

**BOARD OF FORESTRY AND FIRE PROTECTION**

P.O. Box 944246  
SACRAMENTO, CA 94244-2460  
Website: [www.bof.fire.ca.gov](http://www.bof.fire.ca.gov)  
(916) 653-8007



Peter N. Maurer  
Calaveras County Planning Department  
891 Mountain Ranch Road  
San Andreas, CA 95249

June 11, 2015

Dear Mr. Maurer:

The State Board of Forestry and Fire Protection (Board) is required to review and provide recommendations to the safety element of county and local government general plans when such plans are being amended. This review is in accordance with Government Code (GC) §65302.5 which requires the Board to review the fire safety elements when the general plans contains State Responsibility Areas or Very High Fire Hazard Severity Zones.

Enclosed is the final review and recommendations for the Calaveras County General Plan Safety Element, December 2014. The Board has prepared this document in cooperation with members of the CAL FIRE Land Use Planning Program.

Government Code §65302.5 also requires the Calaveras County Planning Department to consider and accept the recommendations made by the Board and communicate in writing to the Board its reasons for not accepting any recommendations.

Additionally, the Board of Forestry and Fire Protection has updated their State Responsible Area Fire Safe Regulations (14 CCR § 1270 et seq) and the new regulations will be effective January 1, 2016. As of that date, any certifications issued to county ordinances that met or exceeded the previous regulations shall be invalid. For information about the new regulations and how to request certification of local ordinances, please visit the Board's Local Government webpage: [http://bofdata.fire.ca.gov/board\\_joint\\_policies/local\\_government/](http://bofdata.fire.ca.gov/board_joint_policies/local_government/).

Thank you for the opportunity to participate in your planning process and we look forward to working with you on these recommendations. We hope this input leads to greater protection and reduced cost and losses from wildfires to Calaveras County and adjacent wildlands.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Keith Gilles".

J. Keith Gilles  
Chair, Board of Forestry and Fire Protection

CC: Chief Pete Muñoz, CAL FIRE Land Use Planning

# Calaveras County

## Land Use Planning Program

### General Plan Safety Element Assessment Tier 1

June 16, 2015

Board of Forestry and Fire Protection



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**Purpose and Background:** The State Board of Forestry and Fire Protection (Board) is required to review and make recommendations for the safety element of general plan updates in accordance with Government Code (GC) 65302.5. The review and recommendations apply to those general plans with State Responsibility Area (SRA) (Public Resources Code (PRC) 4125) or Very High Fire Hazard Severity Zone Local Responsibility Area (VHFHSZ LRA) (GC 51177(i), PRC 4125).

The statutory requirements for the Board review and recommendations pursuant to GC 65302.5 (a)(1) and (2), and (b) are as follows:

- *“The draft elements...to the fire safety element of a county’s or a city’s general plan...shall be submitted to the Board at least 90 days prior to... the adoption or amendment to the safety element of its general plan [for each county or city with SRA or VHFHSZ].”*
- *“The Board shall... review the draft or an existing safety element and report its written recommendations to the planning agency within 60 days of its receipt of the draft or existing safety element....”*
- *“Prior to adoption of the draft element..., the Board of Supervisors... shall consider the recommendations made by the Board... If the Board of Supervisors...determines not to accept all or some of the recommendations..., the Board of Supervisors... shall communicate in writing to the Board its reasons for not accepting the recommendations.”*

**Methodology for Review and Recommendations:** The Board established a standardized method to review the safety element of general plans. The methodology includes 1) examining the safety element for inclusion of factors that are important for mitigation of wildfire hazard and risks, and 2) making recommendations related to these factors. The evaluation factors and recommendations below were developed using CAL FIRE technical documents and input from local fire departments.

Enclosed is the most expansive set of recommendations suggested by the Board, known as a Tier 1 Assessment. These recommendations are directed at communities that include:

- Overall high population densities; or
- High proportion of SRA or 20% or more of a city’s acreage is VHFHSZ LRA; or
- Population centers in or adjacent to VHFHSZ SRA, if there is no designated VHFHSZ LRA in the county; or
- Within the context of neighboring jurisdictions, the location of VHFHSZ in the jurisdiction creates an overall picture of contiguous fuels that threaten population or economic centers.

As local fuels, boundaries, populations, and other variables change throughout time, Board staff have the discretion to re-assign a jurisdiction into a lower or higher assessment tier. Staff will consider:

- Variations in population and population density; or
- Changes in proportion of land designated VHFHSZ (lower or higher); or
- Firefighting capabilities (paid, volunteer, equipment, etc) and contract changes; or

- Past planning efforts and involvement of organizations such as local Fire Safe Councils and new initiatives or efforts that have emerged over time; or
- Changes to the context of VHFHSZ within the region – does the VHFHSZ in a jurisdiction combine with neighboring fuels to create a continual pattern of very high fire risk in a way that it hadn't previously?

A full list of communities to be evaluated under Tier 1 are listed below.

