Department/Department of Emergency Services for review and approval prior to beginning construction.	New construction	Community Development Department/ Department of Emergency Services	Ongoing

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## 8.1 OVERVIEW

This section describes a formal plan maintenance process to ensure that the 2016 LHMP remains an active and applicable document. It includes an explanation of how the LHMP POC and the Planning Committee intend to organize their efforts to ensure that improvements and revisions to the 2016 LHMP occur in a well-managed, efficient, and coordinated manner. Specifically, the 2016 LHMP this section has been revised to include streamlined plan maintenance procedures, such as questionnaires and progress reports, and a LHMP update schedule which starts the plan update process six months prior to the LHMP's re-adoption date.

The following three process steps are addressed in detail below:

- Monitoring, evaluating, and updating the LHMP
- Implementation through existing planning mechanisms
- Continued public involvement

## 8.2 MONITORING, EVALUATING, AND UPDATING THE PLAN

The requirements for monitoring, evaluating, and updating the 2016 LHMP, as stipulated in the DMA 2000 and its implementing regulations, are described below.

### Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans

#### Element A: Planning Process

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)(1))

To maintain momentum and build on previous hazard mitigation planning efforts and successes, the LHMP POC will make use of the Planning Committee to monitor, evaluate, and update the 2016 LHMP. The LHMP POC will continue to coordinate all local efforts to monitor, evaluate, and update this document.

- Every 12 months from plan adoption, the LHMP POC will email each member of the Planning Committee an Annual Review Questionnaire to complete. As shown in **Appendix D, Plan Maintenance**, the Annual Review Questionnaire will include an evaluation of the following: planning process, hazard analysis, vulnerability analysis, capability assessment, and mitigation strategy.
- The LHMP POC will collect all completed questionnaires and determine if the 2016 LHMP needs to be updated to address new or more threatening hazards, new technical reports or findings, and new or better-defined mitigation projects. The LHMP POC will summarize these findings and email them out to the Planning Committee. If the LHMP POC believes that the 2016 LHMP needs to be updated based on the findings, then a request will be made to the Planning Committee members to attend a formal LHMP update meeting.

Additionally, mitigation actions will be monitored and updated through the use of the Mitigation Project Progress Report. During each annual review, each department or agency currently administering a mitigation project will submit a progress report to the LHMP POC to review and

evaluate. For projects that are being funded by a FEMA mitigation grant, FEMA quarterly reports may be used as the preferred reporting tool. As shown in **Appendix D, Plan Maintenance**, the progress report will discuss the current status of the mitigation project, including any changes made to the project, identify implementation problems, and describe appropriate strategies to overcome them. After considering the findings of the submitted progress reports, the LHMP POC may request that the implementing department or agency meet to discuss project conditions.

In addition to the Annual Review Questionnaire, Mitigation Project Progress Report or FEMA quarterly report, and any annual meetings, the Planning Committee will meet to update the 2016 LHMP every 5 years. To ensure that this update occurs, within the first six months of the fourth year following plan adoption, the LHMP POC will ensure that the Planning Committee undertakes the following activities:

- Research funding available to assist in LHMP update (and apply for funds that may take up to one year to obtain)
- Thoroughly analyze and update the hazard analysis and vulnerability analysis
- Complete a new Annual Review Questionnaire and review previous questionnaires
- Provide a detailed review of the mitigation strategy and prepare a new mitigation action plan
- Document the plan update process
- Prepare a new draft LHMP for public comment
- Submit an updated LHMP to Cal OES and FEMA for approval
- Submit final draft to the Paso Robles City Council for adoption

### 8.3 IMPLEMENTATION THROUGH EXISTING PLANNING MECHANISMS

The requirements for implementing the 2016 LHMP through existing planning mechanisms, as stipulated in the DMA 2000 and its implementing regulations, are described below.

#### Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans

##### Element C: Mitigation Strategy

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)(iii))

After the adoption of the 2016 LHMP, the LHMP POC and Planning Committee will work to incorporate applicable elements of the 2016 LHMP into other existing planning mechanisms. The processes for incorporating the 2016 LHMP into various planning documents will occur as (1) other plans and policies are updated and (2) new plans and policies are developed.

Therefore, the City of Paso Robles will undertake and/or continue to undertake the following activities:

- The Planning Division will use information from the hazard analysis section and mitigation action plan in the 2016 LHMP to update the Safety Element of the General Plan.
- The Department of Emergency Services will use information from the hazard analysis and vulnerability analysis sections in the 2016 LHMP to update the Growth Emergency Services Growth Management Plan and the Emergency Operations Plan.
- The Department of Emergency Services will use information from the vulnerability analysis section in the 2016 LHMP to develop emergency preparedness public information and related outreach efforts.
- As done with the 2005 LHMP, Capital Projects Engineering will continue to work with the LHMP POC to ensure that relevant mitigation actions identified in the mitigation action plan (i.e., Mitigation Action 4.A.2 in the 2005 LHMP and Mitigation Actions 6 & 7 in the 2016 LHMP) are integrated into the Capital Improvement Projects.

## 8.4 CONTINUED PUBLIC INVOLVEMENT

The requirements for continued public involvement, as stipulated in the DMA 2000 and its implementing regulations, are described below.

### Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans

#### Element A: Planning Process

A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement § 201.6(c)(4))

The LHMP POC and the Planning Committee are dedicated to involving the public directly in the continual reshaping and updating of the 2016 LHMP. A downloadable copy of the 2016 LHMP and any proposed changes or updates will be posted on the City’s website. The City’s website will also contain an e-mail address and phone number to which people can direct their comments or concerns.

As noted above, the Planning Committee will be retained to oversee implementation, examine the annual review questionnaires and project progress reports, modify the implementation strategy and process as needed, and update the LHMP as required. The LHMP POC will also identify opportunities to raise community awareness about the 2016 LHMP and the hazards that affect the City. This effort could include attendance and provision of materials at county and city-sponsored events, Red Cross programs, and public mailings. Any public comments received regarding the 2016 LHMP will be collected by the LHMP POC, included in the annual report, and considered during future LHMP updates.

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**Appendix A**  
**FEMA Documentation**

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## APPENDIX A: LOCAL MITIGATION PLAN REVIEW TOOL

The *Local Mitigation Plan Review Tool* demonstrates how the Local Mitigation Plan meets the regulation in 44 CFR §201.6 and offers States 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.
- The Multi-jurisdiction Summary Sheet is an optional worksheet that can be used to document how each jurisdiction met the requirements of the each Element of the Plan (Planning Process; Hazard Identification and Risk Assessment; Mitigation Strategy; Plan Review, Evaluation, and Implementation; and Plan Adoption).

The FEMA Mitigation Planner must reference this *Local Mitigation Plan Review Guide* when completing the *Local Mitigation Plan Review Tool*.

<b>Jurisdiction:</b> City of Paso Robles	<b>Title of Plan:</b> City of Paso Robles Local Hazard Mitigation Plan	<b>Date of Plan:</b> March 20, 2014 <b>Resubmittal: 20 January 2016</b>
<b>Local Point of Contact:</b> Susan DeCarli		<b>Address:</b> 1000 Spring St. Paso Robles, CA 93446
<b>Title:</b> City Planner		
<b>Agency:</b> Community Development Department		
<b>Phone Number:</b> 805-237-3970		<b>E-Mail:</b> sdecarli@prcity.org

<b>State Reviewer:</b>	<b>Title:</b>	<b>Date:</b>
------------------------	---------------	--------------

<b>FEMA Reviewer:</b> Wynne Kwan	<b>Title:</b> Lead Planner	<b>Date:</b> 16 April 2015 <b>Resubmittal: 25 January 2016</b>
<b>Date Received in FEMA Region (insert #)</b>	3/31/2015	
<b>Plan Not Approved</b>	The Plan is NOT APPROVED.	
<b>Plan Approvable Pending Adoption</b>	<b>The Plan is Approved Pending Adoption (25 January 2016)</b>	
<b>Plan Approved</b>		

**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 this *Plan Review Guide* in Section 4, Regulation Checklist.

<b>1. REGULATION CHECKLIST</b>	<b>Location in Plan</b>	<b>Met</b>	<b>Not Met</b>
<b>Regulation (44 CFR 201.6 Local Mitigation Plans)</b>	<b>(section and/or</b>		
<b>ELEMENT A. PLANNING PROCESS</b>			
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))	Section 3, 4.2	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))	Section 3.3.1	X	
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))	Section 3.3.2 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 3.4, 9	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 8.4	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))	Section 8.2 Appendix D	X	
<b>ELEMENT A: REQUIRED REVISIONS</b>			
<b>ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSMENT</b>			



<b>1. REGULATION CHECKLIST</b>		<b>Location in Plan</b>	<b>Met</b>	<b>Not Met</b>
<b>Regulation (44 CFR 201.6 Local Mitigation Plans)</b>	<b>(section and/or</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))	Dam Failure: Section 4.3.1 Drought: Section 4.3.2 Earthquake: Section 4.3.3 Expansive Soils: Section 4.3.4 Extreme Heat: Section 4.3.5 Flood: Section 4.3.6	Drought; Earthquake; Expansive Soils; Extreme Heat; Flood; Freeze/Extreme Cold; Land Subsidence; Landslide; Wildfire; <b>Dam Failure</b>		
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))	Freeze/Extreme Cold: Section 4.3.7 Land Subsidence: Section 4.3.9 Landslide: Section 4.3.10 Wildfire: Section 4.3.11 Appendix B  <b>Resubmittal: Dam - Pages 4-3 to 4-4</b>  <b>Landslide – Page 4-21</b>	Dam Failure; Drought; Earthquake; Expansive Soils; Extreme Heat; Flood; Freeze/Extreme Cold; Land Subsidence; Wildfire; <b>Landslide</b>		

