Annex A City of Angels Camp

A.1 Introduction

This Annex details the hazard mitigation planning elements specific to the City of Angels Camp, a participating jurisdiction to the Calaveras County Local Hazard Mitigation Plan (LHMP). This annex is not intended to be a standalone document, but appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the City. This annex provides additional information specific to the City of Angels Camp, with a focus on providing additional details on the risk assessment and mitigation strategy for this community.

A.2 Planning Process

As described above, the City of Angels Camp followed the planning process detailed in Section 3.0 of the base plan. In addition to providing representation on the Calaveras County Hazard Mitigation Planning Committee (HMPC), the City formulated their own internal planning team to support the broader planning process requirements. LHMP planning participants included staff from the following City departments:

- Steve Flaigg – Building Inspector
- Colleen Haerr – City Engineer
- David Myers – City Engineer
- David Hanham – Planning Director
- Nathan Pry, Deputy Chief/Fire Marshall
- Todd Fordahl – Angels Camp Police Department

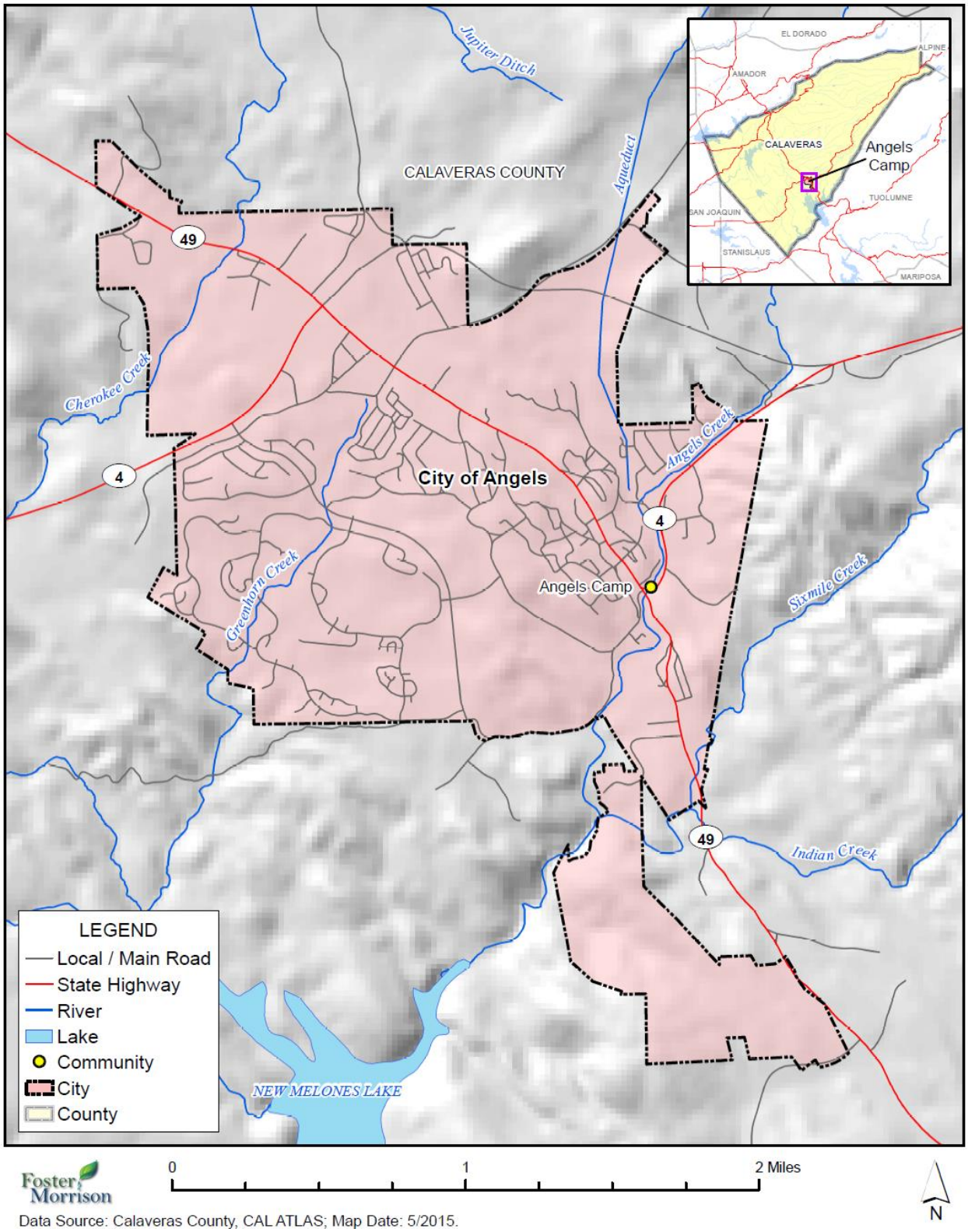
The City of Angels is a small city and so while only two of the City employees were able to attend the second planning committee meeting, much of the coordination was accomplished by emails, phone calls, and in-house discussions. The in-house discussion meetings were held by two or three people at any one time and all of the participants had a chance to review the material and provide data and input to the City of Angel's Camp Annex.

Additional details on plan participation and City representatives are included in Appendix A.

A.3 Community Profile

The community profile for the City of Angels Camp is detailed in the following sections. Figure A-1 displays a map and the location of the City of Angels Camp within Calaveras County.

Figure A-1 City of Angels Camp Base Map



A.3.1. Geography and Location

Angels Camp is situated in the southern-central portion of Calaveras County at 1,379 feet above sea level. This location is generally on the eastern fringe of the San Joaquin Valley and in the western foothills of the Sierra Nevada Range, typically above the winter fog and extreme summer heat of the lower valley and below most of the snow of the high Sierras. Highway 49 is the main north-south arterial and Highway 4 is the main east-west arterial. Cherokee Creek crosses the northwestern section of the city. Angels Creek, Sixmile Creek and Indian Creek converge to form the Middle Fork Stanislaus River near the south end of town.

A.3.2. History

The history of Angels Camp is similar to many of the towns formed in the mid-19th century during the California's Gold Rush. During the first few years, there were as many as 4,000 miners working the surface gold of Angels in the one mile area from Angels Creek to Utica Park. This source played out quickly, but as the legend goes, Bennegar Rasberry fired his muzzle loader into the ground and split a stone to reveal gold inside, thus initiating the era of hard rock mining in Angels Camp.

The main quartz vein extended from southern Altaville to Angels Creek and all along Main Street of early Angels Camp. The estimated gross recovery of gold from the 5 primary mines from 1886 to 1910 was $19,985,747 and Angels Creek ran chalky white from the mill wastes.

Mark Twain based his short story "The Celebrated Jumping Frog of Calaveras County" on a story he claimed he heard at the Angels Hotel. The event is commemorated to this day with a Jumping Frog Jubilee in May each year at the Calaveras County Fairgrounds, just southeast of Angels Camp.

A.3.3. Economy

US Census estimates show economic characteristics for the City of Angels Camp. These are shown in Table A-1.

Table A-1 City of Angels Camp Civilian Employed Population 16 years and Over

Industry	Estimated Employment	Percent
Agriculture, forestry, fishing and hunting, and mining	0	0.0%
Construction	171	11.1%
Manufacturing	185	12.0%
Wholesale trade	21	1.4%
Retail trade	107	6.9%
Transportation and warehousing, and utilities	138	8.9%
Information	17	1.1%
Finance and insurance, and real estate and rental and leasing	67	4.3%

Industry	Estimated Employment	Percent
Professional, scientific, and management, and administrative and waste management services	63	4.1%
Educational services, and health care and social assistance	447	29.0%
Arts, entertainment, and recreation, and accommodation and food services	52	3.4%
Other services, except public administration	55	3.6%
Public administration	219	14.2%

Source: US Census Bureau American Community Survey 2009-2013 Estimates

A.3.4. Population

The California Department of Finance estimated the population of the City of Angels Camp to be 3,726 in January of 2014.

A.4 Hazard Identification and Summary

This section details how the risk varies across the Calaveras County planning area. The City's planning team identified the hazards that affect the City and summarized their frequency of occurrence, spatial extent, potential magnitude, and significance specific to Angels Camp (see Table A-2). In the context of the plan's planning area, there are no hazards that are unique to Angels Camp.

Information on past occurrences and the likelihood of future occurrences is detailed in Section 4, Risk Assessment, of the base plan. Additional information for high and medium significant hazards for the City is included in the Vulnerability Assessment section of this Annex.

Table A-2 City of Angels Camp Hazard Identification Table

Hazard	Geographic Extent	Probability of Future Occurrences	Magnitude/ Severity	Significance
Agricultural Hazards	Extensive	Highly Likely	Critical	Medium
Avalanche	Limited	Likely	Negligible	Low
Dam Failure	Limited	Occasional	Catastrophic	Medium
Drought and Water Shortage	Extensive	Likely	Critical	High
Earthquake	Significant	Occasional	Limited	Low
Flood 100/500 year	Significant	Occasional	Critical	Medium
Flood: Localized Stormwater Flooding	Extensive	Highly Likely	Limited	Med/High
Landslides and Debris Flows	Limited	Occasional	Limited	Low
Levee Failure	Limited	Unlikely	Negligible	Low
Severe Weather: Extreme Heat	Extensive	Highly Likely	Limited	Low
Severe Weather: Heavy Rains and Storms	Extensive	Highly Likely	Critical	High
Severe Weather: Winter Storms and Extreme Cold	Extensive	Highly Likely	Critical	Medium
Severe Weather: Wind (include tornadoes)	Extensive	Highly Likely	Limited	Medium
Volcano	Extensive	Unlikely	Critical	Low
Fire: Wildfire	Extensive	Highly Likely	Catastrophic	High

Geographic Extent
Limited: Less than 10% of planning area
Significant: 10-50% of planning area
Extensive: 50-100% of planning area

Significance
Low: minimal potential impact
Medium: moderate potential impact
High: widespread potential impact

Magnitude/Severity
Catastrophic—More than 50 percent of property severely damaged; shutdown of facilities for more than 30 days; and/or multiple deaths
Critical—25-50 percent of property severely damaged; shutdown of facilities for at least two weeks; and/or injuries and/or illnesses result in permanent disability
Limited—10-25 percent of property severely damaged; shutdown of facilities for more than a week; and/or injuries/illnesses treatable do not result in permanent disability
Negligible—Less than 10 percent of property severely damaged, shutdown of facilities and services for less than 24 hours; and/or injuries/illnesses treatable with first aid

Probability of Future Occurrences
Highly Likely: Near 100% chance of occurrence in next year, or happens every year.
Likely: Between 10 and 100% chance of occurrence in next year, or has a recurrence interval of 10 years or less.
Occasional: Between 1 and 10% chance of occurrence in the next year, or has a recurrence interval of 11 to 100 years.
Unlikely: Less than 1% chance of occurrence in next 100 years, or has a recurrence interval of greater than every 100 years.

A.5 Vulnerability Assessment

The intent of this section is to assess Angels Camp's vulnerability separate from that of the planning area as a whole, which has already been assessed in Section 4.3 Vulnerability Assessment of the base plan. This vulnerability assessment provides an inventory of the population, property, and other assets located within the City and further analyzes those assets at risk to identified hazards ranked of medium or high significance (as listed in Table A-2) to the community. For more information about how hazards affect the County as a whole, see Chapter 4 Risk Assessment in the main plan.

A.5.1. Total Assets at Risk

This section identifies Angels Camp's total assets at risk, including values at risk, critical facilities and infrastructure, natural resources, and historic and cultural resources. Growth and development trends are also presented for the community. This data is not hazard specific, but is representative of total assets at risk within a community.

Values at Risk

The following data from the Calaveras County Assessor's Office is based on the 2014 Assessor's data. This data should only be used as a guideline to overall values in the County, as the information has some limitations. The most significant limitation is created by Proposition 13. Instead of adjusting property values annually, the values are not adjusted or assessed at fair market value until a property transfer occurs. As a result, overall value information is most likely low and does not reflect current market value of properties within the County. It is also important to note, in the event of a disaster (depending on the type), it is generally the value of the infrastructure or improvements to the land that is of concern or at risk. Generally, the land itself is not a loss. More information on the methodology is shown in Section 4.3.1 of the base plan. Table A-3 shows the Assessor's values (e.g., the values at risk) broken down by property type for the City of Angels Camp.

Table A-3 City of Angels Camp Total Exposure

Property Use	Total Parcel Count	Total Land Value	Improved Parcel Count	Improved Structure Value	Improved Other Value	Total Value
Agriculture	36	$4,625,506	16	$2,572,278	$19,700	$7,217,484
Commercial	141	$15,594,025	123	$51,379,185	$2,315,509	$69,288,719
Institutional	20	$55,249	1	$105,476	$0	$160,725
Other	167	$1,530,629	22	$6,053,579	$20,740	$7,604,948
Residential	1,784	$84,723,074	1,434	$263,550,850	$525,489	$348,799,413
Vacant Land	84	$7,099,919	3	$835,793	$0	$7,935,712
Total	**2,232**	**$113,628,402**	**1,599**	**$332,017,161**	**$2,881,438**	**$441,007,001**

Source: Calaveras County 2014 Assessor's Data

Critical Facilities and Infrastructure

For purposes of this plan, a critical facility is defined as:

> *Any facility, including without limitation, a structure, infrastructure, property, equipment or service, that if adversely affected during a hazard event may result in severe consequences to public health and safety or interrupt essential services and operations for the community at any time before, during and after the hazard event.*

This definition was refined by separating out three categories of critical facilities as further described in Section 4.3.1 of the base plan. These categories include At-Risk Populations, Essential Services, and Hazardous Materials Facilities.

An inventory of critical facilities in the City of Angels Camp from Calaveras County GIS is provided in Table A-4 and shown on Figure A-2. Details of critical facility definition, type, name, address, and jurisdiction by hazard zone are listed in Appendix F.

Table A-4 City of Angels Camp Critical Facilities: Summary Table

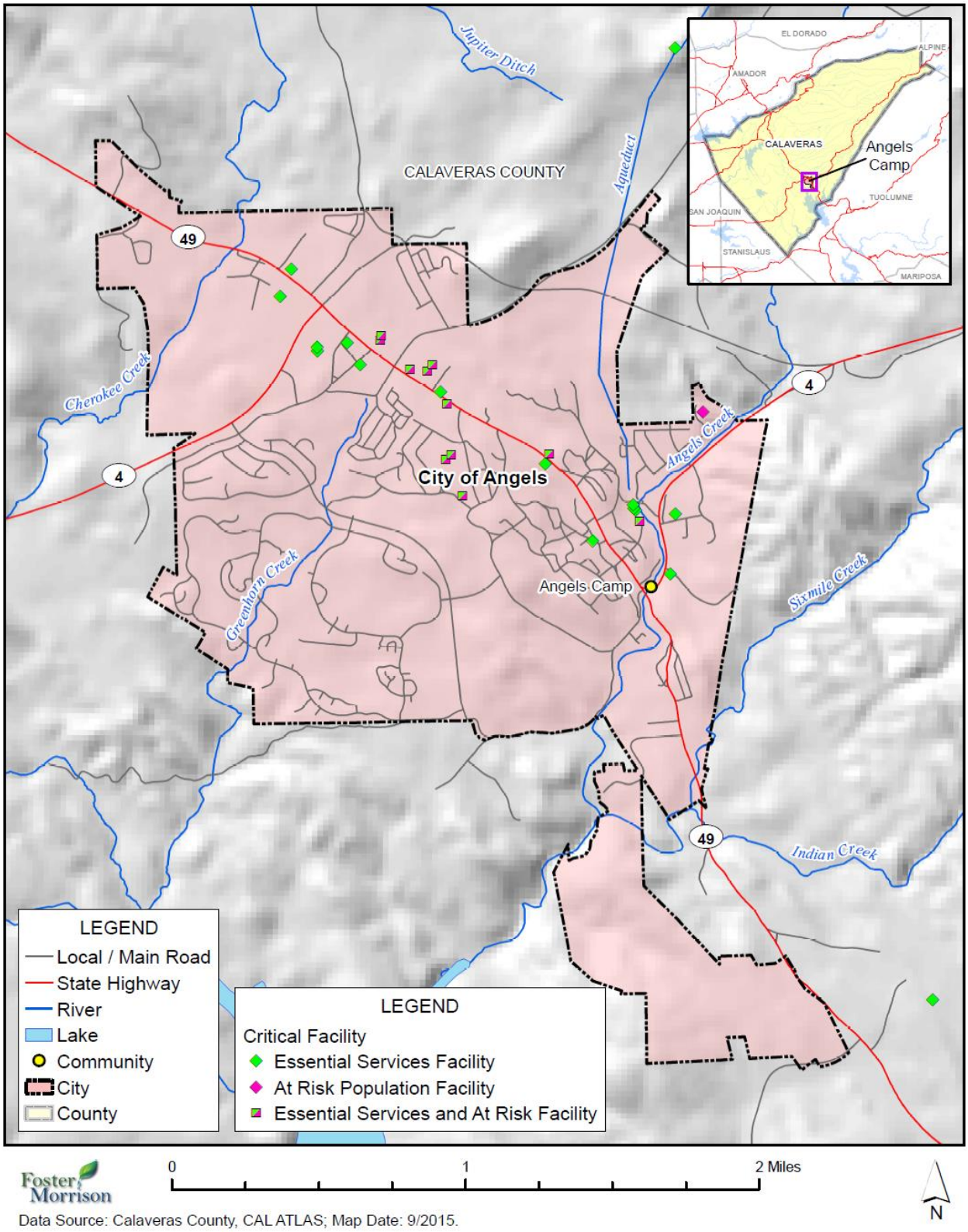
Category	Type	Facility Count
At Risk Population Facilities	Congregate Care Facility	1
	School	0
Essential Services Facilities	Community Food Bank / Pantry	4
	Emergency Medical	1
	Fire Station	4
	Government Operations	1
	Medical Health Facility	2
	Police	1
	Power Utility	1
Hazardous Materials Facilities	Hazardous Materials Facilities	0
Multiple Categories	School / Emergency Shelter	11
Total City of Angels Camp		**26**

Source: Calaveras County GIS

In addition to these facilities, the City noted four facilities that were not included in the GIS analysis of critical facilities.