Counties (alphabetical)				
Alameda	Glenn	Monterey	San Diego	Solano
Alpine	Humboldt	Napa	San Joaquin	Sonoma
Amador	Kern	Nevada	San Luis Obispo	Stanislaus
Butte	Lake	Orange	San Mateo	Tehama
Calaveras	Lassen	Placer	Santa Barbara	Trinity
Alameda	Los Angeles	Plumas	Santa Clara	Tulare
Alpine	Madera	Riverside	Santa Cruz	Tuolumne
Contra Costa	Marin	Sacramento	Shasta	Ventura
Del Norte	Mariposa	San Benito	Sierra	Yolo
El Dorado	Mendocino	San Bernardino	Siskiyou	Yuba
Fresno				

Cities (alphabetical by county)				
<b>Alameda</b>	<b>Los Angeles con't</b>	<b>Napa</b>	<b>Riverside con't</b>	<b>San Mateo</b>
Oakland	Glendale	Calistoga	Lake Elsinore	Hillsborough
<b>Butte</b>	Glendora	<b>Nevada</b>	Murrieta	San Carlos
Paradise	Hidden Hills	Calistoga	<b>San Bernardino</b>	Woodside
<b>Contra Costa</b>	Irwindale	Grass Valley	Big Bear Lake	<b>Santa Barbara</b>
El Cerrito	La Canada Flintridge	Nevada City	Colton	Santa Barbara
Lafayette	La Habra Heights	Truckee	Grand Terrace	<b>Santa Clara</b>
Orinda	La Verne	<b>Orange</b>	Highland	Los Gatos
Richmond	Los Angeles	Aliso Viejo	Loma Linda	Monte Sereno
<b>El Dorado</b>	Malibu	Anaheim	Rancho Cucamonga	Saratoga
Placerville	Monrovia	Brea	Redlands	<b>Shasta</b>
South Lake Tahoe	Palmdale	Laguna Beach	San Bernardino	Redding
<b>Lake</b>	Palos Verdes Estates	Laguna Niguel	Yucaipa	Shasta Lake
Clearlake	Pasadena	Lake Forest	<b>San Diego</b>	<b>Siskiyou</b>
<b>Los Angeles</b>	Rancho Palos Verdes	Newport Beach	Encinitas	Dunsmuir
Agoura Hills	Rolling Hills	Rancho Santa Margarita	Escondido	Fort Jones
Avalon	Rolling Hills Estates	San Clemente	Poway	Mount Shasta
Azusa	San Dimas	Yorba Linda	San Diego	Weed
Beverly Hills	Santa Clarita	<b>Placer</b>	San Marcos	<b>Tuolumne</b>
Bradbury	Sierra Madre	Colfax	Santee	Sonoma
Burbank	Westlake Village	<b>Plumas</b>	<b>San Luis Obispo</b>	<b>Ventura</b>
Calabasas	Whittier	Portola	Atascadero	Moorpark
Claremont	<b>Marin</b>	<b>Riverside</b>	Pismo Beach	Ojai
Diamond Bar	Mill Valley	Banning	<b>San Mateo</b>	Simi Valley
Duarte	<b>Monterey</b>	Beaumont	Belmont	Thousand Oaks
	Carmel	Calimesa	Half Moon Bay	

## Review Process and Timeline

The county/local jurisdiction and CAL FIRE Land Use Planning staff will receive and review technical guidance documents, the Board assessment, and relevant information from CAL FIRE and the Governor's Office of Planning and Research.



The county or local jurisdiction will work closely with CAL FIRE Land Use Planning staff during the development of the general plan and the safety element in particular.



**At least 90 days prior to the adoption or amendment of the General Plan:** The county or local jurisdiction will submit the safety element to the Board of Forestry & Fire Protection for review. Jurisdictions are encouraged to send safety elements to the Board prior to the 90 day statutory requirement for greater collaboration.



**No more than 60 days later:** The Board will consider staff recommendations and approve as-is or with changes at the next Board meeting. This deadline may be modified upon mutual agreement between Board staff and local jurisdictions.

# Standard List of General Plan Safety Element Recommendations

Jurisdiction: Calaveras County		CAL FIRE Unit: Tuolumne-Calaveras	Date Received:
County: Calaveras	LUPP Reviewer: Kevin Lindo	Unit Contact: DC Roy Evans	Date Reviewed: May 20, 2015

**General Recommendations:**

- Unclear whether the “General Plan Background Report” is incorporated into the general plan by reference. If the General Plan Background Report is not incorporated into the plan by reference, then the Fire Hazard Severity Maps need to be included in the Safety Element.

## 1.0 Wildfire Protection Planning

1.1 General Plan references and incorporates County or Unit Fire Plan. Yes Partial No

**Recommendation 1:** Identify, reference or create (if necessary) a fire plan for the geographic scope of the General Plan. General Plan should incorporate the general concepts and standards from any county fire plan, fire protection agency (federal or state) fire plan, and local hazard mitigation plan. Identify or reference the local Unit Fire Plan and, if applicable, the Community Wildfire Prevention Plan.

**Priority:** High  Medium  Low N/A

**Recommendation 2:** Ensure fire plans incorporated by reference into the contain evaluations of fire hazards, assessment of assets at risk, prioritization of hazard mitigation actions, and implementation and monitoring components.

**Priority:** High  Medium  Low N/A

**Additional Wildfire Protection Planning Recommendations:**  
Include reference to Local Hazard Mitigation Plan

## 2.0 Land Use Planning:

2.1 Goals and policies include mitigation of fire hazard for future development. Yes Partial No

**Recommendation 1:** Establish goals and policies for specific ordinances addressing evacuation and emergency vehicle access; water supplies and fire flow; fuel modification for defensible space; and home addressing and signing.

**Priority:** High  Medium  Low  N/A

**Recommendation 2:** Specify the local ordinances, code sections, or regulations addressing the above standards, particularly any ordinances that address right-of-way, easement, and other reasonable offsite and onsite improvements for a division of land which qualifies for a Parcel Map rather than a Tentative/Final Map under the Subdivision Map Act.