1. REGULATION CHECKLIST		Location in Plan (section and/or	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
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))	Dam Failure: Section 4.3.1 Drought: Section 4.3.2 Earthquake: Section 4.3.3 Expansive Soils: Section 4.3.4 Extreme Heat: Section 4.3.5 Flood: Section 4.3.6 Freeze/Extreme Cold: Section 4.3.7 Land Subsidence: Section 4.3.9 Landslide: Section 4.3.10 Wildfire: Section 4.3.11 Section 5 Appendix B	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))	Section 5.6	X		
<b>ELEMENT B: REQUIRED REVISIONS</b>				
<p><b>B1.</b> The Plan does not provide a description of the magnitude/extent of the dam failure inundation hazard. Extent means the strength or magnitude of the hazard. For example, extent could be described in terms of the specific measurement of an occurrence on a scientific scale (for example, Enhanced Fujita Scale, Saffir-Simpson Hurricane Scale, Richter Scale, flood depth grids) and/or other hazard factors, such as duration and speed of onset. <b>The Plan must provide a description of the magnitude/extent of the dam failure hazard.</b></p> <p><b>Resubmittal:</b> The revised Plan includes information the number of square miles would be inundated due to dam failure and the location map illustrates the location of the dam inundation zone. These show location, but not extent. However, the Plan also notes and defines the US Army Corps of Engineers Dam Safety Action Classification for the Salinas Dam. This element is met.</p> <p><b>B2.</b> The Plan says that the probability of future landslides is low. This is a general descriptor which should be defined. Probability may be defined in terms of general descriptors (for example, unlikely, likely, highly likely) but must be defined in the Plan. For example, "highly likely" could be defined as equals near 100% chance of occurrence next year or happens every year. <b>The Plan must include the probability of future landslide hazard events, by defining "low."</b></p> <p><b>Resubmittal:</b> The revised Plan notes that landslides are most likely to occur during or after severe winter storms or after a large earthquake. The probably of severe winter storms and earthquakes have been added to the text. This element is met.</p>				

1. REGULATION CHECKLIST Regulation (44 CFR 201.6 Local Mitigation Plans)	Location in Plan (section and/or	Met	Not Met
<b>ELEMENT C. MITIGATION STRATEGY</b>			
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))	Section 1.5.2, 6	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))	Section 6	X	
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))	Section 7.2	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))	Section 7.4	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))	Section 7.5, 7.6	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))	Section 8.3	X	
<p><b>ELEMENT C: REQUIRED REVISIONS</b></p> <p><b>C5.</b> Table 7-5 on page 7-7 identifies the prioritized mitigation actions for the 2014 Plan, and includes information on the responsible department/agency and timeframe. However, potential funding sources are not identified. <b>The Plan must identify potential funding sources for each mitigation action.</b></p> <p><b>Resubmittal: The revised Plan notes that for the 5 prioritized mitigation actions FEMA HMA assistance, including HMGP and PDM, would be the potential funding sources. This element is met. In future iterations of the Plan, potential funding sources should also include non-FEMA funding sources.</b></p> <p><b>C6.</b> The Plan identifies the City of Paso Robles' existing planning mechanisms, as well as provides a description of the process the City will undertake to integrate data, information, and hazard mitigation goals/action into those planning mechanisms. However, the Plan does not discuss how the City has integrated the 2005 Plan into existing planning mechanisms. <b>As an update, the Plan must explain how the City of Paso Robles incorporated the previously-approved mitigation plan, when appropriate, into other planning mechanisms as a demonstration of progress in local hazard mitigation efforts. If the City did not integrate the 2005 Plan into existing planning mechanisms, then the Plan must state so and explain why this did not happen.</b></p> <p><b>Resubmittal: The revised Plan provides additional information on how the City of Paso Robles incorporated its previously-approved plan into other planning mechanisms. This element is met.</b></p>			
<b>ELEMENT D. PLAN REVIEW, EVALUATION, AND IMPLEMENTATION</b> (applicable to plan updates only)			
D1. Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3))	Pages 1-3, Section 1.5.5	X	

<b>1. REGULATION CHECKLIST</b>		Location in Plan (section and/or	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))	Section 7.3	X		
D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))	Section 7.5	X		
<b><u>ELEMENT D: REQUIRED REVISIONS</u></b>				
<b>ELEMENT E. PLAN ADOPTION</b>				
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))	Section 2 Appendix A			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	N/A		N/A
<b><u>ELEMENT E: REQUIRED REVISIONS</u></b>				
<b>E1. The City of Paso Robles intends to adopt the Plan once it receives conditional approval from FEMA.</b> The Plan does not include documentation of plan adoption by the City of Paso Robles City Council. <b>Adoption must take place within one calendar year of receipt of FEMA's "Approval Pending Adoption" (APA). Supporting documentation of plan adoption must be provided to FEMA.</b>				
<b>ELEMENT F. ADDITIONAL STATE REQUIREMENTS (OPTIONAL FOR STATE REVIEWERS ONLY; NOT TO BE COMPLETED BY FEMA)</b>				
F1.				
F2.				
<b><u>ELEMENT F: REQUIRED REVISIONS</u></b>				

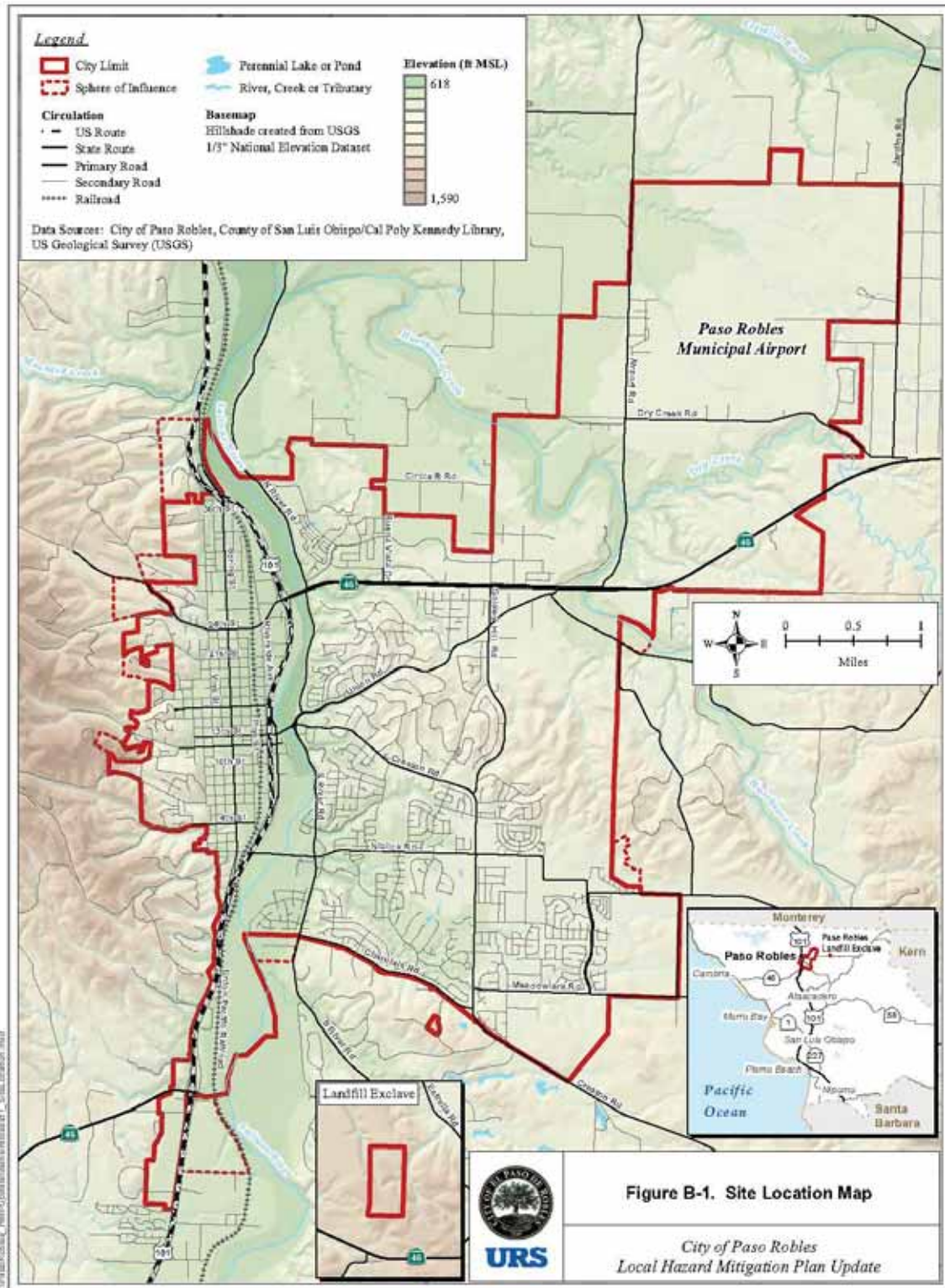
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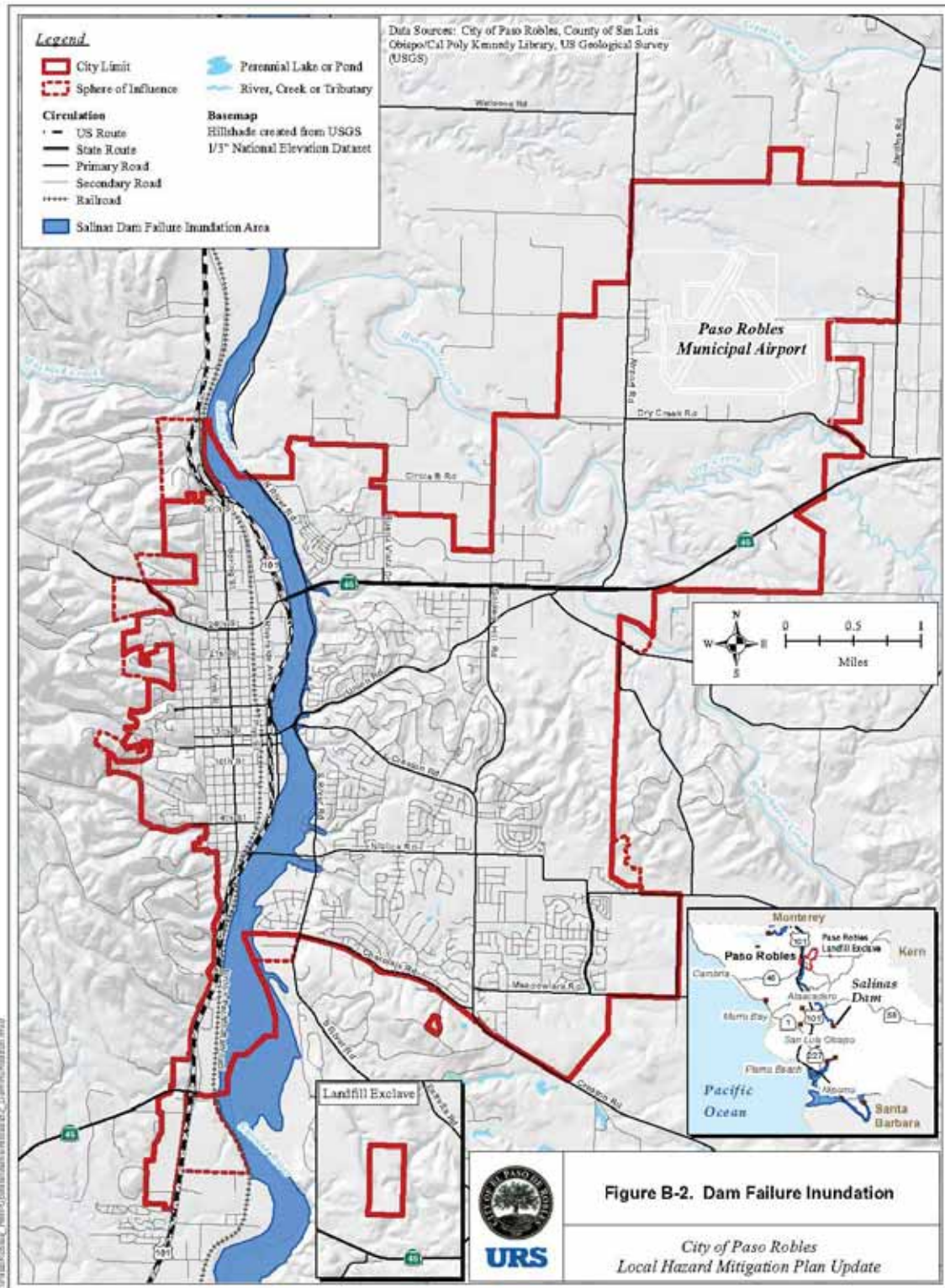
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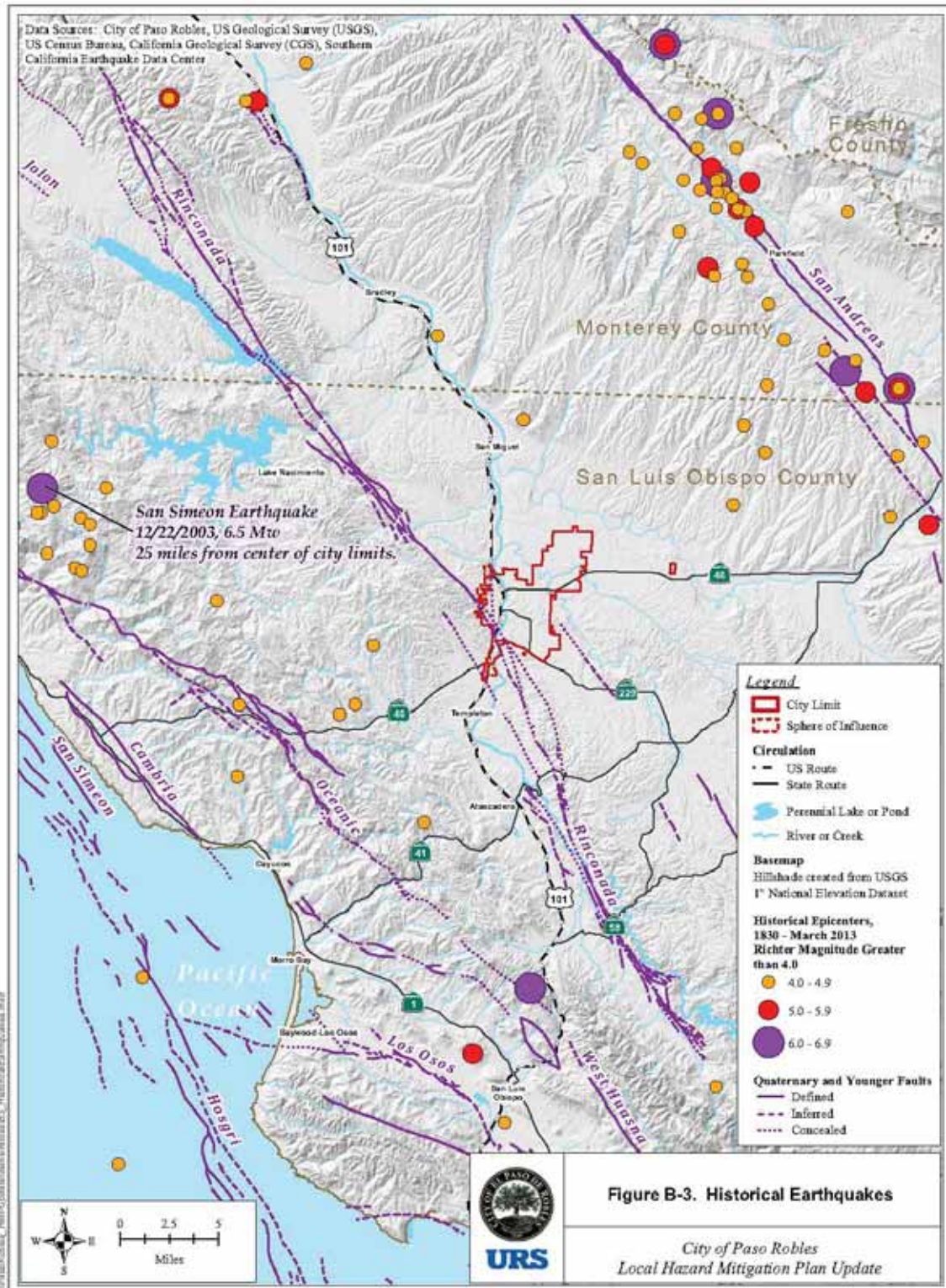
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**Figures**