- Amerigas Propane distribution center
- PG&E's Helio-pad
- Calaveras Lumber
- The Foundry

Figure A-2 City of Angels Camp Critical Facilities



Data Source: Calaveras County, CAL ATLAS; Map Date: 9/2015.

Natural Resources

The city's Sphere of Influence includes the following habitat types:

- Blue-oak foothill-pine woodlands
- Chaparral (mixed, chamise)
- Pasture (irrigated and non-irrigated)
- Cropland (primarily vineyards)
- Natural springs
- Reservoirs, Ponds
- Annual grasslands
- Blue-oak woodlands
- Valley foothill riparian (streams)
- Valley oak woodlands

A number of special status plant and animal species as defined by the U.S. Fish and Wildlife Service (USFW), California Department of Fish and Game (CDFG) and California Native Plant Society (CNPS) occur in the Angels Camp geographic sphere of influence. Table A-5 lists these special status species.

Table A-5 Special Status Plant and Animal Species Occurring or with the Potential to Occur Within the Angela Camp Sphere of Influence

Common Name	Scientific Name	Status
Invertebrates		
Valley elderberry longhorn beetle	*Desmocerus californicus dimorph*us	FT
Reptiles		
Western pond turtle	*Clemmys marmorata*	SSC
Amphibians		
California tiger salamander	*Abystoma californiense*	FC, SSC
California red-legged frog	*Rana aurora draytonii*	FC, SSC
Foothill yellow-legged frog	*Rana boylii*	SSC
Western spadefoot	*Scaphiopus hammondi*	SSC
Birds		
Cooper's hawk	*Accipiter cooperi*	SSC
Sharp-shinned hawk	*Accipiter striatus*	SSC
Tricolored blackbird	*Agelaius tricolor*	SSC
Golden eagle	*Aquila chrysaetos*	SSC, BGEPA
Ferruginous hawk	*Buteo regalis*	SSC
Willow flycatcher, nesting	*Empidonax traillii extemis*	FE
White-tailed kite	*Elanus leucurus*	SA, FPS
Merlin	*Falco mexicanus*	SSC
Bald eagle – wintering	*Haliaetus leucocephalus*	FT, BGEPA

Common Name	Scientific Name	Status
Loggerhead shrike	*Lanius ludovicianus*	SSC
California horned lark	*Phrynosoma coronatum frontale*	SSC
Burrowing owl	*Speotyto cunicularia*	SSC
Mammals		
Pallid bat	*Antrozous pallidus*	SSC
Ringtail	*Bassaricus astutus*	FPS
Greater western mastiff bat	*Eumops perotis californicus*	SSC
Western red bat	*Lasiurus blossevilli*	SSC
Pale big-eared bat	*Plecotus townsendii pallescens*	SA
Pacific western big-eared bat	*Plecotus townsendii townsendii*	SA
Plants		
Ione manzanita	*Arctostaphylos myrtifolia*	CNPS 1B, FT
Chinese Camp brodiaea	*Brodiaea pallida*	CNPS 1B, FT, SE
Hoover's calycadenia	*Calycadenia hooveri*	CNPS 1B
Mariposa cryptantha	*Cryptantha mariposae*	CNPS 1B
Tuolumne button celery	*Eryngium pinnatisectum*	CNPS 1B
Parry's horkelia	*Horkelia parryi*	CNPS 1B
Veined water lichen	*Hydrothyria venosa*	USDA
Ahart's dwarf rush	*Juncus leiospermus var. ahartii*	CNPS 1B
Stebbin's lomatium	*Lomatium stebbinsii*	CNPS 1B
Pansy monkeyflower	*Mimulus pulchellus*	CNPS 1B
Whipple's monkeyflower	*Mimulus whipplei*	CNPS 1A
Tongue-leaf copper moss	*Scopelophila cataractae*	CNPS 2

Common Name	Scientific Name	Status

Status Key
CNPS 1A California Native Plant Society, List 1A: Presumed extinct in California, but may occur or be re-discovered during the life of the plan.
CNPS 1B California Native Plant Society List 1B: Plants rare, threatened or endangered in California or elsewhere
CNPS 2 California Native Plant Society List 2: Plants rare, threatened or endangered in California, but more common elsewhere
CNPS 3 California Native Plant Society List 3: More information needed
FT: Federally listed, threatened (Federal Endangered Species Act)
FE: Federally listed, endangered (Federal Endangered Species Act)
FC: Federal candidate for listing (Federal Endangered Specie Act)
SE: State listed, endangered (California Endangered Species Act)
SSC: Species of Special Concern (California Department of Fish and Game, CDFG)
SA: California Natural Diversity Database Special Animal (California Department of Fish and Game, CDFG). May include animals considered endangered or rare pursuant to Section 15380(d) of the CEQA guidelines; animals that are biologically rare, very restricted in distribution or declining throughout their range; population(s) in California that may be peripheral to the major portion of the animal's range, but which are threatened with extirpation in California; and animals closely associated with habitat that is declining in California (e.g., wetlands, riparian, native grasslands); this category may apply to species at specific life stages (e.g., wintering, breeding, nesting).
BGEPA Bald and Golden Eagle Protection Act (United States Code Sections 668-668d)
FPS: Fully protected species, California Department of Fish and Game (California Fish and Game Code Section 4700 of Chapter 8; Section 5050 of Chapter 2, Division 6; and Chapter 1, Section 5515)
USDA: United States Department of Agriculture, Forest Service, Sensitive Species

Source: Angels Camp General Plan, Appendix 4 Conservation and Open Space

Historic and Cultural Resources

Angels Camp has a stock of historically significant homes, public buildings, and landmarks. To inventory these resources, the HMPC collected information from a number of sources. The California Department of Parks and Recreation Office of Historic Preservation (OHP) was the primary source of information. The OHP is responsible for the administration of federally and state mandated historic preservation programs to further the identification, evaluation, registration, and protection of California's irreplaceable archaeological and historical resources. OHP administers the National Register of Historic Places, the California Register of Historical Resources, California Historical Landmarks, and the California Points of Historical Interest programs. Each program has different eligibility criteria and procedural requirements. These requirements are detailed in Section 4.3.1 of the base plan. Historical resources included in the programs above are identified in Table A-6.

Table A-6 Angels Camp – OHP Historical Resources

Name/Landmark Plaque Number	National Register	State Landmark	California Register	Point of Interest	Date Listed	Town
Angels Camp (287)		X			2/4/1938	Angels Camp
Angels Hotel (734)	X	X			4/8/1960	Angels Camp
Birthplace Of Archie Stevenot (769)		X			12/1/1961	Angels Camp
Calaveras County Bank (N1366)	X				8/1/1985	Angels Camp

Name/Landmark Plaque Number	National Register	State Landmark	California Register	Point of Interest	Date Listed	Town
Carson Hill (274)		X			10/6/1937	Angels Camp
Choy, Sam, Brick Store (N1309)	X				9/20/1984	Angels Camp
Robinson's Ferry (276)		X			10/6/1937	Angels Camp
Utica Mansion (N1290)	X				5/31/1984	Angels Camp

Source: California Office of Historic Preservation

It should be noted that as defined by the National Environmental Policy Act (NEPA), any property over 50 years of age is considered a historic resource and is potentially eligible for the National Register. Thus, in the event that the property is to be altered, or has been altered, as the result of a major federal action, the property must be evaluated under the guidelines set forth by NEPA. Structural mitigation projects are considered alterations for the purpose of this regulation.

Growth and Development Trends

Past Growth and Current Land Use

Table A-7 shows the population of Angels Camp since its incorporation in 1912. Growth has been steady since the 1970s.

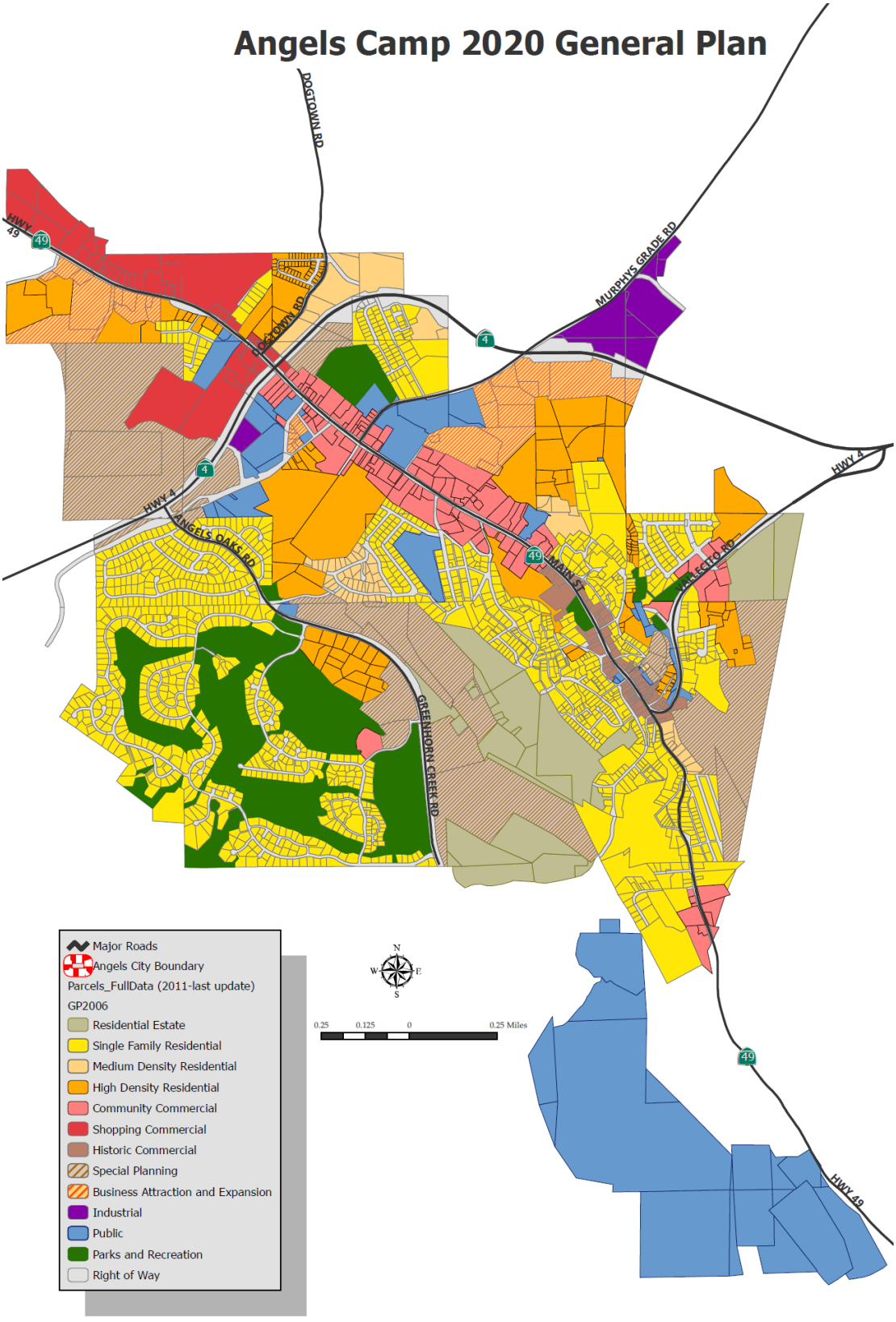
Table A-7 City of Angels Camp Historical Population Growth

Year	Population	Population Change	Population Percent Change
1912	4,000	–	–
1920	941	-3,509	-
1930	915	-26	-2.8%
1940	1,163	248	27.1%
1950	1,147	-16	-1.4%
1960	1,121	-26	-2.3%
1970	1,710	589	52.5%
1980	2,302	592	34.6%
1990	2,409	107	4.6%
2000	3,004	595	24.7%
2010	3,836	832	27.7%
2014	3,726	-110	-2.9%

Source: City of Angels Camp Housing Element, US Census Bureau, California Department of Finance

Land use from the General Plan 2020 document forthe City is shown in Figure A-3.

Figure A-3 City of Angels Camp Land Use



Special Populations

Angels Camp noted that there are groups of people in the City who may need additional help during an emergency. These groups include low income and the elderly. Evacuations are difficult for the elderly and disabled. Low income residents may see increased effects from hazards as their ability to rebuild is limited. Language barriers may also occur.

Development since 2010 Plan

Angels Camp searched for buildings built in the City since the 2010 LHMP. There were 15 residential, 1 commercial, and 0 industrial buildings completed in the City limits since 2010. None were in the floodplain or in a very high wildfire severity areas.

Future Development

Table A-7 shows the population estimates of Angels Camp for the year 2020. The General Plan Land Use Element shows 3 separate scenarios, which are reproduced here.

Table A-8 City of Angels Camp Historical Population Growth

Projection	% Growth Rate	Projected 2020 Population
Low Projection	1.80%	4,622
General Plan 2020 Projection	2.16%	4,874
High Projection	2.25%	5,138

Source: City of Angels Camp General Plan Land Use Element

The HMPC noted that development in the City is primarily occurring in residential areas. There is expected to be light amounts of commercial and industrial development in the City. There are two approved planned projects for future development inside the City boundary.

- Mark Twain Family Medical Center at 590 Stanislaus Ave., APN# 058-024-016 in the City of Angels Camp CA. This will be a commercial development.
- De Nova Homes Classics on the Ridge on Mac Cauley Ranch Road APN# 058-046-014 in the City of Angels Camp. This is a residential development (R1-PD) consisting of 50+ single family residences.

Neither development is in a floodplain or a Very High Fire Hazard Zone.

A.5.2. Priority Hazards: Vulnerability Assessment

This section provides the vulnerability assessment, including any quantifiable loss estimates, for those hazards identified above in Table A-2 as high or medium significance hazards. Impacts of past events and vulnerability of the City to specific hazards are further discussed below (see Section 4.1 Hazard Identification in the base plan for more detailed information about these hazards and their impacts on the Calaveras County planning area). Methodologies for calculating loss estimates are the same as those described in Section 4.3 of the base plan. In general, the most vulnerable structures are those located

within the floodplain or within dam inundation areas, structures and infrastructure located in WUI areas, unreinforced masonry buildings, mobile homes, and buildings built prior to the introduction of modern building codes.

An estimate of the vulnerability of the City to each identified hazard, in addition to the estimate of risk of future occurrence, is provided in each of the hazard-specific sections that follow. Vulnerability is measured in general, qualitative terms and is a summary of the potential impact based on past occurrences, spatial extent, and damage and casualty potential. It is categorized into the following classifications:

- **Extremely Low**—The occurrence and potential cost of damage to life and property is very minimal to nonexistent.
- **Low**—Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal.
- **Medium**—Moderate potential impact. This ranking carries a moderate threat level to the general population and/or built environment. Here the potential damage is more isolated and less costly than a more widespread disaster.
- **High**—Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past.
- **Extremely High**—Very widespread with catastrophic impact.

Agricultural Hazards

Likelihood of Future Occurrence—Highly Likely
Vulnerability—Medium

According to the US Department of Agriculture (USDA), every year natural disasters, such as droughts, earthquakes, extreme heat and cold, floods, fires, earthquakes, hail, landslides, and tornadoes, challenge agricultural production. Because agriculture relies on the weather, climate, and water availability to thrive, it is easily impacted by natural events and disasters. Agricultural impacts from natural events and disasters most commonly include: contamination of water bodies, loss of harvest or livestock, increased susceptibility to disease, and destruction of irrigation systems and other agricultural infrastructure. These impacts can have long lasting effects on agricultural production including crops, forest growth, and arable lands, which require time to mature.

Establishment of an invasive species would be detrimental to the agricultural industry of Calaveras County because of product losses, stringent quarantine regulations, loss of exporting opportunities and increased treatment costs. The introduction of exotic plants influences wildlife by displacing forage species, modifying habitat structure—such as changing grassland to a forb-dominated community—or changing species interactions within the ecosystem. In addition, invasive plants:

- Increase wildfire potential
- Reduce water resources
- Accelerate erosion and flooding
- Threaten wildlife

- Degrade rangeland, cropland, and timberland
- Diminish outdoor recreation opportunities.

An agricultural industry does exist inside the City, primarily livestock, small farming, and agricultural education at the school. In addition, agriculture is a $29 million industry in Calaveras County. Some of the revenue from agricultural production is spent in Angels Camp. The removal or reduction of this large source of revenue would affect local businesses and industries, and could remove a portion of the tax base that the City depends on to provide essential services.

Future Development

Ag hazards and the related economic impacts could affect future development. Should economic issues arise due to agricultural hazards, it may limit future development due to economic concerns.

Dam Failure

Likelihood of Future Occurrence—Occasional
Vulnerability—High

Dam failure could occur in one of the many high or significant hazard dams, both large or small, in Calaveras County, which could cause loss of life and property, flooding, interruption of transportation (in particular the Highway 4/49 bridges at the southern end of the city), communication systems, etc. The City's 2020 General Plan Safety Element reviewed the risk of dam failure to the City. The dams highlighted in the Safety Element are shown on Table A-9.