**Priority:**  High  Medium  Low  N/A

**Recommendation 3:** Develop fire safe development codes used as standards for fire protection for new development in State Responsibility Area (SRA) within the entity's jurisdiction that meet or exceed statewide standards in Title14 California Code of Regulations Section 1270 et seq.

**Priority:**  High  Medium  Low  N/A

**Recommendation 4:** Adopt, and have certified by the BOF, local fire safe ordinances which meet or exceed standards in 14 CCR § 1270 for State Responsibility Area.

**Priority:**  High  Medium  Low  N/A

**Recommendation 5:** Consider mitigation of previously developed areas that do not meet Title14 California Code of Regulations Section 1270 et seq. or equivalent local ordinance.

**Priority:**  High  Medium  Low  N/A

- 2.2 Disclose wildland urban interface hazards, including Fire Hazard Severity Zone designations and other vulnerable areas as determined by CAL FIRE or fire prevention organizations. Describe or map any Firewise Communities or other firesafe communities as determined by the National Fire Protection Association, Fire Safe Council, or other organizations.  Yes  Partial  No

**Recommendation 1:** Specify whether the entity has a Very High Fire Hazard Severity Zones (VHFHSZ) designation pursuant GC 51175 and include a map of the zones that clearly indicates any area designated VHFHSZ.

**Priority:**  High  Medium  Low  N/A;

**Recommendation 2:** Adopt CAL FIRE recommended Fire Hazard Severity Zones including model ordinances developed by the Office of the State Fire Marshal for establishing VHFHSZ areas.

**Priority:**  High  Medium  Low  N/A

**Recommendation 3:** Discuss and/or include local fire hazard maps.

**Priority:**  High  Medium  Low  N/A

- 2.3 The design and location of new development provides for adequate infrastructure for the safe ingress of emergency response vehicles and simultaneously allows civilian egress during an emergency:  Yes  Partial  No

**Recommendation 1:** Develop a policy that approval of parcel maps and tentative maps is conditional based on meeting regulations adopted pursuant to §4290 and 4291 of the Public Resources Code, particularly those regarding road standards for ingress, egress, and fire

equipment access.

**Priority:**  High  Medium  Low  N/A

**Recommendation 2:** Develop pre-plans for fire prone areas that address civilian evacuations to temporary safety locations.

**Priority:**  High  Medium  Low  N/A

- 2.4 When approving parcel maps and use permits, consideration is given to providing adequate water supply infrastructure that meets zoning and fire protection needs.  Yes  Partial  No

**Recommendation 1:** Develop a policy that approval of parcel maps is conditional based on meeting zoning requirements and fire safe development codes.

**Priority:**  High  Medium  Low  N/A

**Additional Land Use Planning Recommendations:**

2.1 The Board of Forestry and Fire Protection has updated § 1270 et seq and any certifications issued to local jurisdictions for their SRA Fire Safe Regulation ordinances will be considered invalid as of January 1, 2016. Please visit [http://bofdata.fire.ca.gov/board\\_joint\\_policies/local\\_government/](http://bofdata.fire.ca.gov/board_joint_policies/local_government/) for information on updating and certifying local ordinances.

2.2 Include Firewise Communities and Firesafe communities into maps and/or discussion within Safety Element.

**3.0 Housing/Structures and Neighborhoods:**

- 3.1 Incorporation of current fire safe building codes.  Yes  Partial  No

**Recommendation 1:** Adopt building codes for new development in State Responsibility Areas or incorporated areas with VHFHSZ that are based on those established by the Office of the State Fire Marshal in Title 19 and Title 24 CCR, referred to as the “Wildland Urban Interface Building Codes.”

**Priority:**  High  Medium  Low  N/A

- 3.2 Identification and actions for substandard fire safe housing and neighborhoods relative to fire hazard area.  Yes  Partial  No

**Recommendation 1:** Identify and map existing housing structures that do not conform to contemporary fire standards in terms of building materials, perimeter access, and vegetative hazards in VHFHSZ or SRA by fire hazard zone designation.

**Priority:**  High  Medium  Low  N/A

**Recommendation 2:** Identify plans and actions to improve substandard housing structures and neighborhoods. Plans and actions should include structural rehabilitation, occupancy reduction, demolition, reconstruction, neighborhood-wide fuels hazard reduction projects,

community education, and other community based solutions.

**Priority:**  High  Medium  Low  N/A

**Recommendation 3:** Identify plans and actions for existing residential structures and neighborhoods, and particularly substandard residential structures and neighborhoods, to be improved to meet current fire safe ordinances pertaining to access, water flow, signing, and vegetation clearing.

**Priority:**  High  Medium  Low  N/A

3.3 Consideration of diverse occupancies and their effects on wildfire protection.

Yes  Partial  No

**Recommendation 1:** Ensure risks to uniquely occupied structures, such as seasonally occupied homes, multiple dwelling structures, or other structures with unique occupancy characteristics, are considered for appropriate and unique wildfire protection needs.

**Priority:**  High  Medium  Low  N/A

3.4 Fire engineering features for structures in VHFHSZ.  Yes  Partial  No

**Recommendation 1:** Ensure new development proposals contain specific fire protection plans, actions, and codes for fire engineering features for structures in VHFHSZ. Examples include codes requiring automatic sprinklers in VHFHSZ.