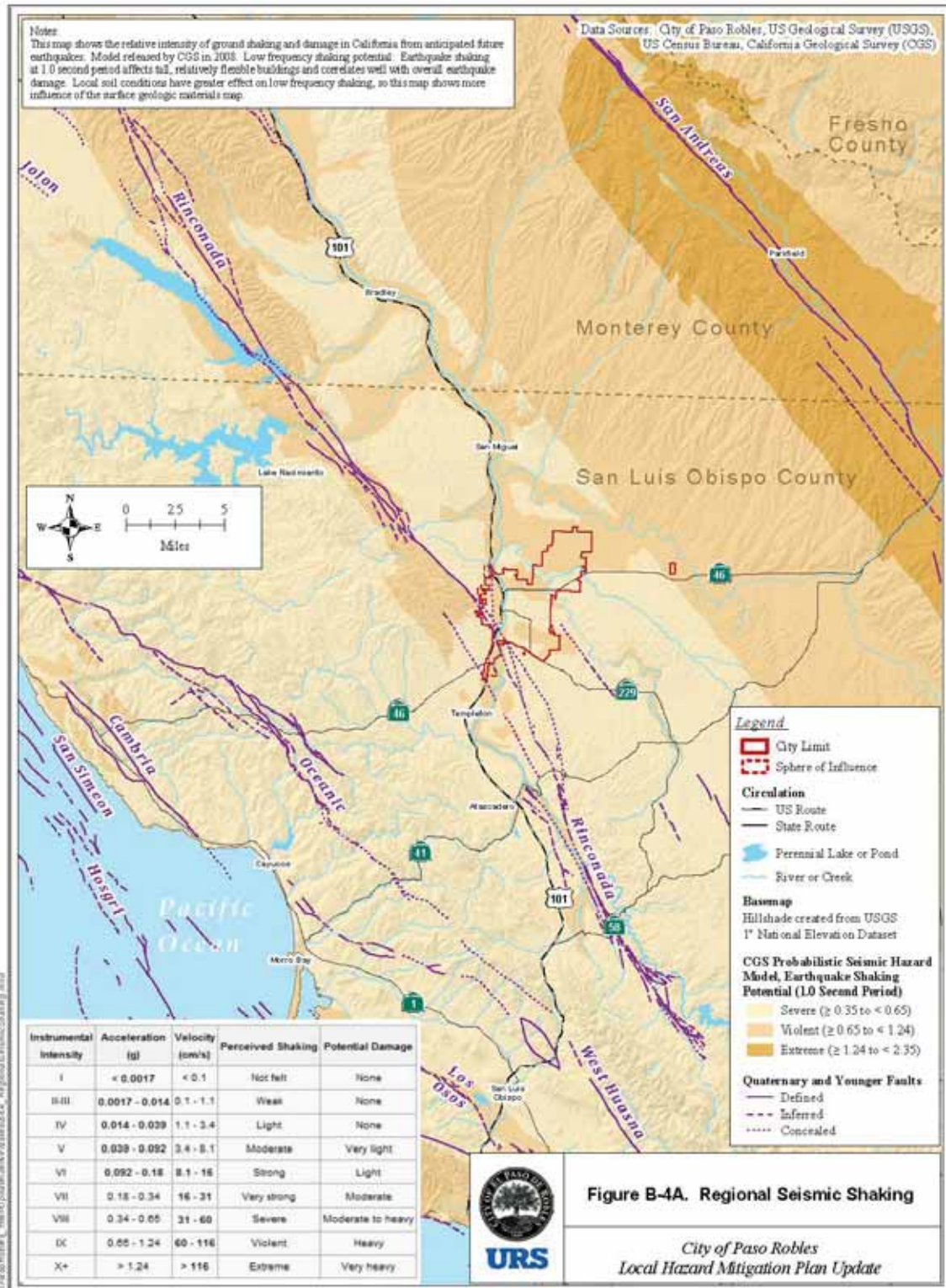
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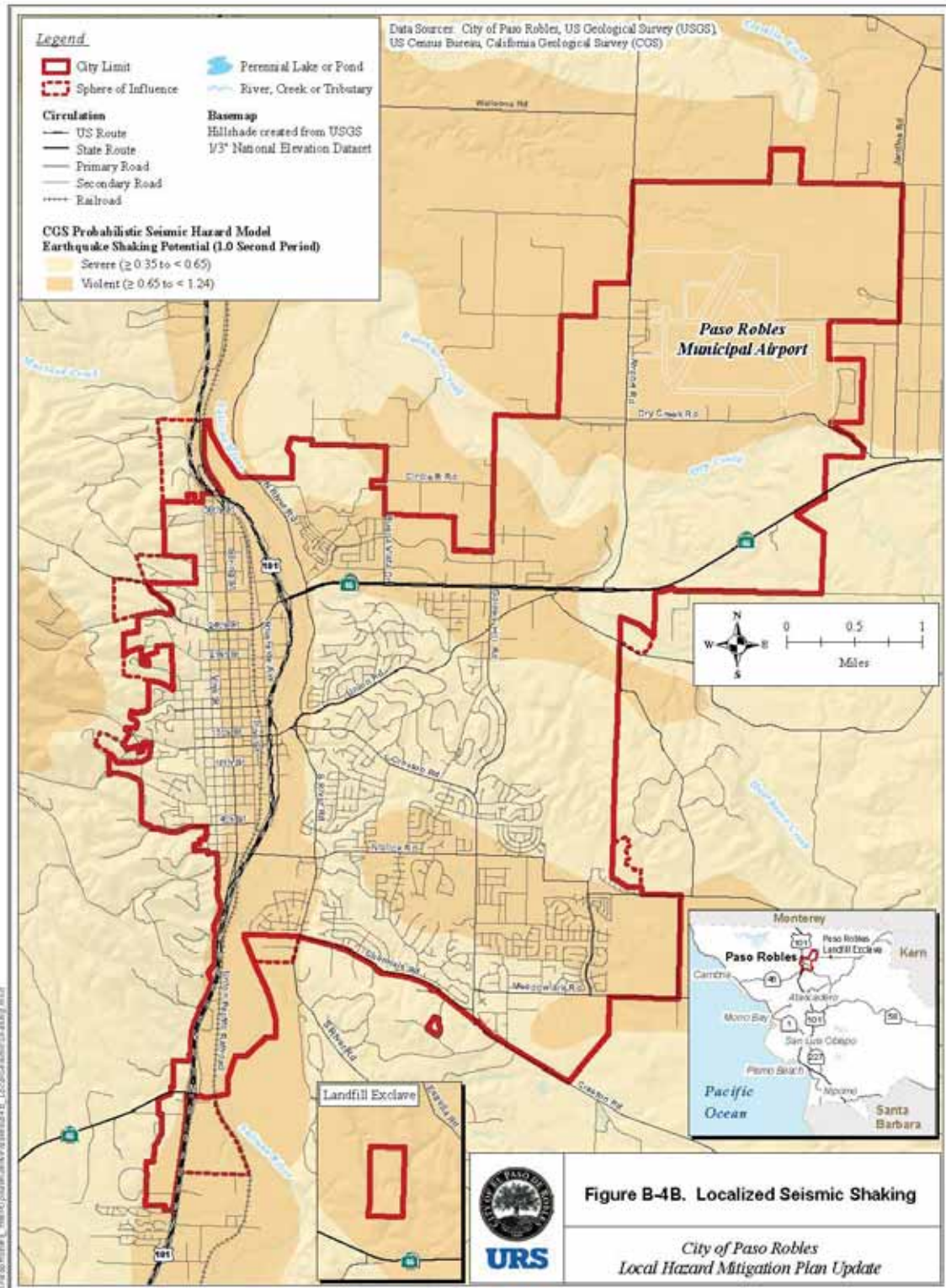