Table A-9 Dams with Potential to Affect Angels Camp

Name	Hazard	County	Owner	River	Near City	EAP
Ross	S	Calaveras	Jon & Angelita Janofsky	French Gulch	Angels City	Y
Holman	S	Calaveras	–	Angels Creek Tributary	–	Y
New Spicer Meadow	H	Tuolumne	Calaveras Co Water District	Highland Creek		Y
Alpine Main	S	Alpine	Northern California Power	Silver Creek	Bear Valley	Y
Alpine Auxiliary No. 2	S	Alpine	Northern California Power	Silver Creek	Bear Valley	Y
Alpine Auxiliary No. 3	S	Alpine	Northern California Power	Silver Creek	Bear Valley	Y
Alpine Auxiliary No. 4	S	Alpine	Northern California Power	Silver Creek	Bear Valley	Y
Utica Main	S	Alpine/ Tuolumne	Northern California Power	North Fork Stanislaus - Tributary	Bear Valley	Y
Utica Auxiliary No. 2	S	Alpine/ Tuolumne	Northern California Power	North Fork Stanislaus - Tributary	Bear Valley	Y

Name	Hazard	County	Owner	River	Near City	EAP
Utica Auxiliary No. 3	S	Alpine/ Tuolumne	Northern California Power	North Fork Stanislaus - Tributary	Bear Valley	Y
Utica Auxiliary No. 4	S	Alpine/ Tuolumne	Northern California Power	North Fork Stanislaus - Tributary	Bear Valley	Y
Utica Auxiliary No. 5	S	Alpine/ Tuolumne	Northern California Power	North Fork Stanislaus - Tributary	Bear Valley	Y
Union Main	L	Alpine	Northern California Power	North Fork Stanislaus - Tributary	Bear Valley	N
Union Auxiliary No. 2	L	Alpine	Northern California Power	North Fork Stanislaus - Tributary	Bear Valley	N
Union Auxiliary No. 3	L	Alpine	Northern California Power	North Fork Stanislaus - Tributary	Bear Valley	N
Union Auxiliary No. 4	L	Alpine	Northern California Power	North Fork Stanislaus - Tributary	Bear Valley	N
Union Auxiliary No. 7	L	Alpine	Northern California Power	North Fork Stanislaus - Tributary	Bear Valley	N

Source: Cal OES, National Performance of Dams Database

Findings from the Safety Element are presented below.

Large dam failures that could ultimately inundate portions of the city include those at the Utica Reservoir (formed by five small dams located upstream of the North Fork Diversion Dam and holding 2,334 acre feet), Union Reservoir (located upstream of the Utica Reservoir and formed by seven small dams and containing 3,130 acre feet), and Lake Alpine (a series of five small dams forming a 4,117 acre-foot reservoir). These facilities are operated by the Northern California Power Agency (NCPA) as part of NCPA's Upper Utica Project, which is located in the Stanislaus National Forest and managed by the U.S. Forest Service. These reservoirs regulate water flows for downstream power generation.

The New Spicer Meadow Reservoir is part of the North Fork Stanislaus River Hydroelectric Project, which is operated by the NCPA in cooperation with the licensee, the Calaveras County Water District (CCWD). Failure of dams at this reservoir also could impact Angels Camp. The facility holds 4,060 acre feet of water.

FERC regulations require the operators of these reservoirs to prepare an Emergency Action plan and inundation map indicating areas that could be affected by dam failure. Those maps indicate flooding would occur within the existing Stanislaus River basin without overtopping the river banks, and without impacts to Angels Camp.

Failure of the dam at Ross Reservoir has the potential to inundate French Gulch and the Utica Ditch. The capacity of Ross Reservoir is unknown. An analysis of the potential threat to people and property within Angels Camp from a failure of the Ross Reservoir Dam has not been conducted.

Failure of the dam at Holman Reservoir (the city's wastewater treatment facility) would result in flows into Angels Creek downstream of the city. While this failure would affect water quality within Angels

Creek, it is not anticipated to create a threat to life or property within the city limits. Further, the city's drinking water supply is located well up-stream of the facility and is unlikely to be affected by failure of the Holman Reservoir dam.

Results of a failure of the dam at the Union Public Utility District Water Treatment facility located near Murphy's has not been studied, but could result in inundation of portions of the city.

Future Development

Development is expected to continue to occur in the City. While future development may place more structures in the dam inundation areas, due to the low risk of dam failure, development will continue in these areas.

Drought and Water Shortage

Likelihood of Future Occurrence—Likely
Vulnerability—High

Drought is different than many of the other natural hazards in that it is not a distinct event and usually has a slow onset. Drought can severely impact a region both physically and economically. Drought affects different sectors in different ways and with varying intensities. Adequate water is the most critical issue and is critical for manufacturing, tourism, recreation, and commercial and domestic use. As the population in the area continues to grow, so will the demand for water.

Based on historical information, the occurrence of drought in California, including the City of Angels Camp, is cyclical, driven by weather patterns. Drought has occurred in the past and will occur in the future. Periods of actual drought with adverse impacts can vary in duration, and the period between droughts is often extended. Although an area may be under an extended dry period, determining when it becomes a drought is based on impacts to individual water users. The vulnerability of the City of Angels Camp to drought is City-wide, but impacts may vary and include reduction in water supply and an increase in dry fuels.

The most significant qualitative impacts associated with drought in the planning area are those related to water intensive activities such as wildfire suppression and protection, municipal usage, commerce, tourism, and recreation. Voluntary conservation measures are typically implemented during extended droughts. A reduction of electric power generation and water quality deterioration are also potential problems. Drought conditions can also cause soil to compact and not absorb water well, potentially making an area more susceptible to flooding.

Future Development

As the population in the area continues to grow, so will the demand for water. Water shortages in the future may be worsened by drought, as the City relies on surface water for its water source. Increased planning will be needed to account for population growth and increased water demands.

Flood: 100/500 year

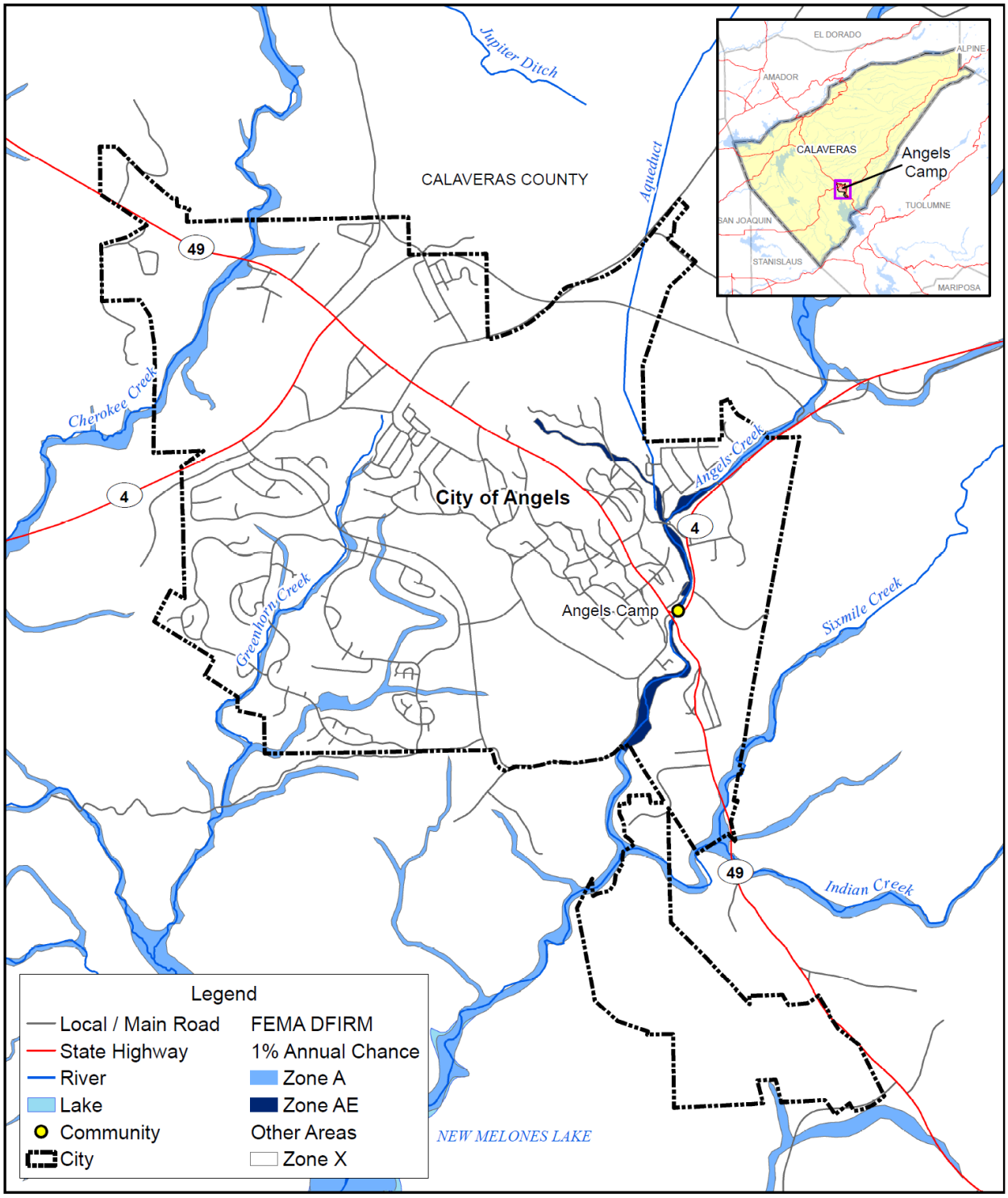
Likelihood of Future Occurrence—Occasional
Vulnerability—High

As previously described in Section 4.2.11 of the main plan, the Calaveras County Planning Area and the City of Angels Camp have been subject to historical flooding. Within the City of Angels Camp, much of the flood damage occurs as a result of localized stormwater flooding, with limited flood damage occurring in the 100-year and greater floodplains.

ARE THERE ANY AREAS IN THE CITY THAT HAVE FLOOD ISSUES?

The City of Angels Camp has properties in the 100-year flood zone as defined by the Federal Emergency Management Agency (FEMA). This can be seen in Figure A-4.

Figure A-4 City of Angels Camp DFIRM Flood Zones



Data Source: FEMA DFIRM/NFHL 12/17/2010, Calaveras County, CAL ATLAS; Map Date: 5/2015.

Assets at Risk

GIS was used to determine the possible impacts of flooding within the City of Angels Camp. The methodology described in Section 4.3.6 of the base plan was followed in determining structures and values at risk to the 1% annual chance flood event. Table A-10 and Table A-11 contain information for incorporated City of Angels Camp only. Table A-10 shows the number of improved parcels and associated structure and contents values at risk to the each of the FEMA flood zones by property use type using the DFIRM data in the unincorporated areas and Table A-11 shows potential losses summarized by 1% annual chance flood events with loss estimates and loss ratios. Methodology for the loss ratios was shown in Section 4.3.6 of the base plan.

Table A-10 City of Angels Camp – Count and Improved Value by Property Use and Detailed 1% Annual Chance Flood Zone

FEMA Flood Zone	Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Improved Value	Total Value
Zone A	Agricultural	0	0	$0	$0	$0
	Commercial	2	2	$159,967	$373,144	$533,111
	Industrial	1	1	$146,626	$154,212	$300,838
	Institutional	0	0	$0	$0	$0
	Other	3	0	$2,721	$0	$2,721
	Residential	9	9	$630,883	$3,010,247	$3,641,130
	Vacant Land	13	1	$659,762	$315,000	$974,762
Total Zone A		**28**	**13**	**$1,599,959.00**	**$3,852,603.00**	**$5,452,562.00**
Zone AE	Agricultural	0	0	$0	$0	$0
	Commercial	1	1	$32,000	$208,000	$240,000
	Industrial	0	0	$0	$0	$0
	Institutional	2	0	$0	$0	$0
	Other	3	0	$8,295	$0	$8,295
	Residential	8	7	$313,431	$734,164	$1,047,595
	Vacant Land	5	0	$46,882	$0	$46,882
Total Zone AE		**19**	**8**	**$400,608.00**	**$942,164.00**	**$1,342,772.00**
Zone X	Agricultural	7	2	$24,911	$52,255	$77,166
	Commercial	132	116	$13,543,511	$42,688,750	$56,232,261
	Industrial	4	3	$191,786	$633,962	$825,748
	Institutional	46	15	$2,329,733	$15,338,831	$17,668,564
	Other	115	9	$884,492	$707,220	$1,591,712
	Residential	1,462	1,429	$71,027,258	$262,281,765	$333,309,023
	Vacant Land	419	4	$23,626,144	$881,049	$24,507,193

FEMA Flood Zone	Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Improved Value	Total Value
Total Zone X		**2,185**	**1,578**	**$111,627,835.00**	**$322,583,832.00**	**$434,211,667.00**
Grand Totals		**2,232**	**1,599**	**$113,628,402**	**$327,378,599**	**$441,007,001**

Source; FEMA DFIRM 2010, Calaveras County Assessor's 2014 Data, County Parcel Layer 2013

Table A-11 City of Angels Camp – Flood Loss Estimates

Flood Zone	Improved Parcel Count	Improved Value	Estimated Contents Value	Total Value	Loss Estimate	Loss Ratio
1% Annual Chance	21	$4,794,767	$4,794,767	$9,274,534	$1,854,906.80	0.42%
Total	**21**	**$4,794,767**	**$4,794,767**	**$9,274,534**	**$1,854,906.80**	**0.42%**

Source; FEMA DFIRM 2010, Calaveras County Assessor's 2014 Data, County Parcel Layer 2013

According to Table A-10 and Table A-11, the City of Angels Camp has 21 improved parcels and $9,274,534 of structure and contents value in the 1% annual chance floodplain. These values can be refined a step further. Applying the 20 percent damage factor as previously described, there is a 1% chance in any given year of a flood event causing roughly $1,854,906.80 in damage in the City of Angels Camp. A loss ratio of 0.42% indicates that losses in Angels Camp to flood would be relatively minor, as less than half a percent of the total values in the City would be damaged. The remaining 1,578 improved parcels within the City are located outside of the 1% or 0.2% annual chance floodplains in Zone X.

Flooded Acres

Also of interest is the land area affected by the various flood zones. The following is an analysis of flooded acres in the City in comparison to total area within the City limits. The same methodology, as discussed in Section 4.3.6 of the base plan, was used for the City of Angels Camp as well as for the County as a whole. Table A-12 represents a detailed and summary analysis of total acres for each FEMA DFIRM flood zone in the City.

Table A-12 City of Angels Camp – Flooded Acres

Flood Zone	Property Use	Total Flooded Acres	Improved Flooded Acres	% of Improved Flooded Acres
Zone A	Agricultural	0.00	0.00	0.0%
	Commercial	28.96	28.96	100.0%
	Industrial	1.51	1.51	100.0%
	Institutional	0.00	0.00	0.0%
	Other	23.47	0.00	0.0%
	Residential	10.35	10.35	100.0%
	Vacant Land	46.51	39.47	84.9%
	Total Zone A	**110.8**	**80.29**	**72.5%**

Flood Zone	Property Use	Total Flooded Acres	Improved Flooded Acres	% of Improved Flooded Acres
Zone AE	Agricultural	0.00	0.00	0.0%
	Commercial	0.16	0.16	100.0%
	Industrial	0.00	0.00	0.0%
	Institutional	1.25	0.00	0.0%
	Other	0.93	0.00	0.0%
	Residential	2.14	2.01	94.3%
	Vacant Land	4.98	0.00	0.0%
	Total Zone AE	**9.46**	**2.17**	**22.9%**
Total 1%		**120.26**	**82.47**	**68.6%**
0.2% Chance	Agricultural	0.00	0.00	0.0%
	Commercial	0.00	0.00	0.0%
	Industrial	0.00	0.00	0.0%
	Institutional	0.00	0.00	0.0%
	Other	0.00	0.00	0.0%
	Residential	0.00	0.00	0.0%
	Vacant Land	0.00	0.00	0.0%
Total 0.2%		**0.00**	**0.00**	**0.0%**

Source: FEMA DFIRM 2010, County Parcel Layer 2013

Population at Risk

The DFIRM flood zones were overlayed on the parcel layer. Those residential parcel centroids that intersect the severity zones were counted and multiplied by the 2010 Census Bureau average household factors for Angels Camp. According to this analysis, there is a total population of 39 residents of the City at risk to flooding. This is shown in Table A-15.

Table A-13 City of Angels Camp – Count of Improved Residential Parcels and Population by Flood Zone

Flood Zone	Improved Residential Parcels	Population*
A	9	21
AE	8	18
Total	**17**	**39**

Source: Calaveras County 2014 Assessor's Data; FEMA DFIRM 2010, US Census Bureau

* Average household populations from the 2010 US Census were used: Angels Camp – 2.30.