**Priority:**  High  Medium  Low  N/A

**Additional Housing/Structures and Neighborhoods Recommendations:**

**4.0 Conservation and Open Space:**

4.1 Identification of critical natural resource values relative to fire hazard areas.  Yes  Partial  No

**Recommendation 1:** Identify critical natural resources and other “open space” values within the geographic scope of the General Plan.

**Priority:**  High  Medium  Low  N/A

4.2 Inclusion of resource management activities to enhance protection of open space and natural resource values.  Yes  Partial  No

**Recommendation 1:** Develop plans and action items for vegetation management that provides fire damage mitigation and protection of open space values. Plans should address protection of natural resource financial values, establishment of fire resilient natural resources, protection of watershed qualities, and protection of endangered species habitats. Actions should consider prescribed burning, fuel breaks, and vegetation thinning and removal

**Priority:**  High  Medium  Low  N/A

**Recommendation 2:** Establish goals and policies for reducing the wildland fire hazards within the entity’s boundaries, especially on vacant residential lots and greenbelts and, with the

relevant partners, on adjacent private wildlands or federal lands with fire hazards that threaten the entity's jurisdiction.

**Priority:**  High  Medium  Low  N/A

4.3 Integration of open space into fire safety effectiveness.  Yes  Partial  No

**Recommendation 1:** Establish goals and policies for incorporating systematic fire protection improvements for open space. Specifics policies should address facilitation of safe fire suppression tactics, standards for adequate access for firefighting, fire mitigation planning with agencies/private landowners managing open space adjacent to the GP area, water sources for fire suppression, and other fire prevention and suppression needs.

**Priority:**  High  Medium  Low  N/A

4.4 Urban forestry plans relative to fire protection.  Yes  Partial  No

**Recommendation 1:** Ensure residential areas have appropriate fire resistant landscapes and discontinuous vegetation adjacent to open space or wildland areas.

**Priority:**  High  Medium  Low  N/A

**Recommendation 2:** Evaluate and resolve existing laws and local ordinances which conflict with fire protection requirements. Examples include conflicts with vegetation hazard reduction ordinances and listed species habitat protection requirements.

**Priority:**  High  Medium  Low  N/A

4.5 Mitigation for unique pest, disease and other forest health issues leading to hazardous situations.  Yes  Partial  No

**Recommendation 1:** Establish goals and policies that address unique pest, disease, exotic species and other forest health issues in open space areas for purposes of reducing fire hazard and supporting ecological integrity.

**Priority:**  High  Medium  Low  N/A

**Additional Conservation and Open Space Recommendations:**

**5.0 Circulation and Access:**

5.1 Adequate access to high hazard wildland/open space areas.  Yes  Partial  No

**Recommendation 1:** Establish goals and policies for adequate access in Very High Fire Hazard Severity Zones that meet or exceed standards in Title 14 CCR 1270 for lands with no structures, and maintain conditions of access in a suitable fashion for suppression access or public evacuation.

**Priority:**  High  Medium  Low  N/A

5.2 Standards for evacuation of residential areas in high hazard areas. Yes Partial No

**Recommendation 1:** Goals and policies should be established to delineate residential evacuation routes and evacuation plans in high or very high fire hazard residential areas.

**Priority:** High Medium Low N/A

5.3 Incorporate a policy that provides for a fuel maintenance program along roadways in the agency having jurisdiction. Yes Partial No

**Recommendation 1:** Develop an adaptive vegetation management plan that considers fuels, topography, weather (prevailing winds and wind event specific to the area), fire ignitions and fire history.

**Priority:** High Medium Low N/A

5.4 Adequacy of existing and future transportation system to incorporate fire infrastructure elements. Yes Partial No

**Recommendation 1:** Establish goals and policies for proposed and existing transportation systems to facilitate fire infrastructure elements such as turnouts, helispots and safety zones.

**Priority:** High Medium Low N/A

**Additional Circulation and Access Recommendations:**

5.3 Reference any portions of Unit and or Local Plans that pertain to this section.

**6.0 Defensible Space**

6.1 Develop geographic specific fire risk reduction mitigation measures using fuel modification. Yes Partial No

**Recommendation 1:** Include policies and recommendations that incorporate fire safe buffers and greenbelts as part of the development planning. Ensure that land uses designated near very fire hazard severity zones are compatible with wildland fire protection strategies/capabilities.

**Priority:** High Medium Low N/A

6.2 Fuel modification around homes. Yes Partial No

**Recommendation 1:** Establish ordinances in SRA or VHFHSZ for vegetation fire hazard reduction around structures that meet or exceed the Board of Forestry and Fire Protection's Defensible Space Guidelines for SRA and the Very High Fire Hazard severity zones, including vacant lots.

See [http://www.bof.fire.ca.gov/pdfs/Copyof4291finalguidelines9\\_29\\_06.pdf](http://www.bof.fire.ca.gov/pdfs/Copyof4291finalguidelines9_29_06.pdf)

**Priority:** High Medium Low N/A

**Recommendation 2:** Reduce fuel around communities and subdivisions, considering fuels, topography, weather (prevailing winds and wind event specific to the area), fire ignitions and fire history.

**Priority:**  High  Medium  Low  N/A

6.3 Fire suppression defense zones.  Yes  Partial  No

**Recommendation 1:** Establish goals and policies that create wildfire defense zones for emergency services, including fuel breaks or other staging areas where WUI firefighting tactics could be most effectively deployed.