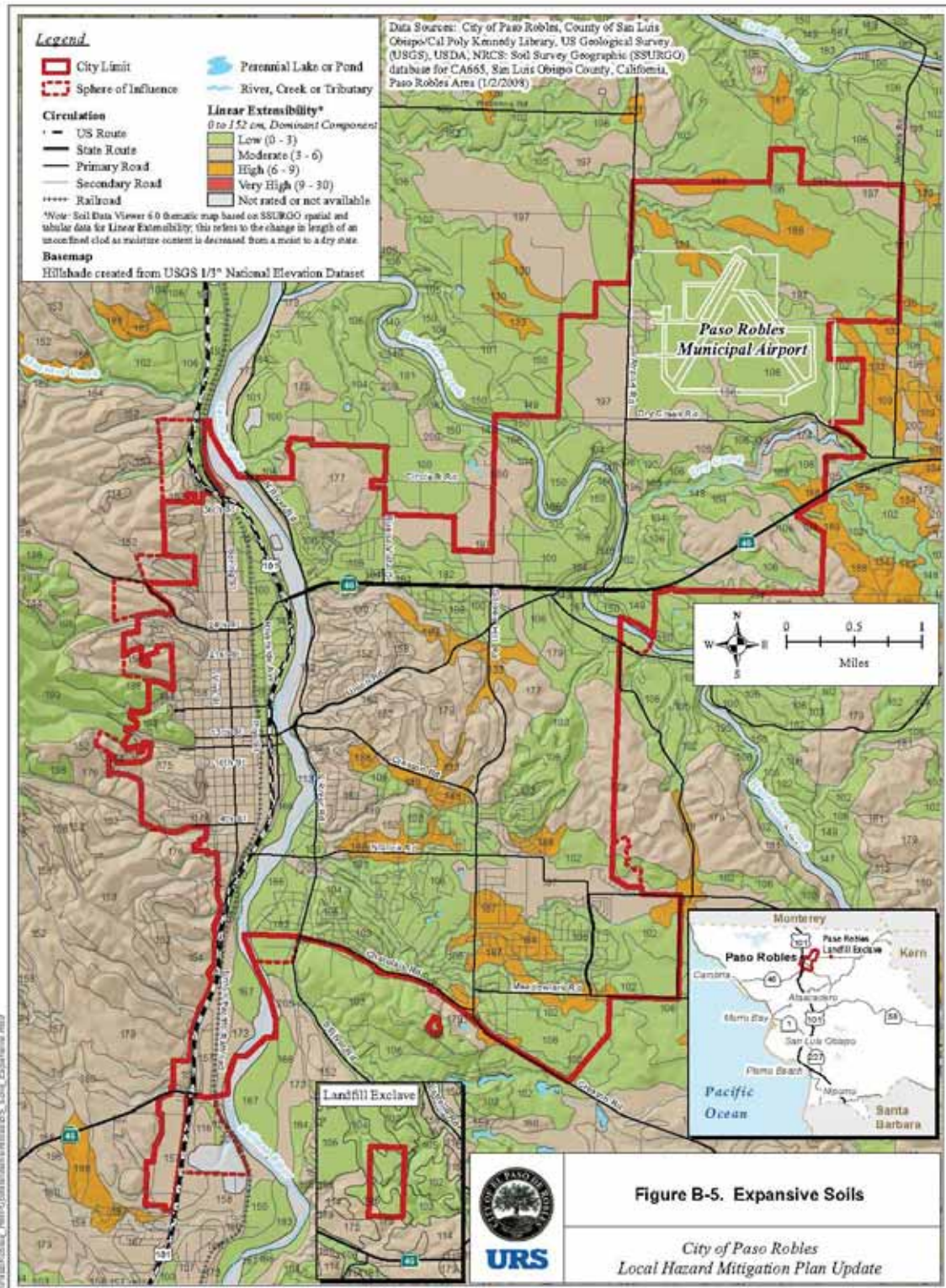


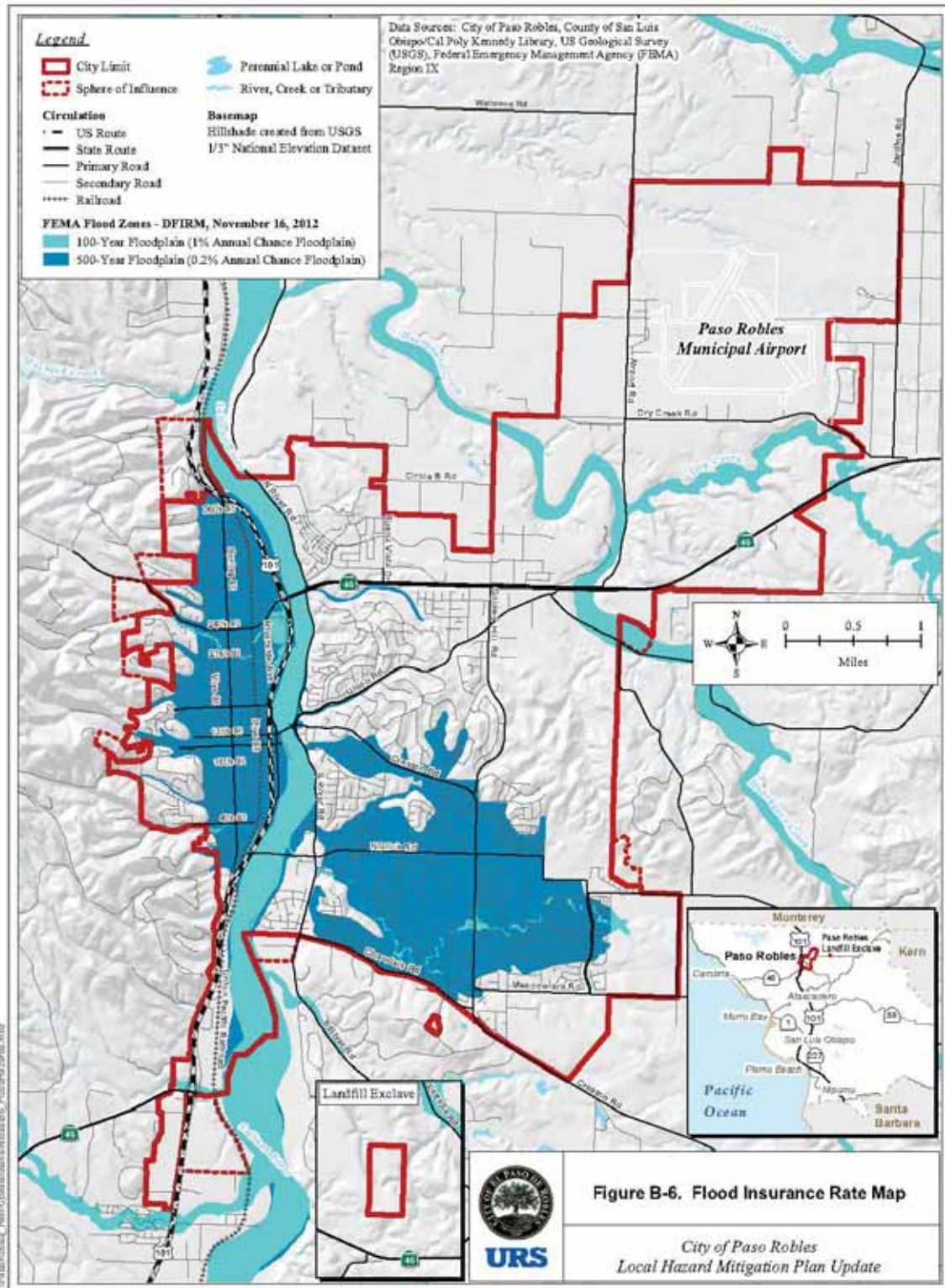


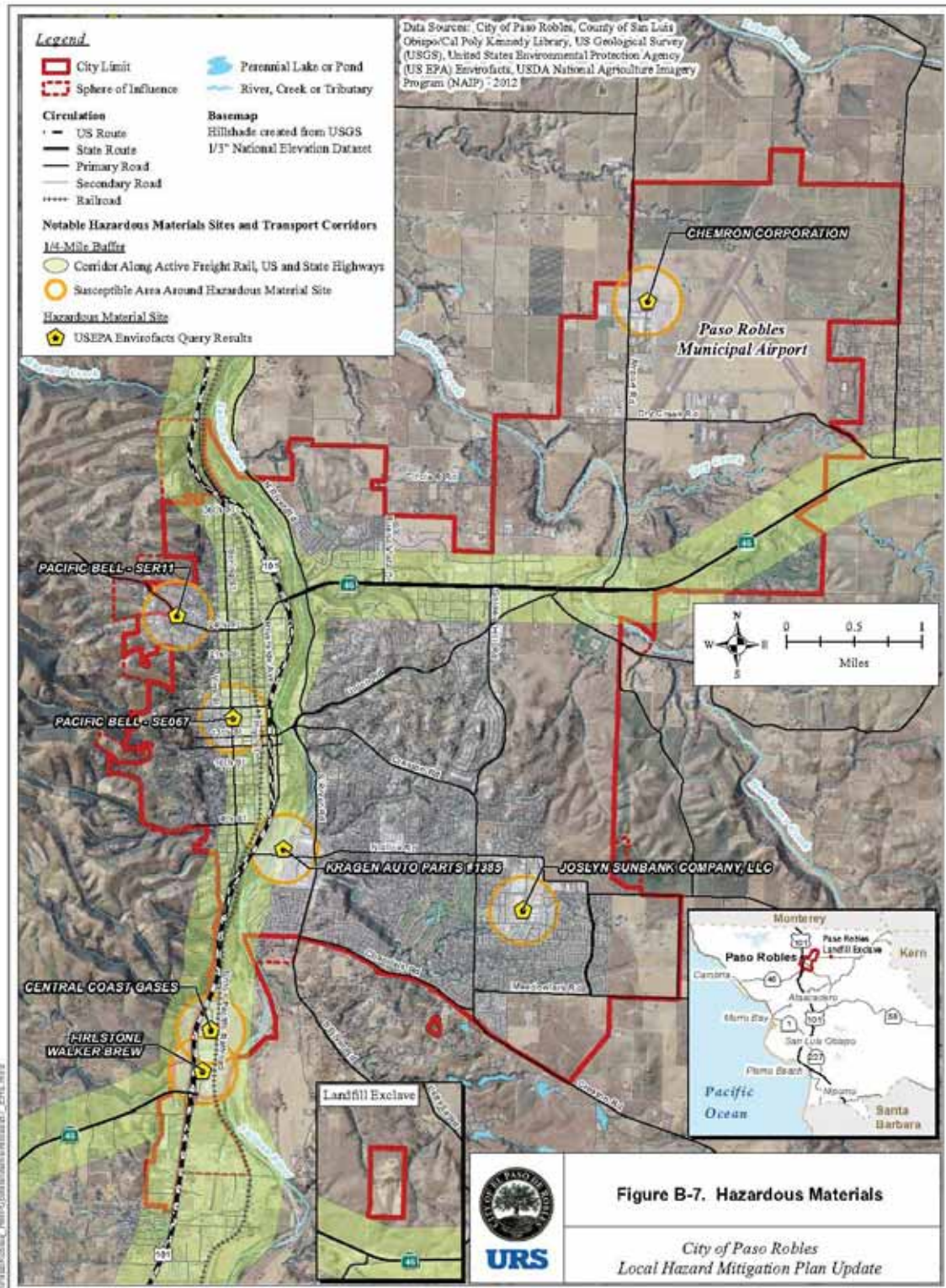




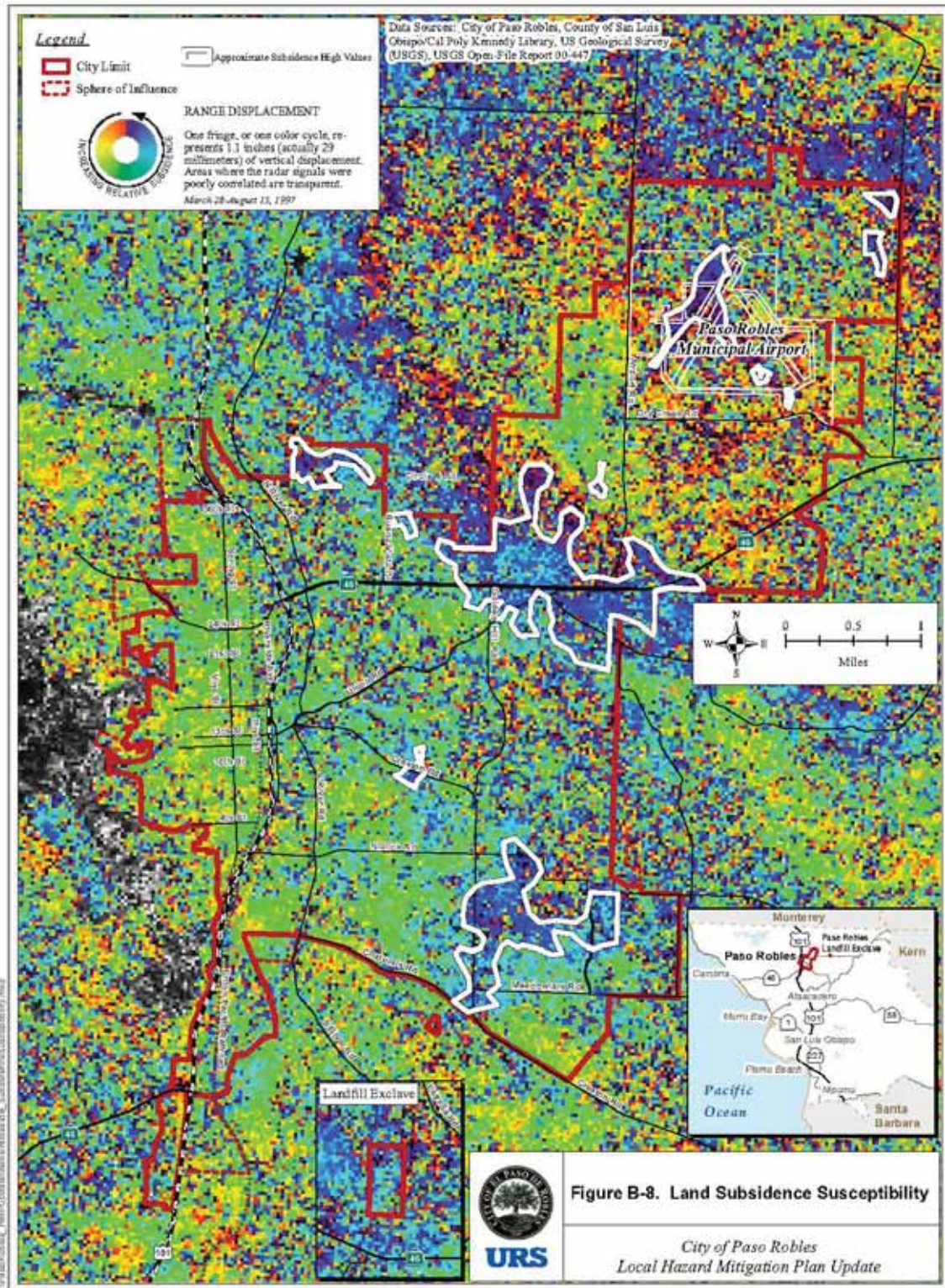


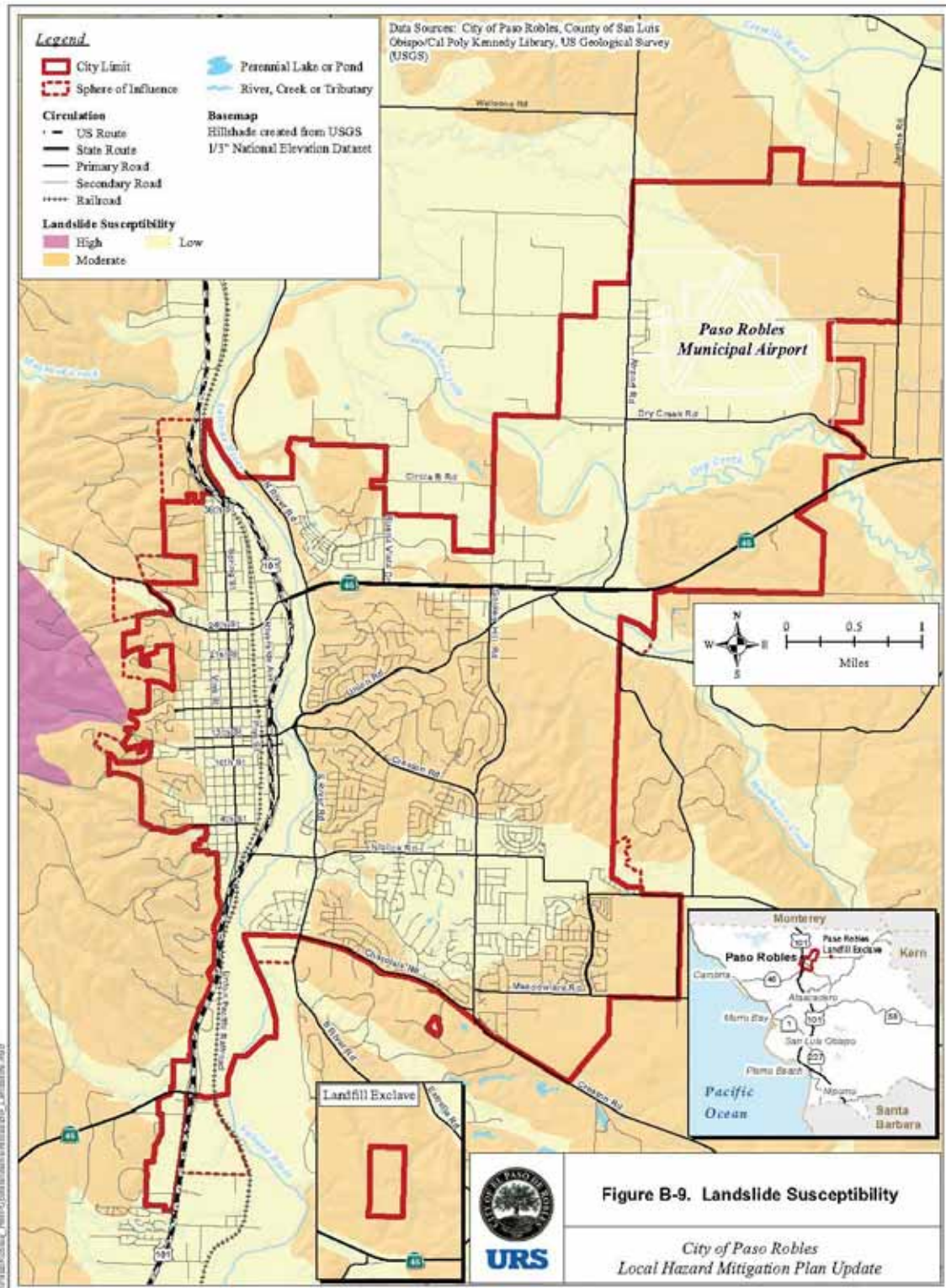


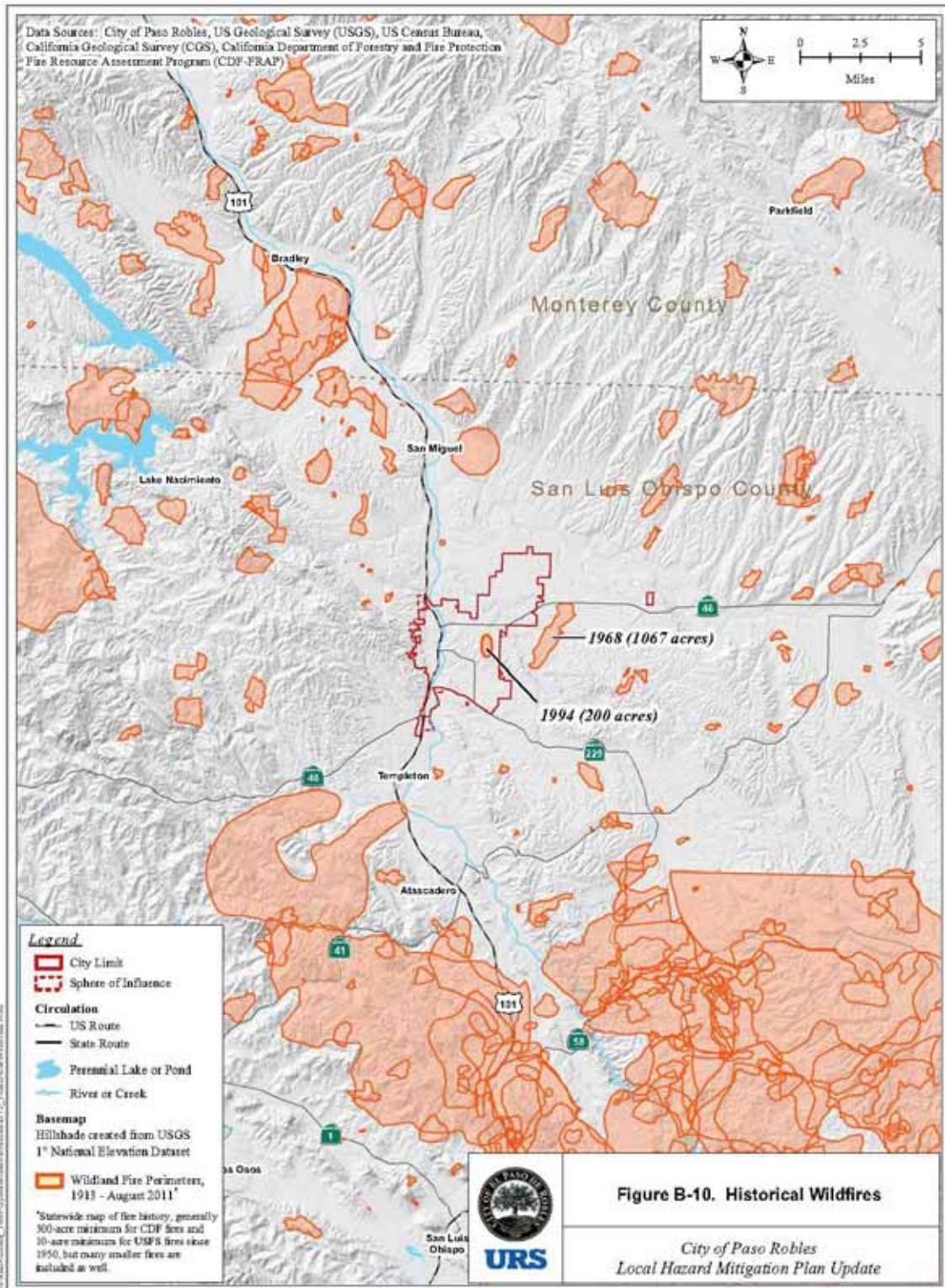


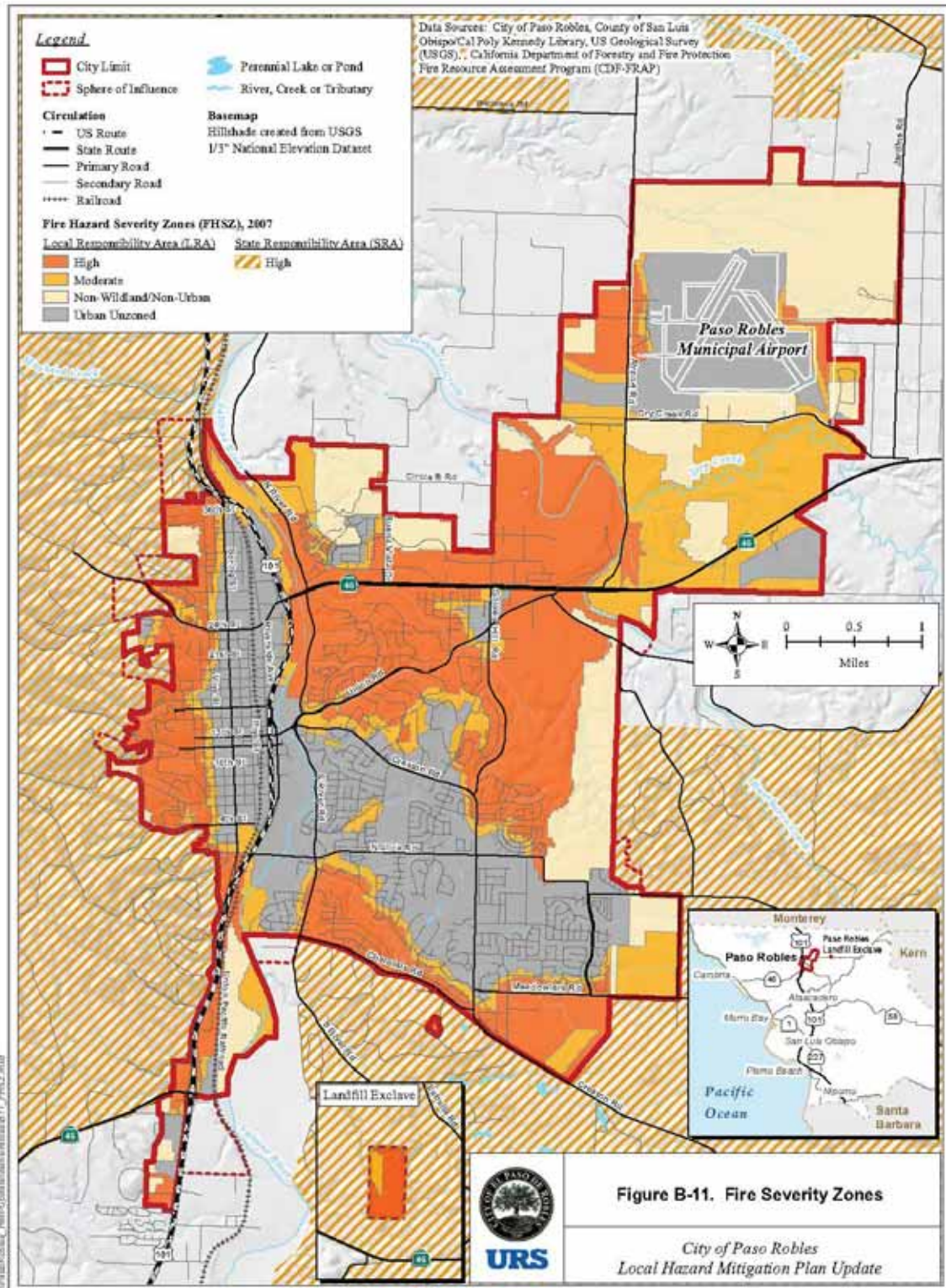