Critical Facilities at Risk

A separate analysis was performed on the critical facility inventory in Calaveras County and Angels Camp. GIS was used to determine whether the facility locations intersects a DFIRM flood hazard areas,

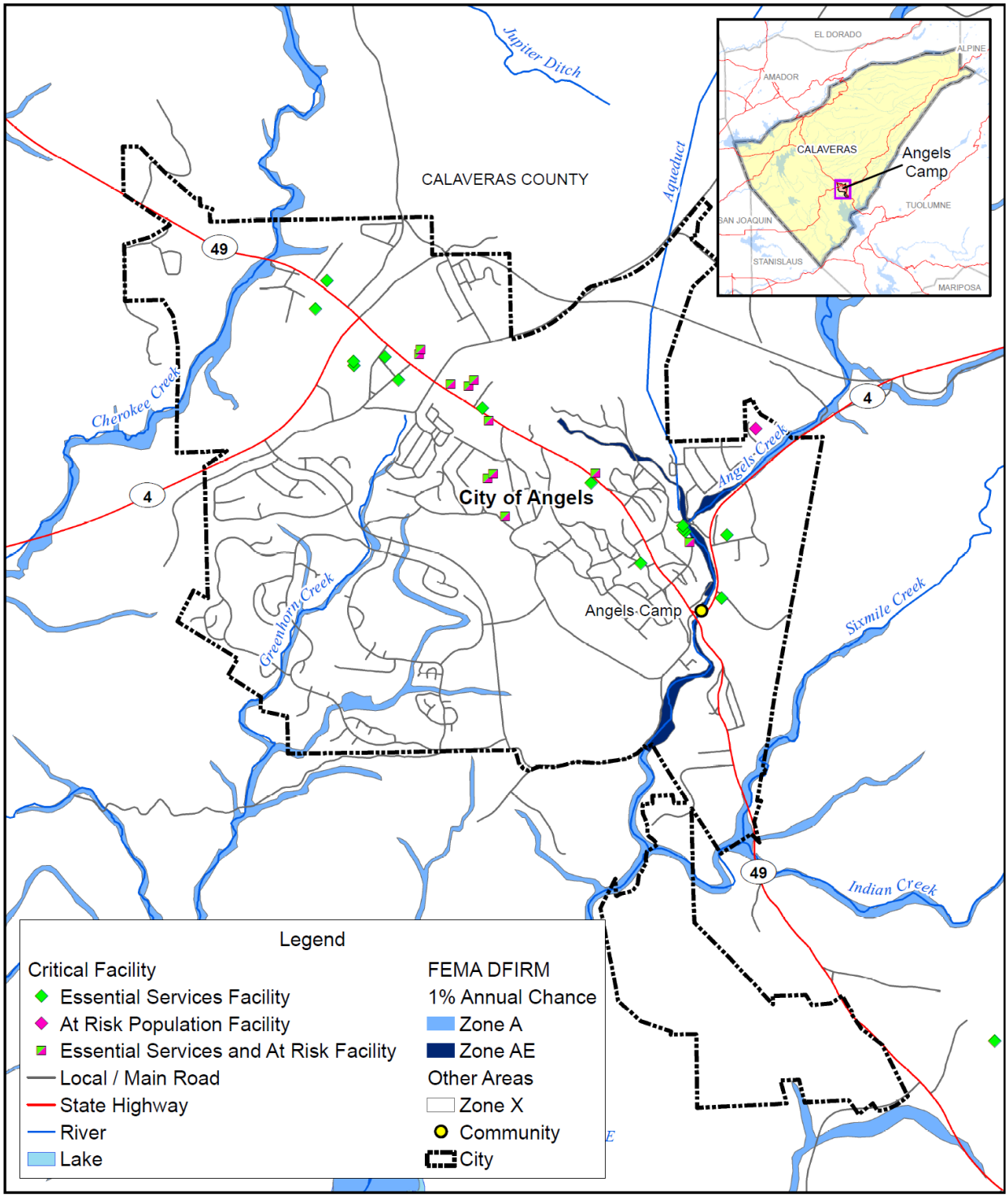
and if so, which zone it intersects Details of critical facilities in the floodplain in the City of Angels Camp are shown in Figure A-5 and Table A-14. As shown on the table and figure, Angels Camp has no critical facilities located in DFIRM flood zones. Details of critical facility definition, type, name and address and jurisdiction by flood zone are listed in Appendix F.

Table A-14 City of Angels Camp Critical Facilities in DFIRM Flood Zones

Flood Zone	Category	Facility Count
0.2% Annual Chance	At Risk Population Facilities	-
	Essential Services Facilities	-
	Hazardous Materials Facilities	-
	Multiple Categories	-
	Total 0.2% Annual Chance	**0**
1% Annual Chance (Zone A, AE)	At Risk Population Facilities	-
	Essential Services Facilities	-
	Hazardous Materials Facilities	-
	Multiple Categories	-
	Total 1% Annual Chance	**0**

Source: Calaveras County GIS, FEMA DFIRM 2010

Figure A-5 City of Angels Camp Critical Facilities in DFIRM Flood Zones



Data Source: FEMA DFIRM/NFHL 12/17/2010, Calaveras County, CAL ATLAS; Map Date: 9/2015.

Insurance Coverage, Claims Paid, and Repetitive Loss

The City of Angels Camp joined the National Flood Insurance Program (NFIP) on September 4, 1984. The City does not participate in the CRS program. NFIP data indicates that as of September 15, 2014, there were 28 flood insurance policies in force in the City with $9,666,000 of coverage. There have been 3 historical claims for flood losses totaling $13,701. NFIP data further indicates that there are 0 repetitive loss (RL) and 0 severe repetitive loss buildings in the City.

Future Development

No development is expected to occur in the floodplain in the City. If development were to occur, it would be subject to the development standards of the City's floodplain ordinance.

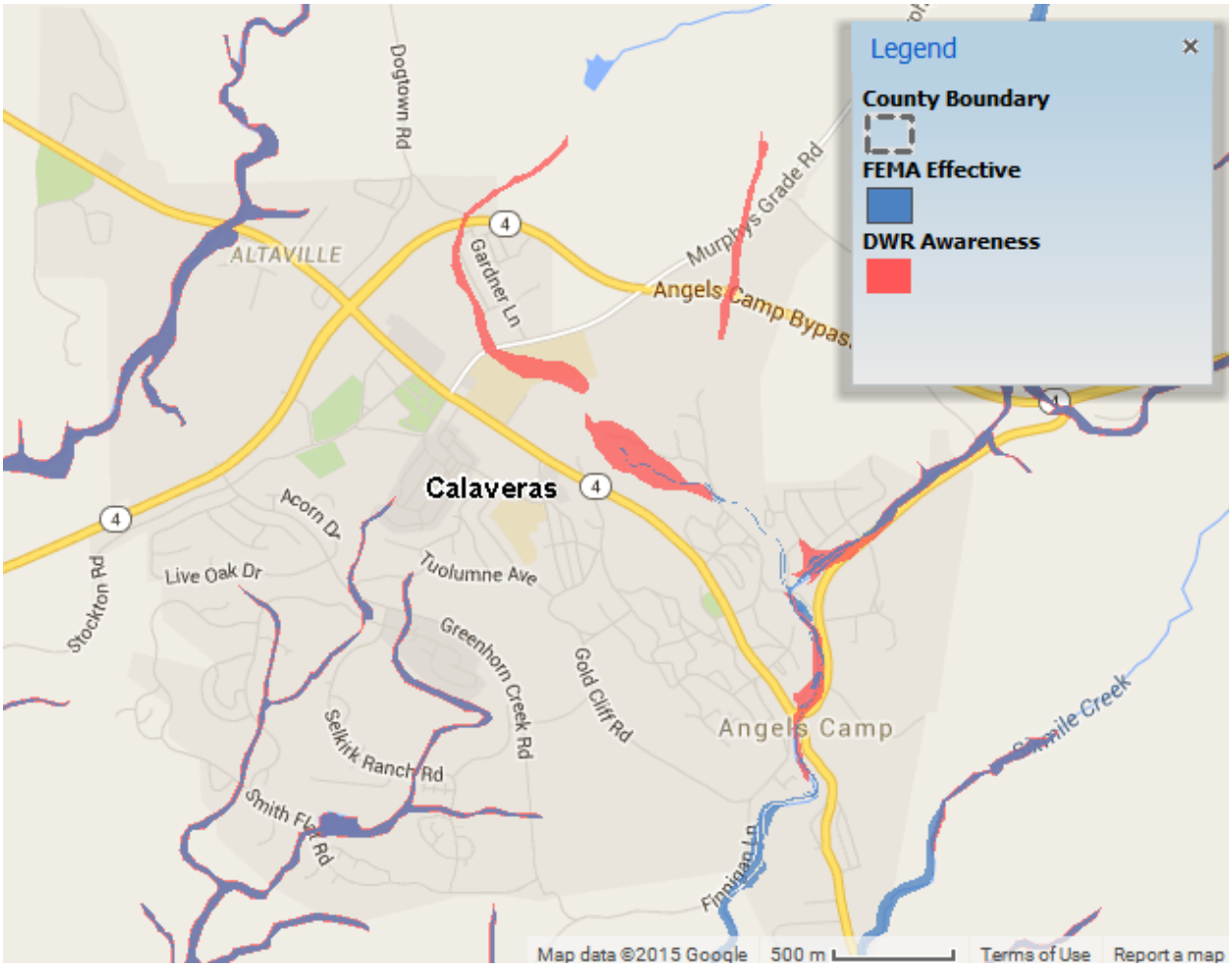
California Department of Water Resources Best Available Maps (BAM)

The FEMA regulatory maps provide just one perspective on flood risks in Calaveras County. Senate Bill 5 (SB 5), enacted in 2007, authorized the California DWR to develop the Best Available Maps (BAM) displaying 100- and 200-year floodplains for areas located within the Sacramento-San Joaquin (SAC-SJ) Valley watershed. SB 5 requires that these maps contain the best available information on flood hazards and be provided to cities and counties in the SAC-SJ Valley watershed. This effort was completed by DWR in 2008. DWR has expanded the BAM to cover all counties in the State and to include 500-year floodplains.

Different than the FEMA DFIRMs which have been prepared to support the NFIP and reflect only the 100-year event risk, the BAMs are provided for informational purposes and are intended to reflect current 100-, 200-, and 500-year event risks using the best available data. The 100-year floodplain limits on the BAM are a composite of multiple 100-year floodplain mapping sources. It is intended to show all currently identified areas at risk for a 100-year flood event, including FEMA's 100-year floodplains. The BAM are comprised of different engineering studies performed by FEMA, Corps of Engineers, and DWR for assessment of potential 100-, 200-, and 500-year floodplain areas, as well as for flood awareness areas. These studies are used for different planning and/or regulatory applications. They are for the same flood frequency, however, they may use varied analytical and quality control criteria depending on the study type requirements.

The value in the BAMs is that they provide a bigger picture view of potential flood risk to the City than that provided in the FEMA DFIRMs. This provides the community and residents with an additional tool for understanding potential flood hazards not currently mapped as a regulated floodplain. Improved awareness of flood risk can reduce exposure to flooding for new structures and promote increased protection for existing development. Informed land use planning will also assist in identifying levee maintenance needs and levels of protection. By including the FEMA 100-year floodplain, it also supports identification of the need and requirement for flood insurance. With respect to the BAM maps for Calaveras County and the City of Angels Camp, on the FEMA effective and DWR Awareness maps have been identified. The BAM maps for the City are shown in Figure A-6.

Figure A-6 City of Angels Camp Best Available Maps



Source: California Department of Water Resources

Flood: Localized Stormwater Flooding

Likelihood of Future Occurrence—Highly Likely
Vulnerability—Medium

Localized flooding occurs at various times throughout the year and there are several areas of concern unique to the City. Historically, the City has been at risk of flooding primarily during the spring months when the waterway/creek systems swell with heavy rainfall. This may produce local street flooding due to high water in the waterway/creek systems causing outfalls to back-up into the drainage inlets. Localized flooding in the City occurs along Cherokee, Greenhorn, Angels, Sixmile, and Indian Creek. The HMPC noted that, depending on the duration and strength of rain storms, all roads in the City may see effects of localized flooding.

Future Development

Future development in the City will add more impervious surfaces which will drain to existing waterways in the City. The City will need to be proactive to ensure that increased development has proper siting and drainage for stormwaters. The risk of localized flooding to future development will be minimized by accurate recordkeeping of repetitive localized storm activity. Mitigating the root causes of the localized stormwater flooding will reduce future risks of losses.

Severe Weather: Winter Storms and Extreme Cold

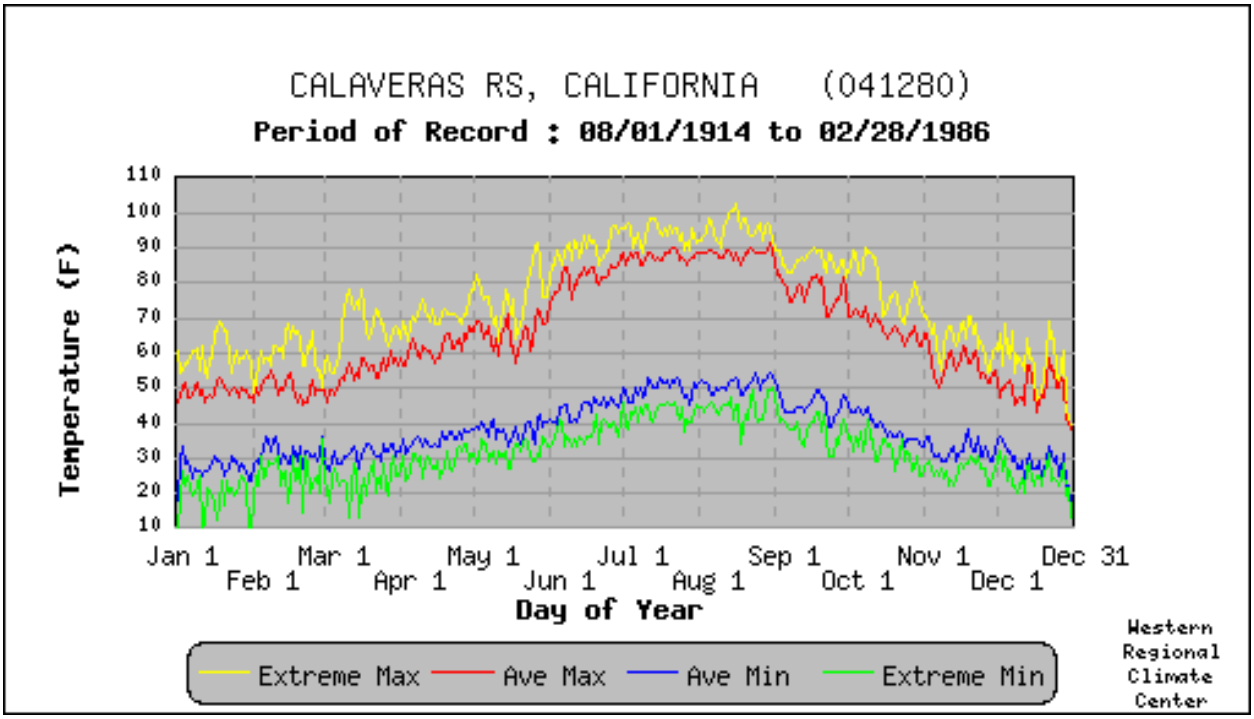
Likelihood of Future Occurrence—Highly Likely
Vulnerability——High

The threat to public safety is typically the greatest concern when it comes to impacts of winter storms. But these storms can also impact the local economy by disrupting transportation and commercial activities. Winter storms are occasionally severe enough to overwhelm snow removal efforts, transportation, land business and commercial activities. Travelers on highways in the County, particularly along remote stretches of road, can become stranded in the City, requiring search and rescue assistance and shelter provisions.

Structural losses to buildings are possible from severe snow loads on rooftops. Older buildings are more at risk, as are buildings with large flat rooftops (often found in public buildings such as schools). Another common impact of blizzards and severe winter storms on the planning area is the loss of power. The weight of heavy continued snowfall and/or ice accumulating on power lines often brings them to the ground causing service disruptions for thousands of customers. This can cause a loss of community water and sewer services, as well as the supply of gasoline, as these services almost always require electrical pumps. In addition, prolonged power outages can mean loss of food to grocery stores, large facilities that provide feeding services (such as hospitals and nursing homes), and restaurants.

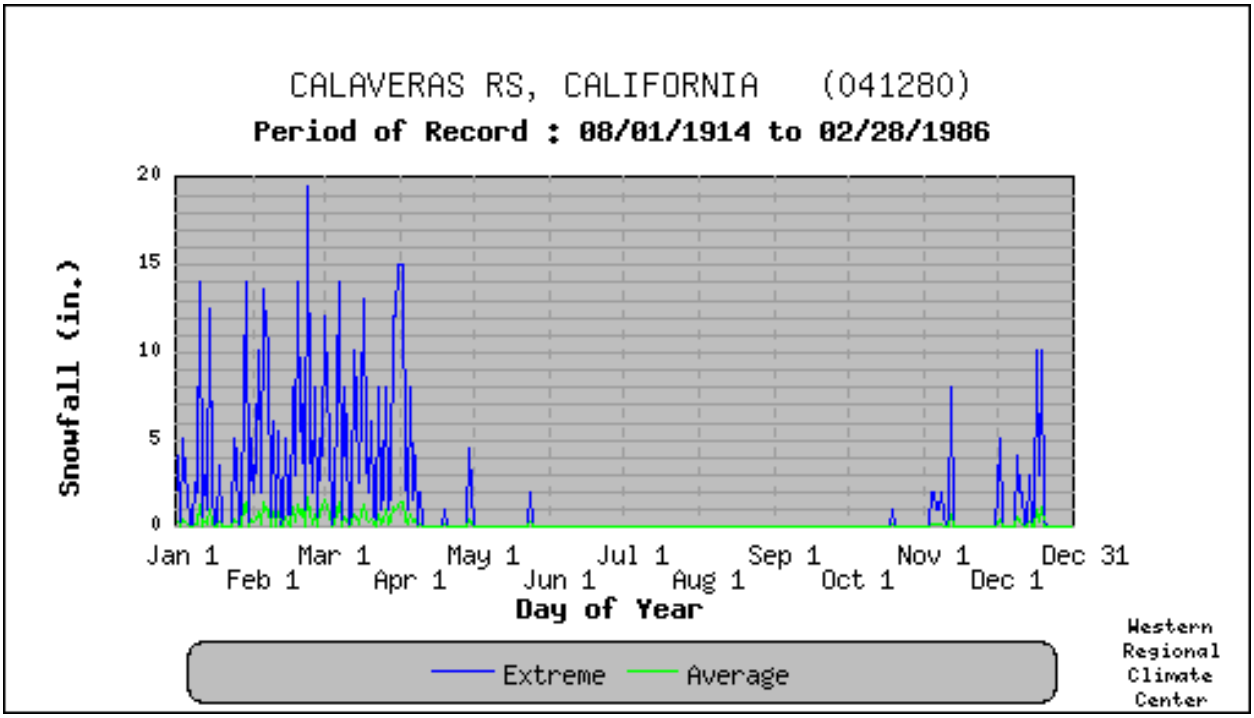
The City experiences temperatures below 32 degrees during the winter months. The temperature moves to the teens in rather extreme situations (see Figure A-7). Many months see a high number of days where daily low temperatures fall below 32°F (see Table A-15). On average, 123.4 days a year see low temperatures below 32°F. Generally, people who live and work in this weather are prepared to cope with these extremes. The City also sees 41.2 inches of snowfall per year on average. Daily averages and extremes are shown on Figure A-8.