**Priority:**  High  Medium  Low  N/A

**Additional Defensible Space Recommendations:**

## 7.0 **Emergency Services:**

7.1 Map/describe existing emergency service facilities and areas lacking services, specifically noting any areas in SRA or VHFHSZs.  Yes  Partial  No

**Recommendation 1:** Include descriptions of emergency services including available equipment, personnel, and maps of facility locations.

**Priority:**  High  Medium  Low  N/A

**Recommendation 2:** Initiate studies and analyses to identify appropriate staffing levels and equipment needs commensurate with the current and projected emergency response environment.

**Priority:**  High  Medium  Low  N/A

7.2 Assessment and projection of future emergency service needs.  Yes  Partial  No

**Recommendation 1:** Ensure new development includes appropriate facilities, equipment, personnel and capacity to assist and support wildfire suppression emergency service needs. Future emergency service needs should be:

- Established consistent with state or national standards.
- Developed based on criteria for determining suppression resource allocation that includes elements such as identified values and assets at risk, ignition density, vegetation type and condition, as well as local weather and topography.
- Local Agency Formation municipal services reviews for evaluating level of service, response times, equipment condition levels and other relevant emergency service information.

**Priority:**  High  Medium  Low  N/A

7.3 Adequacy of training.  Yes  Partial  No

**Recommendation 1:** Establish goals and policies for emergency service training that meets or exceeds state or national standards.

**Priority:**  High  Medium  Low  N/A

- 7.4 Inter-fire service coordination preparedness/mutual aid and multi-jurisdictional fire service agreements.  Yes  Partial  No

**Recommendation 1:** Adopt the Standardized Emergency Management System for responding to large scale disasters requiring a multi-agency response. Ensure and review mutual aid/automatic aid and other cooperative agreements with adjoining emergency service providers.

**Priority:**  High  Medium  Low  N/A

**Additional Emergency Services Recommendations:**

**8.0 Post Fire Safety, Recovery and Maintenance:**

The post fire recommendations address an opportunity for the community and landowners to re-evaluate land uses and practices that affect future wildfire hazards and risk. They also provide for immediate post-fire life and safety considerations to mitigate potential losses to life, human assets and critical natural resources.

- 8.1 Evaluation of redevelopment.  Yes  Partial  No

**Recommendation 1:** In High and Very hazardous areas, ensure redevelopment utilizes state of the art fire resistant building and development standards to improve past ‘substandard’ fire safe conditions.

**Priority:**  High  Medium  Low  N/A

- 8.2 Long term maintenance of fire hazard reduction mitigation projects.  Yes  Partial  No

**Recommendation 1:** Provide polices and goals for maintenance of the post-fire-recovery projects, activities, or infrastructure.

**Priority:**  High  Medium  Low  N/A

- 8.3 Reevaluate hazardous conditions and provide for future fire safe conditions.  Yes  Partial  No

**Recommendation 1:** Incorporate goals and policies that provide for reassessment of fire hazards following wildfire events. Adjust fire prevention and suppression needs for both short and long term fire protection.

**Priority:**  High  Medium  Low  N/A

**Recommendation 2:** Develop burn area recovery plans that incorporate strategic fire safe measures developed during the fire suppression, such as access roads, fire lines, safety zones,

and fuelbreaks, and helispots.

**Priority:**  High  Medium  Low  N/A

8.4 Post fire life and safety assessments.  Yes  Partial  No

**Recommendation 1:** Develop frameworks for rapid post-fire assessment and project implementation to minimize flooding, protect water quality, limit sediment flows and reduce other risks on all land ownerships impacted by wildland fire.

**Priority:**  High  Medium  Low  N/A

**Recommendation 2:** Identify flood and landslide vulnerability areas related to post wildfire conditions.

**Priority:**  High  Medium  Low  N/A

**Recommendation 3:** Establish goals and policies that address the intersection of flood /landslide/post fire burn areas into long term public safety protection plans. These should include treatment assessment of fire related flood risk to life, methods to control storm runoff in burn areas, revegetation of burn areas, and drainage crossing maintenance.

**Priority:**  High  Medium  Low  N/A

**Recommendation 4:** Encourage rapid post-fire assessment, as appropriate, and project implementation to minimize flooding, protect water quality, limit sediment flows and reduce other risks on all land ownerships impacted by wildland fire.

**Priority:**  High  Medium  Low  N/A

8.5 Restore sustainable landscapes and restore functioning ecosystems.  Yes  Partial  No

**Recommendation 1:** Develop burn area recovery plans, evaluation processes and implementation actions that encourage tree and biomass salvage, reforestation activities, create resilient and sustainable landscapes, and restore functioning ecosystems.

**Priority:**  High  Medium  Low  N/A

8.6 Incorporate wildlife habitat/endangered species considerations.  Yes  Partial  No

**Recommendation 1:** Establish goals and policies for consideration of wildlife habitat/endangered species into long term fire area recovery and protection plans, including environmental protection agreements such as natural community conservation plans.

**Priority:**  High  Medium  Low  N/A

8.7 Native species reintroduction.  Yes  Partial  No

**Recommendation 1:** Incorporate native species habitat needs as part of long term fire protection and fire restoration plans.