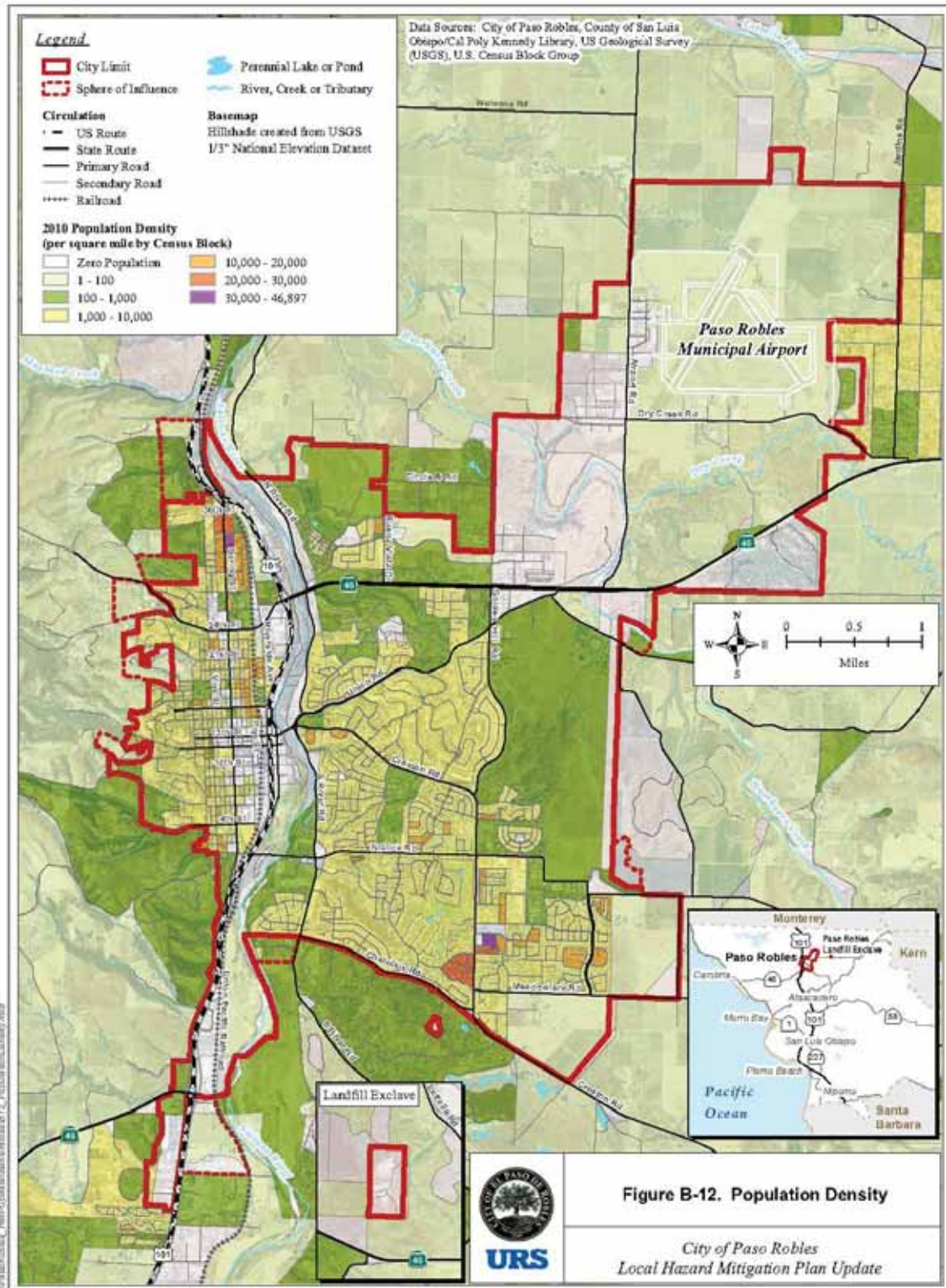




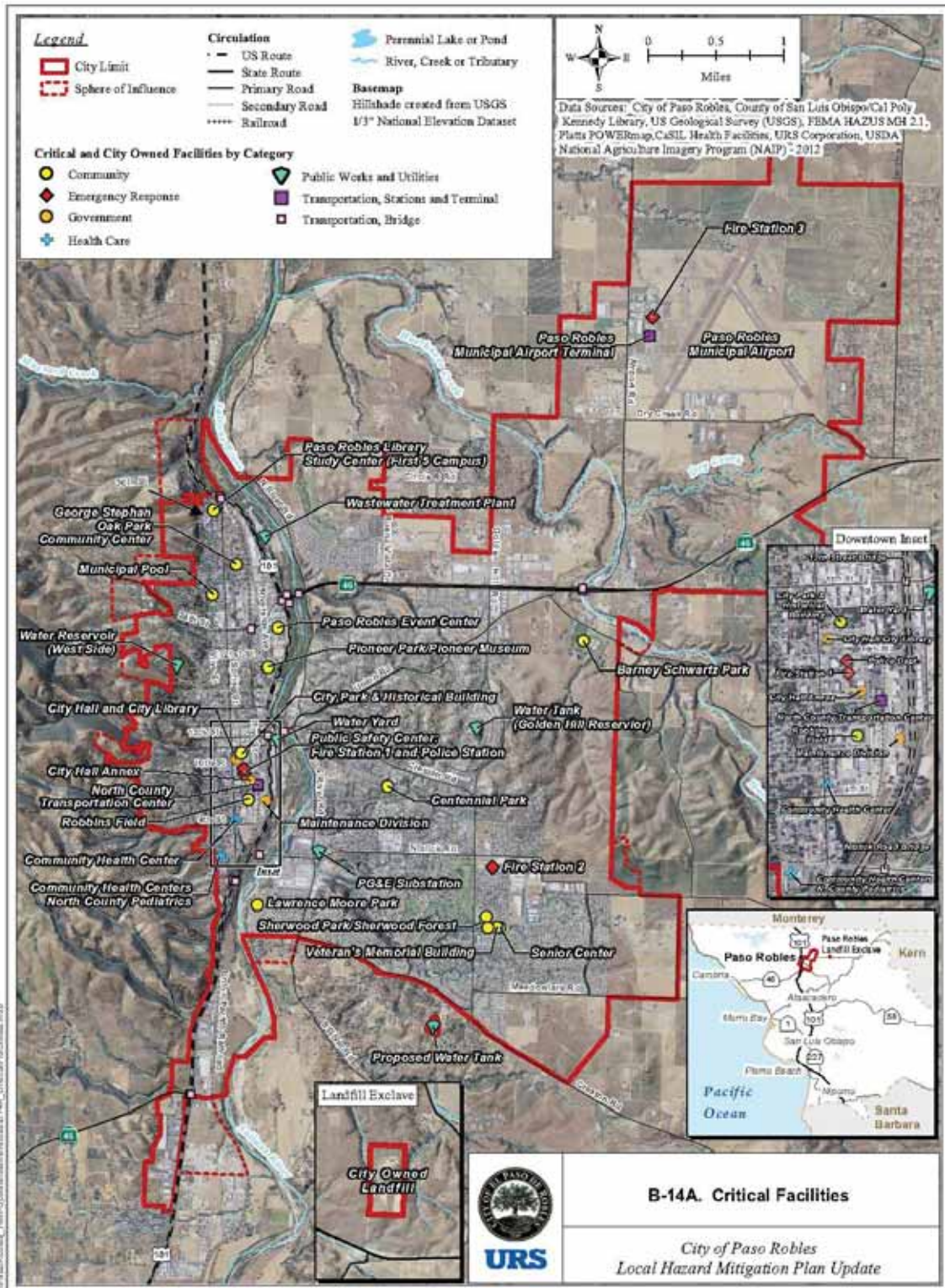


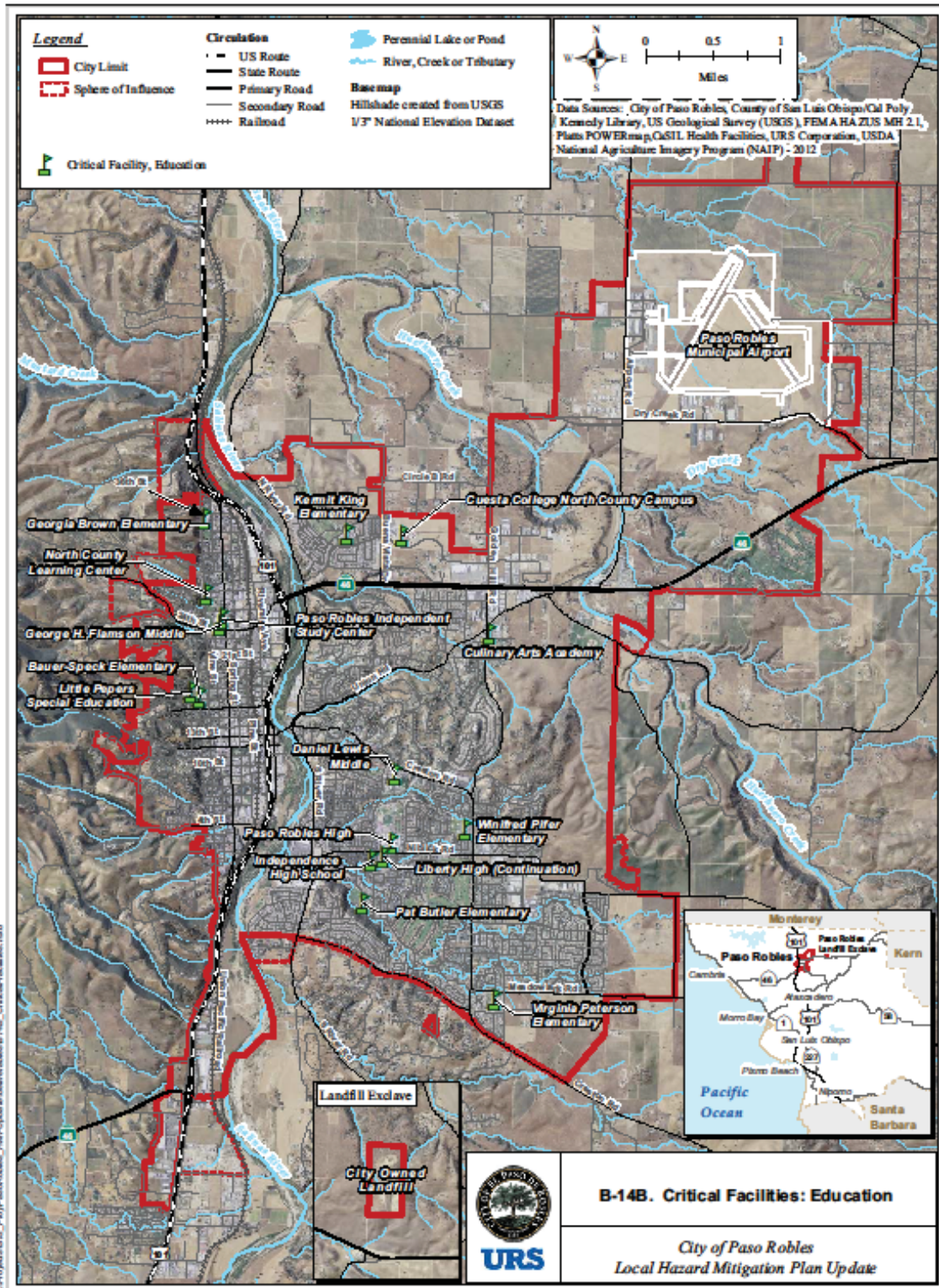












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**Appendix C**  
**Public Outreach**

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## NEWS RELEASE

Contact: Susan DeCarli (805) 237-3970

### City of Paso Robles Local Hazard Mitigation Plan Update

The City of Paso Robles is beginning the process of updating the 2005 Local Hazard Mitigation Plan. The purpose of hazard mitigation is to reduce potential losses from future disasters. Mitigation plans identify the natural hazards that impact communities, identify actions to reduce losses from those hazards, and establish a coordinated process to implement the plan. As part of the update process, the City must review and revise its plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities and resubmit for FEMA approval.