Figure A-7 City of Angels Camp – Extreme Temperatures



Source: Western Regional Climate Center, Calaveras Ranger Station

Figure A-8 City of Angels Camp – Snowfall Average and Extremes



Source: Western Regional Climate Center, Calaveras Ranger Station

Table A-15 Extreme Low Temperatures in Angels Camp

Month	Temperature	Date	Month	Temperature	Date
January	10°	1/1/1915	July	37°	7/26/1916
February	14°	2/21/1920	August	34°	8/18/1916
March	13°	3/11/1917	September	30°	9/23/1920
April	23°	4/30/1919	October	25°	10/30/1919
May	27°	5/27/1919	November	22°	11/11/1915
June	33°	6/01/1916	December	13°	12/31/1915

Source: Western Regional Climate Center, Calaveras Ranger Station

Limited data on freeze impacts in the City was available during the development of this hazard's vulnerability. Areas prone to freezing temperatures are identified normally on a nation-wide assessment scale, which doesn't allow detailed results on specific structures. Secondary impacts of extreme cold can affect the supporting mechanisms or systems of a community's infrastructure. For example, when extreme cold is coupled with high winds or ice storms, power lines may be downed, resulting in an interruption in the transmission of that power shutting down electric furnaces, which may lead to frozen pipes in homes and businesses.

The elderly population in the planning area is most vulnerable to temperature extremes. The residents of elder care facilities are especially vulnerable to extreme temperature events. It is encouraged that such facilities have emergency plans or backup power to address power failure during times of extreme cold.

Future Development

Vulnerability to winter storms and freeze will increase as the average age of the population in the City shifts. Greater numbers of future senior citizens will result from the large number of baby boomers in the City. The elderly are more at risk to the effects of freeze. However, many of the residents of the City are accustomed to living with freeze and take precautions to guard against the threat of freeze. Future development in the City should reduce the risk to frozen pipes, as building codes in the City are well enforced.

Severe Weather: Heavy Rains and Storms

Likelihood of Future Occurrence—Highly Likely
Vulnerability—Medium

According to historical hazard data, severe weather is a regular occurrence in Angels Camp. Damage and disaster declarations related to severe weather have occurred and will continue to occur in the future. Heavy rain and thunderstorms are the most frequent type of severe weather occurrence in the area. Wind and lightning often accompany these storms and have caused damage in the past. Problems associated with the primary effects of severe weather include flooding, pavement deterioration, washouts, high water crossings, landslide/mudslides, debris flows, historic rock wall failures, and downed trees. During times of drought or during storms with limited precipitation, lightning can ignite wildfires as well.

Future Development

The City enforces the state building code and other ordinances, which regulate construction techniques that minimize damage from heavy storms and rain. Future development in the City is subject to these building codes. New critical facilities such as communications towers are required by code to withstand hail damage, lightning, and heavy rains.

Severe Weather: Wind (include tornadoes)

Likelihood of Future Occurrence—Highly Likely
Vulnerability—Medium

High winds are common occurrences in the City throughout the entire year. Straight line winds are primarily a public safety and economic concern. Windstorms can cause damage to structures and power lines which in turn can create hazardous conditions for people. Debris flying from high wind events can shatter windows in structures and vehicles and can harm people that are not adequately sheltered. Tornadoes in the City are rare, but would be devastating if one hit the City.

Losses from straight line winds and tornadoes include:

- Erosion (soil loss)
- Power line impacts and economic losses from power outages
- Occasional building damage, primarily to roofs and out-buildings

Campers, mobile homes, barns, and sheds and their occupants are particularly vulnerable as windstorm events in the region can be sufficient in magnitude to overturn these lighter structures. Livestock that may be contained in these structures may be injured or killed, causing economic harm to the rancher who owns both the structure and the livestock. Overhead power lines are vulnerable and account for the majority of historical damages. State highways can be vulnerable to high winds and dust storms, where high profile vehicles may be overturned by winds and lowered visibility can lead to multi-car accidents.

Future Development

Future development projects should consider windstorm hazards at the planning, engineering and architectural design stage with the goal of reducing vulnerability. The City enforces the state building code and other ordinances, which regulate construction techniques that minimize damage from windstorms. Future development in the City is subject to these building codes.

Wildfire

Likelihood of Future Occurrence—Highly Likely
Vulnerability—High

Major fires are generally categorized as either a conflagration or wildland/forestland. A conflagration may involve residential or commercial areas and spreads across both natural and constructed barriers. Wildland is associated with open range grasslands and into the foothills of a particular area. Because of

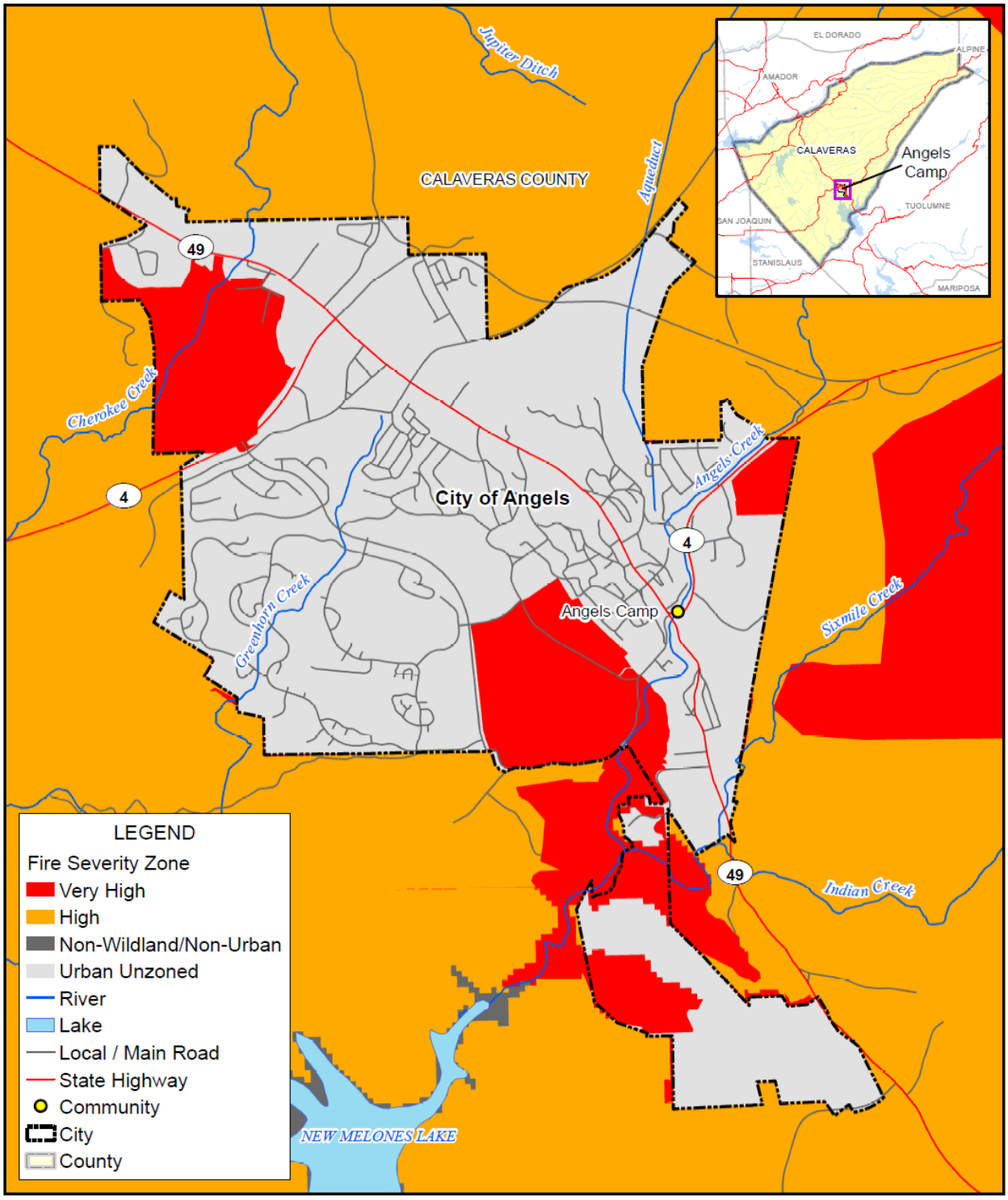
development in areas adjacent to and within Angels Camp, a third classification has emerged, the Wildland Urban Interface wildfire. The urban interface wildfire is one that burns along the urban/rural interface and can result in major losses of property and structures.

A number of factors affect the behavior of wildland and interface fires, including terrain, weather, wind, fuels and seasons. It is well known that fire travels faster uphill than down and is more difficult to fight on steep slopes than on level ground. When weather is hot and the humidity is low, wildland fires can explode with intensity of rapid combustion. Even in the absence of strong winds, a fast-moving fire can generate its own updrafts, particularly in canyons, causing burning brands to be carried high in the air and drop a long distance ahead. This results in spot fires over a wide radius as the wind changes its direction.

Angels Camp is not immune to numerous types of grass and brush fires and any one of them may accelerate into an urban interface wildfire. Such a situation could lead to evacuation of large portions of the population and the potential for significant loss of personal property, structures, and rangeland. The natural fuels available in or near the City vary greatly in the rate and intensity of burning. Fires in heavy brush and stands of trees burn with great intensity but more slowly than in dry grass and leaves. Dense fuels will propagate fire better than sparse fuels. The local fire season generally extends from June through early October.

Figure A-9 shows wildfire risk in Angels Camp. Wildfire threat within the City is very high in limited areas, with most of the City contained within an urban-unzoned area for purposes of wildfire severity zone mapping conducted by CAL FIRE. This mapping followed the methodology detailed in Section 4.3 of the base plan.

Figure A-9 City of Angels Camp Fire Severity Zones



Data Source: CalFire SRA (14_2) 12/2007, LRA 6/2008, FRA/LRA 8/2007 DRAFT, Calaveras County, CAL ATLAS; Map Date: 5/2015.

Assets at Risk

Analysis results for Angels Camp are shown in Table A-16, which summarizes total parcel counts, improved parcel counts and their land and improved values by occupancy type as well as the percentage of parcels affected by each wildfire severity zone..

Table A-16 City of Angels Camp – Count and Value of Parcels by Property Use and Fire Severity Zone

Fire Severity Zone	Property Use	Total Parcel Count	Total Land Value	Improved Parcel Count	Improved Value	Total Value*	% of Affected Parcels to Total
Very High	Agricultural	0	$0	0	$0	$0	0.00%
	Commercial	1	$242,223	1	$289,538	$531,761	0.06%
	Industrial	0	$0	0	$0	$0	0.00%
	Institutional	2	$0	0	$0	$0	0.00%
	Other	6	$45,064	0	$0	$45,064	0.00%
	Residential	47	$1,639,716	47	$5,347,373	$6,987,089	2.94%
	Vacant Land	25	$844,772	0	$0	$844,772	0.00%
	Total	**81**	**$2,771,775**	**48**	**$5,636,911**	**$8,408,686**	**3.00%**
High	Agricultural	0	$0	0	$0	$0	0.00%
	Commercial	0	$0	0	$0	$0	0.00%
	Industrial	0	$0	0	$0	$0	0.00%
	Institutional	0	$0	0	$0	$0	0.00%
	Other	0	$0	0	$0	$0	0.00%
	Residential	0	$0	0	$0	$0	0.00%
	Vacant Land	0	$0	0	$0	$0	0.00%
	Total	**0**	**$0**	**0**	**$0**	**$0**	**0.00%**
Moderate	Agricultural	0	$0	0	$0	$0	0.00%
	Commercial	0	$0	0	$0	$0	0.00%
	Industrial	0	$0	0	$0	$0	0.00%
	Institutional	0	$0	0	$0	$0	0.00%
	Other	0	$0	0	$0	$0	0.00%
	Residential	0	$0	0	$0	$0	0.00%
	Vacant Land	0	$0	0	$0	$0	0.00%
	Total	**0**	**$0**	**0**	**$0**	**$0**	**0.00%**

Fire Severity Zone	Property Use	Total Parcel Count	Total Land Value	Improved Parcel Count	Improved Value	Total Value*	% of Affected Parcels to Total
Non-Wildland/Non-Urban	Agricultural	0	$0	0	$0	$0	0.00%
	Commercial	0	$0	0	$0	$0	0.00%
	Industrial	0	$0	0	$0	$0	0.00%
	Institutional	0	$0	0	$0	$0	0.00%
	Other	0	$0	0	$0	$0	0.00%
	Residential	0	$0	0	$0	$0	0.00%
	Vacant Land	0	$0	0	$0	$0	0.00%
	Total	**0**	**$0**	**0**	**$0**	**$0**	**0.00%**
Urban Unzoned	Agricultural	7	$24,911	2	$52,255	$77,166	0.13%
	Commercial	134	$13,493,255	118	$42,980,356	$56,473,611	7.38%
	Industrial	5	$338,412	4	$788,174	$1,126,586	0.25%
	Institutional	46	$2,329,733	15	$15,338,831	$17,668,564	0.94%
	Other	115	$850,444	9	$707,220	$1,557,664	0.56%
	Residential	1,432	$70,331,856	1,398	$260,678,803	$331,010,659	87.43%
	Vacant Land	412	$23,488,016	5	$1,196,049	$24,684,065	0.31%
	Total	**2,151**	**$110,856,627**	**1,551**	**$321,741,688**	**$432,598,315**	**97.00%**
Grand Total		**2,232**	**$113,628,402**	**1,599**	**$327,378,599**	**$441,007,001**	**100.00%**

Source: Calaveras County Assessor's 2014 Data; CAL FIRE

*Land and structure values

Population at Risk

The Fire Severity Zone dataset was overlayed on the parcel layer. Those residential parcel centroids that intersect the severity zones were counted and multiplied by the 2010 Census Bureau average household factors for each jurisdiction and unincorporated area. Results were tabulated by jurisdiction. According to this analysis, there is a total population of 108 residents of Angels Camp living within a very high fire severity zone. The remaining 3,215 residents are located within the urban-unzoned area based on these CAL FIRE maps. While the majority of residents are not located specifically within a mapped, high risk area, all residents of Angels Camp are at some risk to a devastating wildfire. This is shown in Table A-17.

Table A-17 City of Angels Camp – Count of Improved Residential Parcels and Population by Fire Severity Zone

Fire Severity Zone	Improved Residential Parcels	Population*
Very High	47	108
High	0	0
Moderate	0	0
Non-Wildland/Non-Urban	0	0
Urban-Unzoned	1,398	3,215
Total	**1,434**	**3,323**

Source: Calaveras County 2014 Assessor's Data; CAL FIRE

* Average household populations for Angels Camp (2.30) from the 2010 US Census were used

Critical Facilities at Risk

A separate analysis was performed on the critical facility inventory in Calaveras County and Angels Camp. GIS was used to determine whether the facility locations intersects a fire severity zone, and if so, which zone it intersects Details of critical facilities at risk to wildfire in the City of Angels Camp are shown in Figure A-5 and Table A-14. As shown on the table and figure, Angels Camp has no critical facilities located in the very high fire severity zones; all 26 mapped critical facilities within the City are contained within the urban-unzoned wildfire severity zone. Details of critical facility definition, type, name and address and jurisdiction by wildfire severity zone are listed in Appendix F.