**Priority:**  High  Medium  Low  N/A

**Additional Post Fire Safety, Recovery and Maintenance Recommendations:**

**9.0 Terrorist and homeland security impacts on wildfire protection:**

These recommendations are included to address fire protection needs related to terrorist acts or other homeland security preparedness and response actions. Both preparedness and incident response can adversely impact fire protection. Adverse effects include substantially decreasing emergency resources' availability, responsiveness and effectiveness by diverting resources, interrupting communications, or restricting emergency access.

9.1 Emergency response barriers. Yes Partial No

**Recommendation 1:** Identify goals and policies that address vital access routes that if removed would prevent fire fighter access (bridges, dams, etc.). Develop an alternative emergency access plan for these areas.

**Priority:** High  Medium  Low N/A

9.2 Prioritizing asset protection from fire when faced with a lack of suppression forces.

Yes Partial No

**Recommendation 1:** Identify and prioritize protection needs for assets at risk in the absence of response forces.

**Priority:** High  Medium  Low N/A

**Recommendation:** Establish fire defense strategies (such as fire ignition resistant areas) that provide adequate fire protection without dependency on fire resources (both air and ground) and could serve as safety zones for the public or emergency support personnel.

**Priority:** High  Medium  Low N/A

9.3 Communication channels during incidents. Yes Partial No

**Recommendation 1:** Establish goals and policies consistent with the Governor's Blue Ribbon Fire Commission of 2005 for communications and interoperability. Example goals and policies should address fire personnel capability to communicate effectively across multiple frequency bands and update and expansion of current handheld and mobile radios used on major mutual aid incidents.

**Priority:** High  Medium  Low N/A

**Additional Terrorist and Homeland Security Recommendations:**

# 8. Safety Element

## Introduction

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The Safety Element addresses natural conditions and human activities that can potentially threaten public health and safety. Natural hazards in Calaveras County include the potential for flooding, wildland fire, earthquakes and their associated hazards, and other geologic conditions including unstable or erosive soils and landslides. Understanding these hazards and preparing to deal with them on both an incident-related and ongoing basis are important objectives. The Safety Element is intended to reduce the risks associated with these hazards and help the County prepare for and avoid emergency situations.

## Organization

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### **SAF 1.1 Background and Setting, Associated Plans and Documents**

Overview  
Flood Hazards  
Fire Hazards  
Geotechnical Hazards  
Hazardous Materials

### **SAF 1.2 Goals and Policies**

General  
Flood Hazards  
Fire Hazards  
Geotechnical Hazards  
Hazardous Materials

### **SAF 1.3 Implementation Programs**

General  
Flood Hazards  
Fire Hazards  
Geotechnical Hazards  
Hazardous Materials

## **SAF 1.1 Background and Setting, Associated Plans and Documents**

### Overview

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Potential safety hazards in Calaveras County include:

- Flood Hazards
- Fire Hazards
- Geotechnical Hazards
- Hazardous Materials

Safety-related issues addressed elsewhere in the General Plan include:

- Bicycle and Pedestrian Safety (See Circulation Element)

- Airport Safety (see Land Use Element)

Required components of the Safety Element inapplicable to Calaveras County are: military installations (none currently exist in the County) and tsunamis.

The Calaveras County Office of Emergency Services (OES) responds to major incidents associated with floods, fire, geotechnical hazards and hazardous materials using the Standardized Emergency Management System (SEMS) and National Incident Management System (NIMS). Calaveras County is part of the California Emergency Management Agency Inland Region (Region IV). The Commander/Chief Officer of the Calaveras County Sheriff's Office, Office of Emergency Services (OES) is responsible for implementing the Emergency Operations Plan (EOP) through the efforts of the Calaveras County Sheriff's Department Special Operations Bureau.

#### Associated Plans and Documents

The following plans address emergency preparedness and response to floods, fires, geotechnical hazards, and hazardous materials in Calaveras County. These plans are updated periodically. Current versions of each plan can be found at the Calaveras County Sheriff's Office OES at the Government Center, 1045 Jeff Tuttle Drive, San Andreas, CA.

**Local Hazard Mitigation Plan (LHMP).** The LHMP identifies hazards and methods to reduce threats and/or eliminate long-term risks to people and property from multiple hazards. It contains an initial earthquake performance evaluation of public facilities providing essential services, shelter and critical governmental functions; an inventory of private facilities that are potentially hazardous; and a plan to reduce the potential risk to private and governmental facilities in the event of a disaster. The General Plan Safety Element reflects the analyses and recommendations of the LHMP. In addition to availability at the Sheriff's office, the adopted LHMP can be found on the California Emergency Management Agency's (CALEMA) website.

**Calaveras County Emergency Operations Plan (EOP).** The EOP outlines the functions, responsibilities, and regional risk assessments of Calaveras County for large scale emergencies (i.e. wildland fires, hazardous materials incidents, flooding, dam failure, light airplane crashes, etc.) and sets forth the planned response for managing these incidents. The plan addresses initial and extended emergency response and the recovery process.

**Other Emergency Operation Plans.** In addition to the LHMP and EOP, the Calaveras County Sheriff's Office also maintains the Calaveras County Sheriff's Office Animal Emergency Plan, Calaveras County Mass Fatality Plan, Calaveras County Radio Amateur Civil Emergency Services (RACES) Plan, and Calaveras County Terrorism Plan.

## Flood Hazards

#### Background and Setting: Flood Hazards

At least nine damaging floods occurred between 1950 and 2006 indicating a 16% annual chance of a destructive flood, or one detrimental flood every 6± years, in Calaveras County. Past flood events have caused evacuations and damaged roads, bridges, public facilities, private property, and businesses.