The Hazard Mitigation Plan Update is an open public involvement process and the public is invited to comment on the plan during the drafting stage and prior to plan approval. The first workshop for the plan update will be held on October 18, 2012 and is open to the public. The workshop will cover project initiation, hazard identification, and capability assessment.

**Thursday, October 18, 2012**

City Council Chambers  
1000 Spring Street  
Paso Robles, CA 93446  
**3:00 PM**

The current 2005 Local Hazard Mitigation Plan is available online at: <http://www.prcity.com/government/LHMP-Plan.asp> If you have any questions or would like to provide comments please contact Susan DeCarli at (805) 237-3970 or [SDeCarli@prcity.com](mailto:SDeCarli@prcity.com).

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### Paso Robles Updating Hazard Plan

Submitted by **Santa Maria Dave**, Keeping It Santa Maria Style!  
Thursday, October 4th, 2012, 11:13am

0 Likes 0 Tweets

Topics: News



PASO ROBLES, Calif. - The city of Paso Robles is working on updating their Hazard Mitigation plan and wants public input.

According to the city, the purpose of hazard mitigation is to reduce potential losses from future disasters. Mitigation plans identify the natural hazards that impact communities, identify actions to reduce losses from those hazards, and establish a coordinated process to implement the plan. As part of the update process, the City must review and revise its plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities and resubmit for FEMA approval.

The Hazard Mitigation Plan Update is an open public involvement process and the public is invited to comment on the plan during the drafting stage and prior to plan approval. The first workshop for the plan

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**CITY OF PASO ROBLES  
PRESS RELEASE**

**LOCAL HAZARD MITIGATION PLAN**

**For Immediate Release  
February 20, 2012**

**Paso Robles.** The City of Paso Robles will have a two-week public review period (2/28/14 through 3/14/14) for the updated 2014 Local Hazard Mitigation Plan. The update of the Hazard Mitigation Plan provides an open public involvement process and the public is invited to comment on the plan prior to plan approval.

The purpose of hazard mitigation is to assess risks posed by natural and human-caused hazards and to develop a mitigation strategy for reducing the City's risks. The 2014 Local Hazard Mitigation Plan was prepared in accordance with the requirements of the Disaster Mitigation Act of 2000 and would supersede the 2005 Local Hazard Mitigation Plan. The intent of the plan is to minimize the potential impacts of any type of hazardous event before it occurs.

A two-week public review period will begin on February 28, 2014, during which time a draft providing the background of the Local Hazard Mitigation Plan will be available for public review. A copy of the Draft Local Hazard Mitigation Plan will be posted on the City's web site at [www.prcity.com](http://www.prcity.com). Copies may also be obtained from the Community Development Department located at City Hall, 1000 Spring Street, Paso Robles, for the cost of reproduction.

Questions on this matter should be directed to Susan DeCarli, City Planner, at (805) 237-3970, or by email at [sdecarli@prcity.com](mailto:sdecarli@prcity.com).

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**Appendix D**  
**Plan Maintenance**

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## Appendix D Plan Maintenance

2016 LHMP - Annual Review Questionnaire				
LHMP Section	Questions	Yes	No	Comments
<b>PLANNING PROCESS</b>	Are there internal or external organizations and agencies that have been invaluable to the plan update process or to implementing a mitigation project?			
	Are there procedures (e.g., meeting announcements, plan updates) that can be done differently or more efficiently?			
	Has the Planning Committee undertaken any public outreach activities regarding the LHMP or a mitigation project?			
<b>HAZARD ANALYSIS</b>	Has any natural and/or human-caused disaster occurred in this reporting period?			
	Are there any natural and/or human-caused hazards that have not been addressed in this LHMP and should be?			
	Are new maps, reports, or studies available? If so, what are they and what have they revealed?			
<b>VULNERABILITY ANALYSIS</b>	Do any new assets need to be included?			
	Have there been changes in development trends that could create additional risks?			
<b>CAPABILITY ASSESSMENT</b>	Are there different or additional resources (financial, technical, and human) that are now available for mitigation planning?			
<b>MITIGATION STRATEGY</b>	Should new mitigation actions be added? Should any existing mitigation actions be deleted?			

2016 LHMP - Mitigation Project Progress Report (Page 1)			
<b>Progress Report Period From (date):</b>		<b>To (date):</b>	
<b>Project Title:</b>			
<b>Project ID:</b>			
<b>Description of Project:</b>			
<b>Implementing Agency:</b>			
<b>Supporting Agencies:</b>			
<b>Contact Name:</b>			
<b>Contact E-mail:</b>			
<b>Contact Number:</b>			
<b>Grant/Finance Administrator:</b>			
<b>Total Project Cost:</b>			
<b>Anticipated Cost Overrun/Underrun:</b>			
<b>Date of Project Approval:</b>			
<b>Project Start Date:</b>			
<b>Anticipated Completion Date:</b>			
<b>Summary of Progress of Project for this Reporting Period</b>			
<b>1. What was accomplished during this reporting period?</b>			
<b>2. What obstacles, problems, or delays did the project encounter, if any?</b>			
<b>3. How were the problems resolved?</b>			

**2016 LHMP - Mitigation Project Progress Report (Page 2)**

Milestones	Complete	Project Date of Completion

**Plan Goal(s) Addressed:**

<b>Goal:</b>	
<b>Indicator of Success:</b>	

Project Status		Project Cost Status	
<input type="checkbox"/>	Project on Schedule	<input type="checkbox"/>	Cost Unchanged
<input type="checkbox"/>	Project Completed	<input type="checkbox"/>	Cost Overrun*
<input type="checkbox"/>	Project Delayed*	*explain:	
*explain:		<input type="checkbox"/>	Cost Underrun*
<input type="checkbox"/>	Project Canceled	*explain:	

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RECEIVED

JAN 29 2016

City of Paso Robles,  
Community Development Dept.



FEMA

January 26, 2016

Susan DeCarli  
Community Development Department  
1000 Spring St.  
Paso Robles, CA 93446

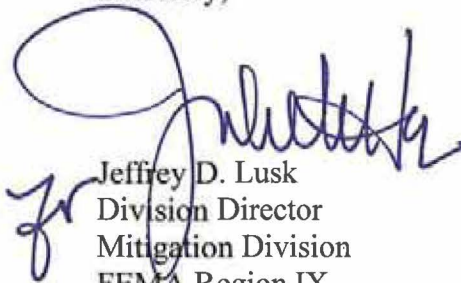
Dear Ms. DeCarli:

We have completed our review of the *City of Paso Robles Local Hazard Mitigation Plan*, and have determined that this plan is eligible for final approval pending its adoption by the City of Paso Robles.

Formal adoption documentation must be submitted to the Regional office by the lead Jurisdiction within one calendar year of the date of this letter, or the entire plan must be updated and resubmitted for review. We will approve the plan upon receipt of the documentation of formal adoption.

If you have any questions regarding the planning or review processes, please contact Phillip Wang, Hazard Mitigation Planner at (510) 627-7753, or by email at [phillip.wang@fema.dhs.gov](mailto:phillip.wang@fema.dhs.gov).

Sincerely,

  
Jeffrey D. Lusk  
Division Director  
Mitigation Division  
FEMA Region IX

cc: Marcia Sully, California State Hazard Mitigation Officer  
Jose Lara, California Office of Emergency Services, Mitigation Planning

PROOF OF PUBLICATION

LEGAL NEWSPAPER NOTICES

PLANNING COMMISSION  
PROJECT NOTICING

Newspaper: The Tribune

Date of Publication: 03/04/16

Meeting Date: 03/15/16  
City Council

Project: Paso Robles 2016 Local Hazard Mitigation Plan.

I, Monica C Hollenbeck, employee of the Community Development Department, Engineering Division, of the City of El Paso de Robles, do hereby certify that this notice is a true copy of a published legal newspaper notice for the above named project.

Signed: Monica C Hollenbeck  
Monica C Hollenbeck

CITY OF EL PASO DE ROBLES  
NOTICE OF PUBLIC HEARING

Local Hazard Mitigation Plan

NOTICE IS HEREBY GIVEN that the City Council of the City of El Paso de Robles will hold a Public Hearing to consider adoption of an update of the City's Local Hazard Mitigation Plan (LHMP).

The LHMP identifies risks posed by natural and manmade disasters to persons and properties within City Limits and it proposes measures to minimize damage from those disasters. Adoption of an LHMP is also necessary in order for the City to qualify for federal Disaster Mitigation Grant funding in the event of future disasters.

The LHMP focuses on potential impacts of disasters such as earthquakes, wildfires, droughts, dam failure, landslides, and floods. Mitigation measures focus on prevention, property protection, public education and awareness, natural resource protection, emergency services, and improved management practices for structural projects.

This hearing will take place in the City Council Chambers at the Paso Robles Library/City Hall, 1000 Spring Street, Paso Robles, California, on Tuesday, March 15, 2016, at 6:30 pm. All interested parties may appear and be heard at this hearing.

Copies of the staff report and Draft Local Hazard Mitigation Plan are available at Paso Robles City Hall, 1000 Spring Street, Paso Robles, and will be posted on the City's website: [www.prcity.com](http://www.prcity.com) prior to the hearing. Copies of the staff report may be purchased at City Hall for the cost of reproduction.

Comments on the proposed Local Hazard Mitigation Plan may be mailed to the Community Development Department, 1000 Spring Street, Paso Robles, CA 93446 or e-mailed to [sdecarli@prcity.com](mailto:sdecarli@prcity.com) provided that such comments are received prior to the time of the hearing.

If you challenge the Local Hazard Mitigation Plan in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the City Council at or prior to the public hearing.

Susan DeCarli  
City Planner  
March 4, 2016

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