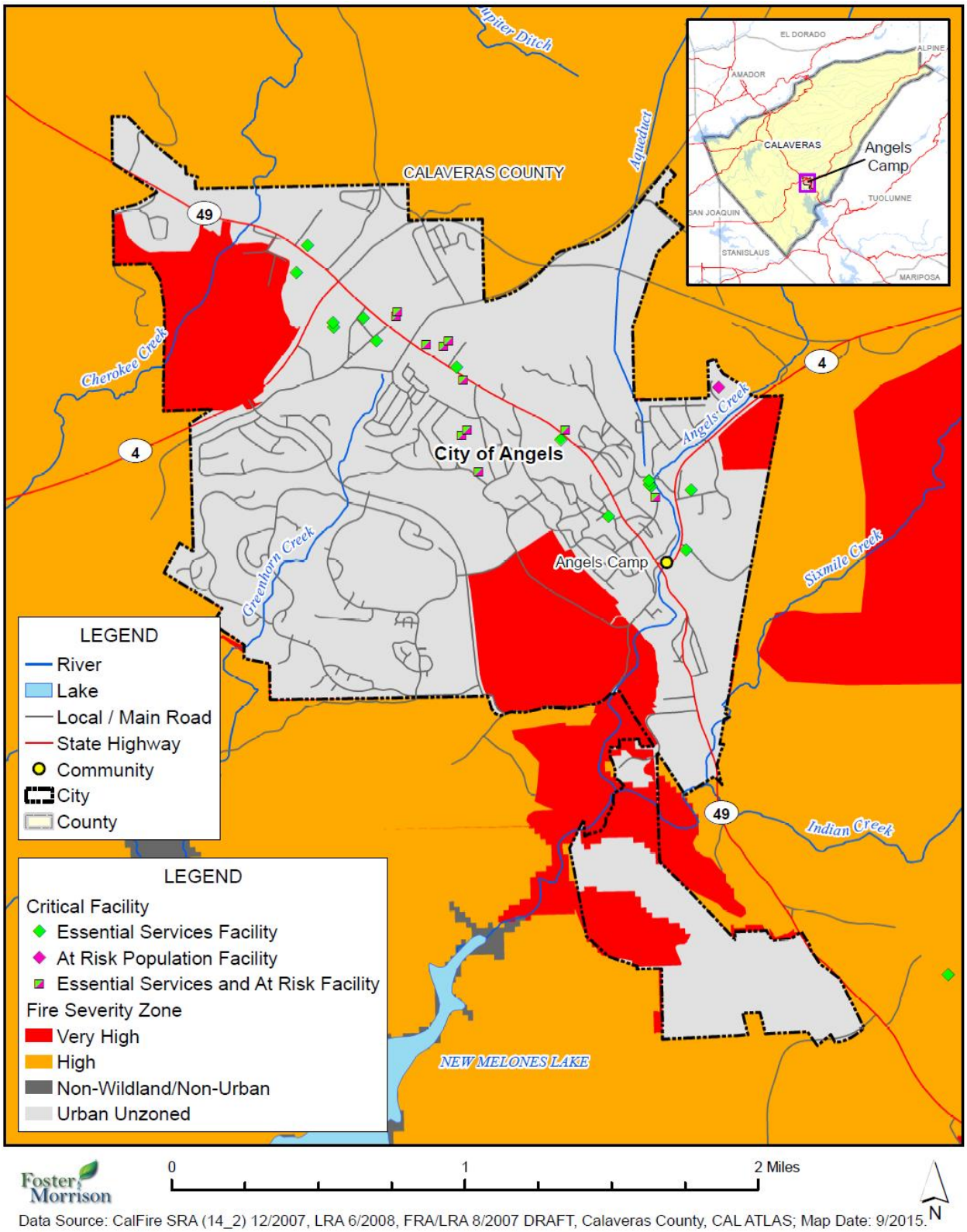
Table A-18 City of Angels Camp Critical Facilities by Fire Severity Zones

Fire	Category	Type	Facility Count
Very High	Essential Services Facilities	–	–
	At Risk Population Facilities	–	–
	Essential Services Facilities and At Risk Population Facilities	–	–
	Hazardous Materials Facilities	–	–
	Total Very High		**0**
High	Essential Services Facilities	–	–
	At Risk Population Facilities	–	–
	Essential Services Facilities and At Risk Population Facilities	–	–
	Hazardous Materials Facilities	–	–
	Total High		**0**
Moderate	Essential Services Facilities	–	–
	At Risk Population Facilities	–	–

Fire	Category	Type	Facility Count
	Essential Services Facilities and At Risk Population Facilities	–	–
	Hazardous Materials Facilities	–	–
	Total Moderate		**0**
Non-Wildland/Non-Urban	Essential Services Facilities	–	–
	At Risk Population Facilities	–	–
	Essential Services Facilities and At Risk Population Facilities	–	–
	Hazardous Materials Facilities	–	–
	Total Non-Wildland/Non-Urban		**0**
Urban Unzoned	Essential Services Facilities	Community Food Bank / Pantry	4
		Emergency Medical	1
		Fire Station	4
		Government Operations	1
		Medical Health Facility	2
		Power Utility	1
		Police	1
	At Risk Population Facilities	Congregate Care Facility	1
	Essential Services Facilities and At Risk Population Facilities	School / Emergency Shelter	11
	Hazardous Materials Facilities		-
	Total Urban Unzoned		**26**
Total Fire - City of Angels Camp			**26**

Source: Calaveras County GIS, CAL FIRE

Figure A-10 City of Angels Camp Critical Facilities by Fire Severity Zone



Future Development

There is currently no development planned in the very high fire severity zones in the City.

A.6 Capability Assessment

Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. This capability assessment is divided into five sections: regulatory mitigation capabilities, administrative and technical mitigation capabilities, fiscal mitigation capabilities, mitigation outreach and partnerships, and other mitigation efforts.

A.6.1. Planning and Regulatory Mitigation Capabilities

Table A-19 lists regulatory mitigation capabilities, including planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are in place in the City of Angels Camp.

Table A-19 City of Angels Camp Regulatory Mitigation Capabilities

Plans	Y/N Year	Does the plan/program address hazards? Does the plan identify projects to include in the mitigation strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Y 2009	The plan addresses hazards in the following elements: Conservation, Public Safety, and Public Facilities and Services. The General Plan identifies goals and policies that are included in the mitigation strategy. The General Plan is used to implement the mitigation actions through the mitigation related policies set forth in the document.
Capital Improvements Plan	Y	The City has adopted a Water and Sewer Master Plan Water in 2011, Sewer in 2013
Economic Development Plan	N	
Local Emergency Operations Plan	Y 2015 (Draft)	The EOP addresses the following hazards: earthquakes, floods, dam failure, wildland fires, landslides, extreme weather emergencies, haz-mat, and other man-mad hazards. The EOP addresses mitigation strategies and can be used to implement mitigation actions.
Continuity of Operations Plan	N	
Transportation Plan	Y	The City adopted the Calaveras Council of Governments Regional Transportation Plan (RTP) as well as the City of Angels Traffic Mitigation Study. The RTP was adopted in 2012 and the Mitigation Study in 2010.
Stormwater Management Plan/Program	Y	While there is not a specific Stormwater Plan, there is a stormwater program within the City that addresses stormwater runoff, flooding and water quality issues.
Engineering Studies for Streams	Y 2010	The FIS addresses hazards specific to the City. It does not include projects or actions.

Community Wildfire Protection Plan	Y 2011	The plan addresses fire specifically. There are mitigation related projects identified in the plan.
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	Y	There are multiple plans that identify hazard, contain mitigation strategies, and are used by the County and City to implement actions. The Calaveras County Terrorism Plan, Area Plan, Water Master Plan, Urban Water Management Plan, and TCU Fire Management Plan are examples of such planning mechanisms that the County and City partner on.
Building Code, Permitting, and Inspections	**Y/N**	**Are codes adequately enforced?**
Building Code	Y	Version/Year: 2013 California Building Code
Building Code Effectiveness Grading Schedule (BCEGS) Score		Score:
Fire department ISO rating:	Y	Rating: 4
Site plan review requirements	Y	Site inspection review by Public Works, Planning, Fire
Land Use Planning and Ordinances	**Y/N**	**Is the ordinance an effective measure for reducing hazard impacts?** **Is the ordinance adequately administered and enforced?**
Zoning ordinance	Y	The ordinance is effective in reducing hazard impacts. The zoning ordinance is administered and enforced.
Subdivision ordinance	Y	The ordinance is effective in reducing hazard impacts. The subdivision ordinance is administered and enforced.
Floodplain ordinance	Y	The ordinance is effective in reducing hazard impacts. The floodplain ordinance is administered and enforced. It is located in Title 15, Chapter 20 of the municipal code for Angels Camp.
Natural hazard specific ordinance (stormwater, steep slope, wildfire)	N	
Flood insurance rate maps	Y	The 2010 DFIRMs are effective. The rate maps are administered and enforced.
Elevation Certificates	N	
Acquisition of land for open space and public recreation uses	N	
Erosion or sediment control program	N	
Other		
How can these capabilities be expanded and improved to reduce risk?		

Outlined below are existing, adopted planning documents with provisions specifically relating to hazard mitigation, public safety and loss reduction.

City of Angels Camp 2020 General Plan

California Law requires that every City and County in the state have a General Plan. The City of Angels Camp 2020 General Plan, adopted in 2009, was prepared over a five-year period that included an

extensive public review process. The General Plan is the most important policy and planning document in the City, and is used by virtually every department. The General Plan is the City's statement of its vision for the future. The General Plan contains policies covering every aspect of the City: land use (how land can be developed), circulation, noise, air quality, housing, open space and conservation, and health and safety.

Goals and policies related to mitigation of natural hazards are as follows:

Goal/Policy/ Program	Explanation
Conservation Element	
Policy 4.C.f	Prepare a Grading Ordinance/Promote Best Management Practices to Reduce Erosion
Goal 4.H	**Protect the health and safety of people and property in the city from natural and man-made hazards.**
Policy 4.H.1	Protect the health and safety of people and property in the city from natural hazards to the extent feasible.
Policy 4.H.2	Protect the health and safety of people and property in the city from manmade hazards to the extent feasible.
Policy 4.H.3	Protect sensitive land uses from encroachment by incompatible land uses.
Policy 4.H.4	Increase citizen awareness of potential health and safety hazards in the city to the extent feasible.
Program 4.H.a	Designate flood hazard areas, as identified by the Federal Emergency Management Agency or as refined through local studies, as Resource Management ("RM" general plan) and Open Space ("OS" zoning).
Program 4.H.b	Coordinate with appropriate local, state and/or federal agencies to ensure the removal of debris adjacent to bridges within the city limits that may result in damage and/or destruction of bridges, or damming at bridges, during flood events, thereby limiting emergency access into and out of the city. Update the city's emergency response plan to address the emergency response priority associated with maintenance of the State Route 49 Bridge over Angels Creek.
Program 4.H.g	Identify funding sources and qualified agencies to prepare detailed flood zone maps establishing flood elevations throughout the city. Consider approaching the Resource Conservation & Development District to assist in preparing the maps.
Public Safety	
Goal 6.A	**Protect persons and property from geologic hazards**
Policy 6.A.1	Assess and keep appraised of the potential risks to persons and property from geological hazards within, or with the potential to affect the city.
Policy 6.A.2	Reduce exposure to risks in hazardous areas by directing development away from these areas.
Policy 6.A.3	Provide guidance to citizens regarding preparing for and responding to emergencies related to earthquakes, volcanic eruptions and other geological hazards that may affect the city.
Policy 6.A.4	Make emergency preparedness a city priority and keep the city's emergency response plan updated.
Program 6.A.a	Prepare an Emergency Operations Plan and Local Hazard Mitigation Plan for the City
Program 6.A.b	Continue to Participate in the Preparation and Implementation of the County/City Hazard Management Plan
Program6.A.c	Investigate the Cost of Requiring New Development to Map Potential Underground Hazards

Goal/Policy/ Program	Explanation
Program 6.A.d	Acquire Maps of Areas Posing a Potential Hazard From Mine or Tunnel Collapse
Program 6.A.e	Require New Development to Evaluate Geotechnical Hazards
Program 6.A.f	Require Geotechnical Hazard Evaluations for Critical Use and High Occupancy Structures
Program 6.A.g	Continue to Enforce the Provisions of the Uniform Building Code
Program 6.A.h	Encourage Rehabilitation of Old Buildings
Program 6.A.i	Designate Identified Hazard Areas Through Appropriate Zoning Where Feasible
Program 6.A.j	Draft a Hillside Management Ordinance
Program 6.A.k	Require Engineering Studies for Development in Unstable Areas, Soil Testing for Expansive Soils
Program 6.A.l	Prepare a Grading Ordinance/Promote Best Management Practices
Program 6.A.m	Establish Standards for Erosion and Dust Control
Program 6.A.n	Keep Appraised of New Seismic Information
Program 6.A.o	Provide Emergency Response/Preparation Guidelines for Citizens on The Angels Camp City Website
Goal 6.B	**Protect persons and property from flooding and inundation from dam failures.**
Policy 6.B.1	Make emergency preparedness a city priority.
Policy 6.B.2	Keep the city's emergency response plan updated to reflect the most current information available regarding the potential risks to persons and property from flooding and inundation from dam failures within the city.
Policy 6.B.3	Provide guidance to citizens for preparing for and responding to floods and inundation from dam failures affecting the city.
Policy 6.B.4	Evaluate and minimize potential impacts of new development on drainage facilities and downstream property.
Program 6.B.c	Facilitate Assessment of Hazards Associated with Dam Failures Affecting Angels Camp
Program 6.B.d	Consider Preparation of a Flood Damage Prevention Ordinance
Program 6.B.e	Continue to Maintain and Upgrade Storm Drainage Facilities
Program 6.B.f	Mitigate Impacts on Downstream Drainage Facilities and Property
Program 6.B.g	Designate Resource Management & Open Space Setbacks Along Creeks
Program 6.B.h	Coordinate With the County to Address the Impacts of Development Within the Watersheds of Drainages Flowing Through the City
Program 6.B.i	Pursue Funding for Preparation of a Hydrological Study
Program 6.B.j	Coordinate with Appropriate Agencies and Private Landowners to Ensure Debris Removal in Streams to Reduce the Potential for Damage of Downstream Facilities (e.g., Bridges)
Program 6.B.k	Design New Bridges (Pedestrian and Automobile) to Minimize Damage From Major Flood Events
Program 6.B.l	Provide Emergency Response/Preparation Guidelines for Citizens on The Angels Camp City Website
Program 6.B.m	Pursue Preparation of Detailed Flood Zone Maps
Program 6.B.n	Protect New Development from Flood Hazards
Goal 6.C	**Undertake adequate preparation for and ensure an adequate response to emergency and disaster situations affecting the city.**

Goal/Policy/ Program	Explanation
Policy 6.C.1	Prepare city staff, to the maximum extent feasible given available funding levels, to respond quickly and adequately to emergency and disaster situations affecting the city.
Policy 6.C.2	Provide guidance to citizens regarding preparing for and responding to emergencies to supplement and ensure the smooth implementation of the city's emergency operations plan.
Policy 6.C.3	Support the formation of self-help/citizen response teams to aid city agencies in providing emergency response services to a large segment of the city's population.
Policy 6.C.4	Make emergency preparedness a city priority and keep the city's emergency response plan updated.
Program 6.C.c	Adopt an Emergency Operations Plan Enabling Ordinance
Program 6.C.d	Sponsor Emergency Training for City Personnel
Program 6.C.e	Conduct Emergency Training Exercises
Program 6.C.f	Continue to Maintain a City Safety Committee
Program 6.C.h	Pursue the Provision of Paramedic Services for the City
Program 6.C.i	Encourage City Residents to Receive Training as Part of Citizen Emergency Response Teams
Goal 6.D	**Protect people and property from risks associated with the use, transport, treatment and disposal of hazardous materials and wastes.**
Policy 6.D.1	Encourage citizen opportunities for recycling and disposal of household hazardous materials and wastes.
Policy 6.D.2	Continue to work cooperatively with other jurisdictions to manage the use, transport, treatment and disposal of hazardous materials.
Policy 6.D.3	Make emergency preparedness a city priority and keep the city's emergency response plan updated
Goal 6.E	**Facilitate the provision of an adequate supply of water, and essential utilities and communications for city residents during emergency situations.**
Policy 6.E.1	Provide the necessary tools to reduce the impacts of disruptions in water and other essential utilities and communications during emergency situations.
Policy 6.E.2	Proactively plan for emergency response during situations affecting the city water supply and essential services and communications.
Policy 6.E.3	Coordinate with public utility agencies in the preparation of emergency operations plans.
Policy 6.E.4	Make emergency preparedness a city priority and keep the city's emergency response plan updated.
Program 6.E.d	Support the Efforts of the Local HAM Radio Club/Radio Amateur Civil Emergency Services (RACES)
Program 6.E.e	Support the Efforts of KVML and Local Access Television to Provide Emergency Updates to Citizens
Program 6.E.f	Increase Water Storage Capacity
Program 6.E.g	Maintain Information Pertaining to Water Resources in Mines, Underground Rivers and High-Production Wells
Program 6.E.h	Maintain Information Pertaining to the Use of Untreated or Semi-Treated Water During Emergency Situations
Public Facilities and Services	
Goal 7.B	**Continue to improve Angels Camp's capacity to store, treat and deliver water and to collect and treat wastewater as necessary to achieve the stated goals of the city.**

Goal/Policy/ Program	Explanation
Program 7.B.k	Increase Water Storage Capacity
Goal 7C	**Maintain or increase the standards of coverage currently available within Angels Camp for fire protection and medical response facilities and infrastructure.**
Policy 7.C.4	Monitor the condition of and plan for future fire protection and medical response facility needs.
Policy 7.C.5	Continue to recognize the need for and support fire prevention and education activities to promote community health and safety.
Policy 7.C.6	Continue to support and encourage coordination between organizations and agencies to optimize limited resources assisting in the provision of adequate fire protection and medical response services.
Policy 7.C.7	Recognize the need to coordinate planning for infrastructure improvements (e.g., circulation improvements) to achieve the city's health and safety goals.
Program 7.C.d	Continue to Mitigate Impacts to City Fire and Medical Protection Resources
Program 7.C.e	Make Available Fire Protection Standards
Program 7.C.f	Continue to Maintain and Expand Fire Prevention Inspection Activities
Program 7.C.h	Continue to Provide Fire Prevention and Safety Education
Program 7.C.i	Continue to Implement the Citywide Weed Abatement Program
Program 7.C.n	Prepare a Community Wildfire Protection Plan
Program 7.C.o	Update Chapter 15.24 of the Angels Camp Municipal Code (Fire Prevention), Including Very High Fire Hazard Severity Zone Map (VHFHSZ) Vegetation Management Plans, Guidelines for New Development in Urban/Wildland Interface Areas, Public Resources Code 4291
Goal 7H	**Maintain or increase the levels of service currently available within Angels Camp for public works facilities and infrastructure including roads, sidewalks, drainage facilities, public buildings, and other public facilities.**
Program 7.H.b	Continue to Maintain and Upgrade Storm Drainage Facilities
Program 7.H.c	Mitigate Impacts on Downstream Drainage Facilities and Property
Program 7.H.d	Coordinate with the County to Address the Impacts of Development Increasing Runoff, Flood Hazards or Affecting the City's Storm Drain System within the Watersheds of Drainages Flowing through the City
Program 7.H.i	Pursue Fair Share Participation and Contributions to Finance and Maintain Adequate Stormwater Runoff Infrastructure and Capacity

Source: Angels Camp 2020 General Plan

The City of Angels Camp has many ordinances related to mitigation. These are discussed below.