\$94± million in improved property is located in special flood hazard areas countywide per the 2010 LHMP. Four properties have repeatedly flooded in the County accounting for 66% of the \$748,269 paid in losses through the National Flood Insurance Program (NFIP). Essential public facilities located in flood hazard areas in Calaveras County include a water treatment facility, Sheriff's substation, evacuation site, and a scour critical bridge.

In Calaveras County, flooding may occur from heavy rainfall on saturated soils, rapid snowmelt, or a combination of both. Flooding typically occurs in the winter, but also may result from summer

thunderstorms. Riverine flooding along the main channels of the Mokelumne and Stanislaus Rivers, mid-elevation tributaries of the Mokelumne River, and the upper reaches of the Calaveras River usually results from heavy snowmelt combined with heavy rainfall. In the western County, flooding occurs from heavy rainfall associated with repeated winter storms and saturated soils. The western quarter of Calaveras County contains the majority of properties and facilities that could be impacted by flooding. However, sustained heavy rains, particularly when combined with warm temperatures, can create riverine and/or flash flooding conditions throughout the central and eastern portions of the County.

Agencies responsible for flood protection in Calaveras County are: The Federal Emergency Management Agency (FEMA), the California Department of Water Resources, and the Calaveras County Flood Prevention Officer (Community Development Department). The Calaveras County Office of Emergency Services (OES) responds to major incidents associated with floods.

## Dam Failure Inundation

The National Inventory of Dams (NID) has classified 42 County dams based on the degree of potential hazard posed to downstream areas in the event of dam failure or faulty operations. Seven high hazard dams (probable loss of life), 30 significant hazard dams (possible loss of life, likely significant property/environmental destruction) and seven low hazard dams (no probable loss of human life and low economic and/or environmental losses) are identified. Per FEMA, areas with the greatest threat from dam inundation are located downstream of New Hogan and New Melones Lakes and Pardee, Camanche, and Tulloch Reservoirs in the western County. FEMA flood risk evaluations also indicate a potential flood hazard in areas immediately adjacent to Camanche, New Hogan, and New Melones, and in the vicinity of creeks and rivers countywide. Similarly, threats from seiche also are possible adjacent to County lakes and reservoirs.

### Associated Plans and Documents: Flood Hazards

The County maintains the following text, maps and diagrams identifying the history, location and nature of the County's flood hazards. Text, maps and diagrams are updated on a regular basis. Current versions available at the Calaveras County Planning Department at 891 Mountain Ranch Road, San Andreas, CA 95249, include:

- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM)/ Flood Boundary and Floodway Map (FBFM). These include the National Flood Insurance Program (NFIP) Maps published by FEMA.
- CA Dpt. of Water Resources Awareness Floodplain maps. Also available at: [http://www.water.ca.gov/floodmgmt/lra/fmo/fmb/fes/awareness\\_floodplain\\_maps/calaveras/san\\_andreas.cfm](http://www.water.ca.gov/floodmgmt/lra/fmo/fmb/fes/awareness_floodplain_maps/calaveras/san_andreas.cfm)
- Historical data on flooding (*General Plan Background Report*)
- Existing essential public facilities in flood hazard zones (*General Plan Background Report*)
- Existing structures, roads, and utilities in flood hazard zones (*General Plan Background Report*)
- Areas subject to repeated damage by flooding (*General Plan Background Report*)
- Dams in Calaveras County (*General Plan Background Report*)
- Dam failure inundation maps, Office of Emergency Services (*General Plan Background Report Confidential File – Unavailable for Public Review due to Homeland Security Issues*)
- Geographic Relationship of the Central Valley Flood Protection Plan Target Facilities and Actions to Calaveras County (*General Plan Background Report*)
- Calaveras County Flood Damage Prevention Ordinance (Calaveras County Code Chapter 15.06)

The County does not maintain:

- Maps of levee protection zones or areas subject to inundation in the event of failure of project or nonproject levees or floodwalls (the County has no Levee Protection Zones identified by the Department of Water Resources or Central Valley Flood Protection Board<sup>1</sup>),
- Calaveras County flood information from the US Army Corps of Engineers. USACE works with the CA Department of Water Resources evaluating levees. As described above and verified in the National Levee Database <http://nld.usace.army.mil/> no levee protection areas are identified in the County.
- California Department of Water Resources 200-year floodplain maps (Calaveras County does not contain urban areas with 10,000 or more people for which 200-year floodplains are mapped),
- Central Valley Flood Protection Board (CVFPP) Designated floodway maps (no such floodways are designated in Calaveras County).

**Central Valley Flood Protection Plan (CVFPP).** The CVFPP promotes achieving a minimum 200-year (0.5% annual chance) flood protection standard. Calaveras County traditionally has been considered part of the “Central Valley” because the Mokelumne, Calaveras and Stanislaus Rivers flow through Calaveras County into the Sacramento and San Joaquin Rivers in the Central Valley. Each county in the Sacramento-San Joaquin Valley must reflect CVFPP improvements and policies in its general plan. However, CVFPP improvements and policies do not apply to Calaveras County for the following reasons:

- The CVFPP identifies no proposed flood improvements in the County
- The CVFPP contains no data or analysis pertinent to flooding or flood improvements in the County
- The California Department of Water Resources “Central Valley” jurisdictional boundaries only apply to a small portion of the north bank of the Stanislaus River below Goodwin Dam in Calaveras County. 200-year floodplains have not been determined for this or other locations in the County and are unlikely to be determined for Calaveras County by the state. Based on the preceding, the 200-year floodplain provisions of the CVFPP are practically and realistically inapplicable to Calaveras County and no general plan provisions reflecting the CVFPP are necessary.<sup>2</sup>

Calaveras County remains subject to FEMA’s 100-year floodplain regulations.