Civil Defense and Disaster Organization (Title 2, Chapter 12)

The declared purposes of this chapter are to provide for the preparation and carrying out of plans for the protection of persons and property within this city in the event of a disaster, and to provide for the coordination of the civil defense and disaster functions of the city with all other public agencies and affected private persons, corporations and organizations. As used in this chapter:

- "Civil defense" means preparation for and carrying out of all emergency functions, other than functions for which military forces are primarily responsible, to prevent, minimize and repair injury

and damage resulting from disasters. It shall not include, nor does any provision of this chapter apply to any condition relating to a labor controversy.

- "Disaster" means actual or threatened enemy attack sabotage, extraordinary fire, flood, storm, epidemic, riot, earthquake or other similar public calamity.

It shall be the duty of the city civil defense and disaster council, and it is hereby empowered, to review and recommend for adoption by the city council, civil defense and disaster and mutual aid plans and agreements and such ordinances and resolutions and rules and regulations as are necessary to implement such plans and agreements.

Zoning (Title 17)

The City of Angels Camp Zoning Code is the primary implementing mechanism of the General Plan. Unlike the General Plan, which provides long-range, comprehensive general policies for the general direction of land use in the City, the Zoning Code provides more specific descriptions of the types of uses that are allowed in certain areas, development standards (e.g., setbacks, building heights, lot coverage) and other detailed guidance for property development. The Zoning Code is required to be consistent with the General Plan.

The city council is authorized by the Planning and Zoning Laws of the California State Government Code, Title 7, Planning and Land Use, Division 1, Planning and Zoning, Chapter 4, Zoning Regulations, to regulate the following:

- Use of land and buildings;
- Height, bulk and size of buildings and structures;
- Construction and use of signs and billboards;
- Intensity of land use;
- Establishment and maintenance of building setback lines.

This includes the regulation of development in the floodplain, as discussed in the flood ordinance below.

This zoning plan is adopted to:

- Provide a means to achieve the goals, objectives, policies and standards of the general plan; and to provide a guide for the growth and development of the city;
- Encourage, classify, designate, regulate and segregate the uses of land, buildings and structures to serve the needs of commerce, industry, residences and other appropriate land uses;
- Establish conditions which will allow all the land uses within the city to coexist in harmony;
- Assure adequate site development standards;
- Provide a means of obtaining adequate provisions for community utilities such as transportation, water supply, sewage disposal, schools, parks and other public requirements. (Ord. 270 (part), 1984)

Subdivision (Title 16)

The ordinance codified in this title is enacted to facilitate the orderly development of lands in the incorporated area of the City.

- This title shall implement the objectives established for the development of the city in conformance with its general plan, and the streets and highways plan. A proposed subdivision or land division shall be considered in relation to such plan.
- This title shall provide standards governing the subdividing of lands, surveys therefor, and the submission of maps and the requirements for and improvement of subdivided lands.
- This title shall provide for a resolution governing standards for health and sanitation requirements, and the construction and installation of streets, highways, public utilities and other improvements. The resolution shall provide fee schedules for services rendered by the city.
- This title shall provide for the creation of reasonable building sites by establishing adequate street widths, proper alignment of streets, adequate lot sizes, and means of ingress and egress to and from property.
- This title shall control the division of land which is subject to inundation by flooding from natural streams or artificial ponding caused by man, and other detrimental influences which may cause land to be unsuitable for satisfactory development.
- This title shall control the division of land which may be subject to dangerous or unsuitable soil conditions of any type, or subject to any other impediments affecting the use of the land for human habitation.
- This chapter shall provide rules and regulations governing the contents of tentative maps, final subdivision maps, and parcel maps; it shall establish methods for the processing and filing of the maps and regulate other related matters.

Building Regulation Section (Title 15)

In order to provide minimum standards for the proper regulations of building construction, the following publications are hereby adopted by reference and incorporated in this Code, except as expressly amended or superseded by the provisions of this Code.

- 2013 California Building Code, Title 24, Part 2;
- 2013 California Residential Code, Title 24, Part 2.5;
- 2013 California Electrical Code, Title 24, Part 3;
- 2013 California Mechanical Code, Title 24, Part 4;
- 2013 California Plumbing Code, Title 24, Part 5;
- 2013 California Energy Code, Title 24, Part 6;
- 2013 California Historical Code, Title 24, Part 8;
- 2013 California Fire Code, Title 24, Part 9;
- 2013 California Existing Building Code, Title 24, Part 10;
- 2013 California Green Building Standards Code, Title 24, Part 11.

Flood Ordinance (Title 15, Chapter 20)

The flood hazard areas of the City of Angels are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.

These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas.

Uses that are inadequately flood proofed, elevated or otherwise protected from flood damage also contribute to the flood loss.

It is the purpose of this chapter to promote the public health, safety and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

- To protect human life and health;
- To minimize expenditure of public money for costly flood control projects;
- To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- To minimize prolonged business interruptions;
- To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard;
- To help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future flood blight areas;
- To insure that potential buyers are notified that property is in an area of special flood hazard; and
- To insure that those who occupy the areas of special flood hazard assume responsibility for their action. (Ord. 346 §1.3, 1996)

In order to accomplish its purposes, this chapter includes methods and provisions for:

- Restricting or prohibiting uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;
- Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;
- Controlling filling, grading, dredging and other development which may increase flood damage; and
- Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.

This chapter shall apply to all areas of special flood hazards, areas of flood-related erosion hazards and areas of mudslide (i.e., mudflow) hazards within the jurisdiction of the city of Angels.

No structure or land shall hereafter be constructed, located, extended, converted or altered without full compliance with the terms of this chapter and other applicable regulations. Violations of the provisions of this chapter by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Nothing herein shall prevent the city council from taking such lawful action as is necessary to prevent or remedy any violation.

A development permit shall be obtained before construction or development begins within any area of special flood hazards, areas of flood-related erosion hazards or areas of mudslide (i.e., mudflow) established in Section 15.20.070. Application for a development permit shall be made on forms -furnished by the floodplain administrator and may include, but not be limited to: plans in duplicate drawn to scale showing the nature, location, dimensions and elevation of the area in question; existing or proposed

structures, fill, storage of materials, drainage facilities; and the location of the foregoing. Specifically, the following information is required:

- Proposed elevation in relation to mean sea level, of the lowest floor (including basement) of all structures; in zone AO or VO, elevation of highest adjacent grade and proposed elevation of lowest floor of all structures;
- Proposed elevation in relation to mean sea level to which any structure will be floodproofed;
- All appropriate certifications listed in Section 15.20.150(D); and
- Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

In all areas of special flood hazards the following standards are required:

- Anchoring.
  - ✓ All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
  - ✓ All manufactured homes shall meet the anchoring standards of Section 15.20.190.

- Construction Materials-and Methods.
  - ✓ All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
  - ✓ All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

  - ✓ All new construction and substantial improvements shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or accumulating within the components during conditions of flooding.

- Elevation and Floodproofing.
  - ✓ New construction and substantial improvement of any structure shall have the lowest floor, including basement, elevated to or above the base flood elevation. Nonresidential structures may meet the standards in Section 15.20.160(C)(3). Upon the completion of the structure the elevation of the lowest floor including basement shall be certified by a registered professional engineer or surveyor, or verified by the community building inspector to be properly elevated. Such certification or verification shall be provided to the floodplain administrator.
  - ✓ Nonresidential construction shall either be elevated in conformance with Section 15.20.160(C)(1) or (C)(2) or together with attendant utility and sanitary facilities:
    - Be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;
    - Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
    - Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied. Such certifications shall be provided to the floodplain administrator.

- ✓ Require, for all new construction and substantial improvements, that fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of flood waters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
  - Either a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices; provided, that they permit the automatic entry and exit of flood waters; or
  - Be certified to comply with a local floodproofing standard approved by the Federal Insurance Administration.
- ✓ Manufactured homes shall also meet the standards in Section 15.20.19.

Standards for utilities.

- All new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from systems into flood waters.
- On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

Standards for subdivisions.

- All preliminary subdivision proposals shall identify the flood hazard area and the elevation of the base flood.
- All final subdivision plans will provide the elevation of proposed structure(s) and pads. If the site is filled above the base flood, the final pad elevation will be certified by a registered professional engineer or surveyor and provided to the floodplain administrator.
- All subdivision proposals shall be consistent with the need to minimize flood damage.
- All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.
- All subdivisions shall provide adequate drainage to reduce exposure to flood hazards.

Standards for manufactured homes.

- All new and replacement manufactured homes and additions to manufactured homes shall:
  - ✓ Be elevated so that the lowest floor is at or above the base flood elevation; and
  - ✓ Be securely anchored to a permanent foundation system to resist flotation, collapse or lateral movement.

Floodways.

- Located within areas of special flood hazard established in Section 15.20.070 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:
  - ✓ Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer or architect is provided

demonstrating that encroachments shall not result in any increase in flood level during the occurrence of the base flood discharge.

- ✓ If Section 15.20.200(A) is satisfied, all new -construction and substantial improvement shall comply with all other applicable flood hazard reduction provisions of Article V.

Abatement of Weeds and Rubbish (Title 8, Chapter 10)

The purpose of this chapter is to provide for immediate action to begin abating fire hazards within the city.

- Whenever any condition exists upon the streets, sidewalks, parkways or private property within the city which is defined as a nuisance pursuant to Section 8.10.020, or whenever weeds on specified parcels of property are seasonal and recurrent nuisances, the enforcement officer may declare the same to be a public nuisance.
- Notice of Nuisance. The enforcement officer shall give written notice to the owner of record to abate the nuisance within fifteen days. The notice of nuisance shall state that the property owner is required to abate the nuisance, shall state the nature of the nuisance to be abated, what is required to abate it, and that if the nuisance is not abated the code enforcement officer shall issue a citation and levy a fine in the sum of two hundred dollars.
- Notice of Abatement Proceedings. If the nuisance has not been abated by the owner within fifteen days after service of the notice of nuisance, the enforcement officer is ordered to take appropriate remedial actions. The enforcement officer shall notify the owner of affected properties, as shown on the latest equalized tax assessment roll, by mail, of intention to abate the nuisance.
- Service of Notice. Notice shall be mailed by certified mail to the address of the property owner not less than fifteen days prior to the date of the proposed abatement. Failure of any owner, or any party concerned, to receive a notice shall not affect the validity of any proceeding taken, if the procedure for service of notice has been followed.

Mining and Reclamation (Title 8, Chapter 36)

This chapter is adopted pursuant to the California Surface Mining and Reclamation Act of 1975, Chapter 9, Public Resources Code. The council finds and declares that the extraction of minerals is essential to the continued economic well-being of the city and to the needs of the society, and that the reclamation of mined lands is necessary to prevent or minimize adverse effects on the environment and to protect the public health and safety. The council further finds that the reclamation of mined lands as provided in this chapter will permit the continued mining of minerals and will provide for the protection and subsequent beneficial use of the mined and reclaimed land. The council further finds that surface mining takes place in diverse areas where the geologic, topographic, climatic, biological and social conditions are significantly different and that reclamation operations and the specifications therefore may vary accordingly.

Any person, except as provided in Section 2776, California Surface Mining and Reclamation Act of 1975, who proposes to engage in surface mining operations as defined in this chapter shall, prior to the commencement of such operations, obtain (1) a permit to mine, and (2) approval of a reclamation plan, in accordance with the provisions set forth in this chapter and as further provided in Article 5, California Surface Mining and Reclamation Act of 1975. A fee, as established by resolution, for the permitted uses

shall be paid to the city at the time of filing. All applications for a reclamation plan for surface mining operations shall be made on forms provided by the city clerk's office and as called for by Section 2772 of California Surface Mining and Reclamation Act of 1975. The State Geologist shall be notified of the filing of all permit applications. This chapter shall be reviewed and revised, as necessary, in order to ensure that it is in accordance with the state policy for mined lands reclamation.

Reclamation plans, reports, applications and other documents submitted pursuant to this chapter are public records unless it can be demonstrated to the satisfaction of the city that the release of such information, or part thereof, would reveal production, reserves, or rate of depletion entitled to protection as proprietary information. The city shall identify such proprietary information as a separate part of each application. A copy of all permits, reclamation plans, reports, applications, and other documents submitted pursuant to this chapter, including proprietary information, shall be furnished to the State Geologist by the city upon request. Proprietary information shall be made available to persons other than the State Geologist only when authorized by the mine operator and by the mine owner in accordance with Section 2778, California Surface Mining and Reclamation Act of 1975.

Angels Camp NFIP Capabilities

In addition to the capabilities in the municipal code regarding floodplains, the City has additional capabilities. Table A-20 shows the County's participation in and continued compliance with the NFIP, as well as identifies areas for improvement that could be potential mitigation actions.

Table A-20 Calaveras County NFIP Capabilities

NFIP Topic	Comments
Insurance Summary	
How many NFIP policies are in the community? What is the total premium and coverage?	28 NFIP policies in Angels Camp. Total premium is $16,864.00. Total coverage is $9,666,000.00. Of the 28 parcels, only 2 are located in the A or AE zones, the remaining 26 are located in the B, C or X zones.
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	To date, 3 claims have been paid in Angels Camp. Total amount of paid claims is $13,701.37
How many structures are exposed to flood risk within the community? *"flood risk" is defined as the 1% annual chance flood (100-year flood. Numbers are from overlay of FEMA SFHA and building stock data.	47 total parcels and 21 improved parcels are located in FEMA Flood Zone A or AE in the City.
Describe any areas of flood risk with limited NFIP policy coverage	There are 21 structures in the FEMA Flood Zones A or AE. There are currently 28 NFIP policies in the City; only 2 of the parcels located in the 1% Annual Chance Floodplain or 7% maintain flood insurance. These 26 uninsured parcels within the SFHA are at risk without flood insurance coverage. .

NFIP Topic	Comments
Staff Resources	
Is the Community Floodplain Administrator or NFIP Coordinator certified?	No certification.
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Permit review.
What are the barriers to running an effective NFIP program in the community, if any?	Limited staffing, additional training needed. NFIP program is otherwise effective.
Compliance History	
Is the community in good standing with the NFIP?	Y
Are there any outstanding compliance issues (i.e., current violations)?	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	08/26/11
Is a CAV or CAC scheduled or needed?	Yes, a CAV is needed.
Regulation	
When did the community enter the NFIP?	09/05/1990
Are the FIRMs digital or paper?	Digital
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Meet requirements.
Provide an explanation of the permitting process.	Done during building permit process.
Community Rating System	
Does the community participate in CRS?	No
What is the community's CRS Class Ranking?	N/A
What categories and activities provide CRS points and how can the class be improved?	N/A
Does the plan include CRS planning requirements?	Yes

Source: Calaveras County, FEMA

Incorporation of Hazard Mitigation Plan into Other Plans

Since the creation of the 2010 Calaveras County Local Hazard Mitigation Plan, other plans have been created and/or updated. This includes General Plans, CWPPs, EOPs, other fire plans, and other planning processes. The 2010 LHMP was relied on in the development of the following planning mechanisms in the City of Angels Camp.

Jurisdiction	Planning Mechanism 2010 LHMP Was Incorporated/Implemented In. Details?
City of Angels Camp	Wastewater Management Plan
City of Angels Camp	Water Master Plan

A.6.2. Administrative/Technical Mitigation Capabilities

Table A-21 identifies the City department(s) responsible for activities related to mitigation and loss prevention in Angels Camp.

Table A-21 City of Angels Camp Administrative and Technical Mitigation Capabilities

Administration	Y/N	Describe capability Is coordination effective?
Planning Commission	Y	
Mitigation Planning Committee	N	
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	N	
Mutual aid agreements	Y	The City has agreements with Calaveras County and the surrounding fire districts and water districts.
Other		
Staff	**Y/N FT/PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	Y/FT	The Building Official, Floodplain Administrator, and Emergency manager are roles filled by one staff member.
Floodplain Administrator	Y/PT	See above.
Emergency Manager	Y/PT	See above.
Community Planner	Y/FT	
Civil Engineer	Y/FT	
GIS Coordinator	N	
Other		
Technical	**Y/N**	**Describe capability Has capability been used to assess/mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	Y	
Hazard data and information	Y	Flood and wildfire
Grant writing	N	
Hazus analysis	N	
Other		
How can these capabilities be expanded and improved to reduce risk?		

A.6.3. Fiscal Mitigation Capabilities

Table A-22 identifies financial tools or resources that the City could potentially use to help fund mitigation activities.

Table A-22 City of Angels Camp Fiscal Mitigation Capabilities

Funding Resource	Access/ Eligibility (Y/N)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital improvements project funding	Y	Funding has not been used in the past for mitigation, but could possibly fund future mitigation activity.
Authority to levy taxes for specific purposes	Y	Funding has not been used in the past for mitigation, but could possibly fund future mitigation activity.
Fees for water, sewer, gas, or electric services	Y	Funding has not been used in the past for mitigation, but could possibly fund future mitigation activity.
Impact fees for new development	Y	Funding has not been used in the past for mitigation, but could possibly fund future mitigation activity.
Storm water utility fee	Y	Funding has not been used in the past for mitigation, but could possibly fund future mitigation activity.
Incur debt through general obligation bonds and/or special tax bonds	Y	Funding has not been used in the past for mitigation, but could possibly fund future mitigation activity.
Incur debt through private activities	N	
Community Development Block Grant	Y	Funding has not been used in the past for mitigation, but could possibly fund future mitigation activity.
Other federal funding programs	Y	Funding has not been used in the past for mitigation, but could possibly fund future mitigation activity.
State funding programs	Y	Funding has not been used in the past for mitigation, but could possibly fund future mitigation activity.
Other		
How can these capabilities be expanded and improved to reduce risk?		

A.6.4. Mitigation Education, Outreach, and Partnerships

Table A-23 identifies education and outreach activities that the City uses to help fund mitigation activities.

Table A-23 City of Angels Camp Mitigation Education, Outreach, and Partnerships

Program/Organization	Yes/No	Describe program/organization and how relates to disaster resilience and mitigation. Could the program/organization help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Y	The City partners with the Red Cross and various environmental groups. These groups can be used to implement future actions.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Y	The City partners with state and federal fire agencies. Partnerships with these groups could assist in future mitigation programs/actions.
Natural disaster or safety related school programs	Y	Public Outreach Programs at local schools on Fire Safety
StormReady certification	N	
Firewise Communities certification	N	
Public-private partnership initiatives addressing disaster-related issues	N	
Other		Partnership with Calaveras County
How can these capabilities be expanded and improved to reduce risk?		

A.6.5. Other Mitigation Efforts

Other mitigation related programs and projects that Angels Camp has implemented in the past include the following:

- Public Outreach at local schools on Fire Safety
- Fire Extinguisher Use Trainings at Local Businesses
- Weed Abatement Ordinance
- City adopted a Burn Ordinance in 2012

A.7 Mitigation Strategy

This section describes the mitigation strategy process and mitigation action plan for the City of Angels Camp's inclusion with the Calaveras County Local Hazard Mitigation Plan update.

A.7.1. Mitigation Goals and Objectives

The City of Angels Camp adopts the hazard mitigation goals and objectives developed by the HMPC and described in Chapter 5 Mitigation Strategy of the base plan.

A.7.2. Continued Compliance with the NFIP

The City of Angels Camp joined the NFIP on September 24, 1984. As a participant of the National Flood Insurance Program (NFIP), the City of Angels Camp has administered floodplain management regulations that meet the minimum requirements of the NFIP. The management program objective is to protect people and property within the City. The City of Angels Camp will continue to comply with the requirements of the NFIP in the future.

The City's regulatory activities apply to existing and new development areas of the City; implementing flood protection measures for existing structures and maintaining drainage systems. The goal of the program is to enhance public safety, and reduce impacts and losses while protecting the environment.

The City of Angels Camp Planning and Engineering Department provides public outreach activities which include map information services, public awareness, public hazard disclosure, and flood protection information. This information is readily available to the public and consists of current and accurate flood mapping. In addition, the Planning and Engineering Department provides information about the stormwater management program and up-to-date information related to the maintenance of the drainage system.

The National Flood Insurance Program's (NFIP) Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the three goals of the CRS which are to reduce flood losses, facilitate accurate insurance rating, and promote the awareness of flood insurance. The City of Angels Camp is not a participant in the CRS program.

A.7.3. Mitigation Actions

The planning team for the City of Angels Camp identified and prioritized the following mitigation actions based on the risk assessment and in accordance with the process outline in Section 5, Mitigation Strategy, of the base plan. Background information and information on how each action will be implemented and administered, such as ideas for implementation, responsible office, potential funding, estimated cost, and timeline are also included. General processes and information on plan implementation and maintenance of this LHMP by all participating jurisdictions is included in Section 7, Plan Implementation and Maintenance, of the base plan.

Action 1. Integrate Local Hazard Mitigation Plan into Safety Element of General Plan

Hazards Addressed: All

Issue/Background: Local jurisdiction reimbursement for mitigation projects and cost recovery after a disaster is guided by Government Code Section 8685.9. Specifically, this section requires that the County must adopt a local hazard mitigation plan (LHMP) in accordance with the federal Disaster Mitigation Act of 2000 as part of the safety element of its general plan adopted pursuant to subdivision (g) of Section 65302. It is important for Angels Camp to incorporate the County's LHMP Update into the safety element as part of the next general plan update.

Other Alternatives: No feasible alternatives

Existing Planning Mechanisms through which Action will be Implemented: Safety Element of General Plan

Responsible Office: Angels Camp Planning Department

Priority (High, Medium, Low): High

Cost Estimate: To be determined

Benefits (avoided Losses): Planning documents will help the City maximize potential for state reimbursement post-disaster

Potential Funding: State and/or Federal Grant, existing budgets

Timeline: As soon as possible

Action 2. Develop and Conduct a Multi-Hazard Seasonal Public Awareness Program

Hazards Addressed: Multi-Hazard

Issue/Background: Angels Camp is subject to several natural hazards, each which pose a different degree of risk and associated vulnerability. Some hazards have a combination of attributes, including a high likelihood of occurrence, a specific location that would likely be impacted, and proven approaches that can reduce the impact, such that the HMPC has recommended specific actions be taken. For other hazards, where either the likelihood of occurrence is very low, or the area of likely impact is not specifically known, or there is very little that can be done to reduce the impacts, that the HMPC has determined that the best approach would simply be public awareness. This should include information describing historical events and losses, the likelihood of future occurrences, the range of possible impacts, appropriate actions to save lives and minimize property damage and where additional information can be found. Any information provided through this effort should be accurate, specific, timely and consistent with current and accepted local emergency management procedures as promoted by the California State Office of Emergency Services, and the American Red Cross.

Other Alternatives: Continue public information activities currently implemented

Existing Planning Mechanism(s) through which Action Will Be Implemented:

Responsible Office: City of Angels Camp Police Department in conjunction with the Calaveras County Sherriff's Office

Priority (H, M, L): Medium

Cost Estimate: To be determined depending upon printing and mailing costs, level of volunteer participation, and scope and frequency of events.

Benefits (Losses Avoided): Life safety, reduction in property losses, relatively low cost.

Potential Funding: Staff time; FEMA grants

Timeline: Ongoing - Part of seasonal multi-hazard public awareness campaign

Action 3. Retrofit At-Risk Structures with Ignition-Resistant Materials

Hazards Addressed: Wildfire

Issue/Background: Existing structures in wildfire hazard areas inside Angels Camp can be protected through the use of non-combustible materials and technologies, including:

- Installing roof coverings, sheathing, flashing, skylights, roof and attic vents, eaves, and gutters that conform to ignition-resistant construction standards.
- Installing wall components that conform to ignition-resistant construction standards.
- Protecting propane tanks or other external fuel sources.
- Purchasing and installing external, structure-specific water hydration systems (sprinklers); dedicated power sources; and dedicated cisterns if no water source (e.g., lake, river, or swimming pool) is available.

Other Alternatives: No action.

Existing Planning Mechanism(s) through which Action Will Be Implemented: CWPP

Responsible Office: City of Angels Camp Fire Department in conjunction with the Calaveras Fire Safe Council, CAL FIRE, and neighboring local fire districts.

Priority (H, M, L): High

Cost Estimate: To be determined on a case by case basis.

Benefits (Losses Avoided): Reduced risk of wildfire to individual properties at risk to wildfire due to their construction. In addition, the adjacent properties to those structures not built to fire code (or built before code enforcement) would see reduced risk as well.

Potential Funding: PDM, HMGP

Timeline: As soon as funding is available.

Action 4. Create Defensible Space Around Structures and Infrastructure

Hazards Addressed: Wildfire

Issue/Background: Angels Camp can implement defensible space programs to reduce risk to structures and infrastructure, including:

- Creating buffers around residential and non-residential structures through the removal or reduction of flammable vegetation, including vertical clearance of tree branches.
- Replacing flammable vegetation with less flammable species.
- Creating defensible zones around power lines, oil and gas lines, and other infrastructure systems.

Other Alternatives: No action.

Existing Planning Mechanism(s) through which Action Will Be Implemented: CWPP

Responsible Office City of Angels Camp Fire Department in conjunction with the Calaveras Fire Safe Council, CAL FIRE, and neighboring local fire districts.

Priority (H, M, L): High

Cost Estimate: To be determined on a case by case basis.

Benefits (Losses Avoided): Reduced risk of wildfire damage to properties in Calaveras County. Reduced risk of injury and fatality to firefighters.

Potential Funding: PDM, HMGP

Timeline: As soon as funding is available.

Action 5. Conduct Maintenance to Reduce Risk

Hazards Addressed: Wildfire

Issue/Background: Angels Camp can implement maintenance procedures to reduce wildfire risk, including:

- Performing arson prevention cleanup activities in areas of abandoned or collapsed structures, accumulated trash or debris, and with a history of storing flammable materials where spills or dumping may have occurred.
- Preventing or alleviating wildfires by proper maintenance and separation of power lines as well as efficient response to fallen power lines.
- Routinely inspecting the functionality of fire hydrants.
- Requiring and maintaining safe access for fire apparatus to wildland-urban interface neighborhoods and properties.

Other Alternatives: No action.

Existing Planning Mechanism(s) through which Action Will Be Implemented: CWPP

Responsible Office: City of Angels Camp Fire Department in conjunction with the Calaveras Fire Safe Council, CAL FIRE, and neighboring local fire districts.

Priority (H, M, L): High

Cost Estimate: To be determined on a case by case basis.

Benefits (Losses Avoided): Reduced risk of wildfire damage to properties in Calaveras County. Reduced risk of injury and fatality to firefighters.

Potential Funding: PDM, HMGP

Timeline: As soon as funding is available.

Action 6. Implement a Fuels Management Program

Hazards Addressed: Wildfire

Issue/Background: The City of Angels Camp desires a fuels management program to be implemented to reduce hazardous vegetative fuels on public lands, near essential infrastructure, or on private lands by working with landowners. The program may include the following:

- Performing maintenance including fuel management techniques such as pruning and clearing dead vegetation, selective logging, cutting high grass, planting fire-resistant vegetation, and creating fuel/fire breaks (i.e., areas where the spread of wildfires will be slowed or stopped by the removal of fuels).
- Using prescribed burning to reduce fuel loads that threaten public safety and property.
- Identifying and clearing fuel loads created by downed trees.
- Cutting firebreaks into public wooded areas in the wildland-urban interface.
- Sponsoring local "slash and clean-up days" to reduce fuel loads along the wildland-urban interface.
- Linking wildfire safety with environmental protection strategies (i.e., improving forest ecology, wildlife habitat, etc.).
- Developing a vegetation management plan.

Other Alternatives: No action.

Existing Planning Mechanism(s) through which Action Will Be Implemented: CWPP

Responsible Office: City of Angels Camp Fire Department in conjunction with the Calaveras Fire Safe Council, CAL FIRE, and neighboring local fire districts.

Priority (H, M, L): High

Cost Estimate: To be determined.

Benefits (Losses Avoided): Reduced risk of damage to property. Increased life safety for homeowners and firefighters.

Potential Funding: PDM, HMGP

Timeline: As soon as funding is available.

Action 7. Participate in Firewise Program

Hazards Addressed: Wildfire

Issue/Background: The Firewise program provides a series of steps that individual residents and their neighbors can take to keep their homes and neighborhoods safer from fire. Angels Camp has considered joining the Firewise program.

Other Alternatives: No action.

Existing Planning Mechanism(s) through which Action Will Be Implemented:

Responsible Office: City of Angels Camp Fire Department in conjunction with the Calaveras Fire Safe Council, CAL FIRE, and neighboring local fire districts.

Priority (H, M, L): High

Cost Estimate: To be determined.

Benefits (Losses Avoided): Reduced risk to wildfire due to individual property owners taking steps to protect their own properties.

Potential Funding: PDM, HMGP

Timeline: As soon as funding is available.

Action 8. Increase Wildfire Risk Awareness

Hazards Addressed: Wildfire

Issue/Background: Education and outreach programs can target citizens, businesses, developers, landscapers, and insurers among others to increase awareness of wildfire risk and strategies for protecting homes and infrastructure. Angels Camp has considered:

- Offering GIS hazard mapping online for residents, developers, and design professionals.
- Organizing a local fire department tour to show local elected officials and planners the most vulnerable areas of the community's wildland-urban interface and increase their understanding of risks.
- Working with insurance companies, utility providers, and others to include wildfire safety information in materials provided to area residents.

- Developing partnerships with neighborhood groups, homeowners' associations, and others to conduct outreach activities.
- Using local fire departments to conduct education programs in schools.
- Informing the public about proper evacuation procedures.
- Forming a citizen plan implementation steering committee to monitor progress of local mitigation actions. Include a mix of representatives from neighborhoods, local businesses, and local government.

Other Alternatives: No action.

Existing Planning Mechanism(s) through which Action Will Be Implemented:

Responsible Office: City of Angels Camp Fire Department in conjunction with the Calaveras Fire Safe Council, CAL FIRE, and neighboring local fire districts.

Priority (H, M, L): High

Cost Estimate: Staff time.

Benefits (Losses Avoided): Reduced wildfire risk due to increased homeowner knowledge and understanding of their individual wildfire risk.

Potential Funding: PDM, HMGP

Timeline: Ongoing

Action 9. Educate Property Owners about Wildfire Mitigation Techniques

Hazards Addressed: Wildfire

Issue/Background: Calaveras County can reduce risk to wildfire by educating property owners on actions that they can take to reduce risk to property, such as the following:

- Installing fire mitigation systems such as interior and exterior sprinkler systems.
- Performing safe disposal of yard and household waste rather than open burning.
- Removing dead or dry leaves, needles, twigs, and combustibles from roofs, decks, eaves, porches, and yards.
- Creating a defensible space or buffer zone cleared of combustible materials around property.
- Installing and maintaining smoke detectors and fire extinguishers on each floor of their homes or other buildings.
- Safely using and storing necessary flammable materials, including machine fuels. Approved safety cans should be used for storing gasoline, oily rags, and other flammable materials. Firewood should be stacked at least 100 feet away and uphill from homes.
- Keeping flammables, such as curtains, secured away from windows or using heavy fire-resistant drapes.

Other Alternatives: No action.

Existing Planning Mechanism(s) through which Action Will Be Implemented:

Responsible Office: City of Angels Camp Fire Department in conjunction with the Calaveras Fire Safe Council, CAL FIRE, and neighboring local fire districts.

Priority (H, M, L): High

Cost Estimate: Staff time. Advertising and printing costs.

Benefits (Losses Avoided): Reduced wildfire risk due to increased homeowner knowledge and understanding of their individual wildfire risk.

Potential Funding: PDM, HMGP

Timeline: Ongoing

Action 10. Reclaimed Water Line

Hazards Addressed: Agricultural Hazard/Drought and Water Shortage

Issue/Background: Agriculture is a large part of the economic commerce of the County which connects to tourism within the City. The proposed mitigation project is to construct a reclaimed water line from the City Tertiary Treatment Plan to nearby agriculture land and recreational soccer fields. This project would provide a consistent source of irrigation while improving the agriculture and recreational commerce of the region.

Other Alternatives: No action.

Existing Planning Mechanism(s) through which Action Will Be Implemented: None, this project has not been included in any existing planning documents.

Responsible Office: City of Angels, Public Works Department

Priority (H, M, L): Low

Cost Estimate: $3,000,000

Benefits (Losses Avoided): Increased resilience to drought for the agricultural community.

Potential Funding: Grants, Loans, and Enterprise accounts

Timeline: Ongoing

Action 11. Water Storage Tank

Hazards Addressed: Drought and Water Shortage/Wildfire

Issue/Background: To increase reliability of the City water system and to avoid service interruptions, a new 1.4 million gallon storage tank is sought. The tank site recommended is located in proximity to the proposed pipeline supply route for proposed well sites. This would facilitate filling the tank and provide a suitable parallel storage source for the City.

Other Alternatives: No action.

Existing Planning Mechanism(s) through which Action Will Be Implemented: This project is included in the Water Master Plan which was adopted by the City Council

Responsible Office: City of Angels, Public Works Department

Priority (H, M, L): Medium

Cost Estimate: $2,000,000

Benefits (Losses Avoided): Increased water storage during times of drought. Additional water for firefighting purposes.

Potential Funding: Grants, Loans, and Enterprise accounts

Timeline: Ongoing

DOES THE CITY HAVE ANY POST FIRE PROJECTS AND/OR FLOOD RELATED PROJECTS TO INCLUDE IN THIS SECTION? FEMA WOULD LIKE TO SEE AT LEAST ONE FLOOD PROJECT TO DEMONSTRATE CONTINUED COMPLIANCE WITH THE NFIP AND TO OBTAIN FEMA APPROVAL OF THIS CITY ANNEX