## Fire Hazards

### Background and Setting – Fire Hazards

Fire hazards in Calaveras County include wildland and structure (aka “urban”) fires. Local fire districts, the Angels Camp Fire Department (ACFD), the California Department of Forestry and Fire Protection (CAL FIRE), the State Office of Emergency Services, and the United States Forest Service work together to provide mutual aid for structure fires, wildland fires, vehicle accident extrication, and mass casualty incidents.

**Wildland Fire.** Visiting, living and working in Calaveras County often means building homes, businesses or enjoying recreational facilities near or in forests, grasslands, shrub lands, and other natural areas (i.e., wildlands). The intersection of human development, natural terrain, and flammable vegetation coupled with conditions conducive to a high risk of wildland fire is called the Wildland Urban Interface (WUI). As development encroaches farther into high fire-hazard natural lands, the costs and regulatory

<sup>1</sup> One levee, located along Cosgrove Creek was filled.

<sup>2</sup> Personal Communication, Steve Dawson, Operations Chief, Permitting Division, California Department of Water Resources, (916) 574-0648, September, 2013. It was further clarified that references to jurisdictional boundaries along the Calaveras River from “San Joaquin to New Hogan Dam” encompass the dam on the Calaveras River upstream of Escalon-Bellota Road in San Joaquin County and do not extend into Calaveras County. Similarly, references to CVFPP jurisdiction along the “Mokelumne River – Sacramento and San Joaquin Counties to Comanche Reservoir” include only those areas along the Mokelumne River *below* Comanche Reservoir and outside of Calaveras County.

requirements associated with reducing fire risk and protecting homes, human lives, and natural resources increases.

The majority of wildland fire protection in the County is provided by CAL FIRE. CAL FIRE maintains four battalions and twelve stations distributed throughout the County and provides dispatch services to local fire districts and the ACFD through the Fire Protection Emergency Command Center in San Andreas. Approximately 80% of the County's land area is in CAL FIRE'S Tuolumne Calaveras Unit (TCU) State Responsibility Area (SRA). SRAs are lands where the State Board of Forestry and Fire Protection has determined that the financial responsibility of preventing and suppressing fires is primarily a state responsibility. Within the SRAs, state-designated Fire Hazard Severity Zones indicate the relative threat of wildland fire. As of 2010, over 89% of the County is classified as having either a High or Very High fire risk. The 2010 LHMP states that over 15,000 improved parcels and \$2.2 billion in improvements, including schools, medical centers, water/wastewater facilities, fire stations, police stations and evacuation sites, are in a Very High fire hazard zone.

U.S. Forest Service lands in the eastern County are included in Federal Responsibility Areas (FRAs) and are protected by the Stanislaus National Forest Fire Management Unit.

**Structural Fire.** San Andreas and the City of Angels Camp are located in Local Responsibility Areas (LRAs). Local fire districts within LRAs primarily fight structural ("urban") fires, but also provide wildfire fire protection, mutual aid for other fire agencies, hazardous material response, medical aid and other emergency services.

#### Associated Plans and Documents – Fire Hazards

The County maintains the following text, maps and diagrams identifying the location and nature of the County's fire hazards. Text, maps and diagrams are updated on a regular basis. Current versions can be found at the Calaveras County Planning Department at 891 Mountain Ranch Road, San Andreas, CA 95249 and include:

- Historical data on wildfires (*General Plan Background Report*)
- SRA Fire Hazard Severity Map (*General Plan Background Report*)
- General location and distribution of existing and planned land uses in very high fire hazard severity zones (*General Plan Background Report*)
- The general location and boundaries of local, state and federal agencies with responsibility for fire protection (*General Plan Background Report*)
- SRA Fire Safe Regulations - Calaveras County Code Chapter 8.10 - Fire and Life Safety
- Fire Hazard Areas – Calaveras County Code Chapter 8.08 to provide safeguards to prevent the occurrence of fires which might be caused by recreational, residential, commercial, industrial or other activities conducted in any hazardous fire area
- Road construction standards (including emergency ingress/egress) – Chapter 12.02 Road Construction Standards
- California Building Code - Wildland Urban Interface (WUI) Construction Requirements – Calaveras Code Section 15.04.040 (adopting state code)

In addition, County staff accesses the interactive United States Geological Survey (USGS) wildfire hazard data, including historic wildfire occurrences, fuels, and projected wildfire return intervals and related wildland fire information, available online at: <http://landfire.cr.usgs.gov/>. Documents consulted also include: *Fire Hazard Planning, General Technical Advice Series, Governor's Office of Planning and Research* available online at [http://opr.ca.gov/docs/Fire\\_Hazard\\_Planning-Final\\_Report.pdf](http://opr.ca.gov/docs/Fire_Hazard_Planning-Final_Report.pdf).

**Tuolumne - Calaveras Unit (TCU) Strategic Fire Plan (SFP).** Prepared by CAL FIRE, the SFP provides an assessment of the threats and challenges presented by wildland fire and the current status of projects and programs focused on reducing that threat and increasing community safety and awareness. The SFP is updated periodically. The current version of the SFP can be found on CAL FIRE's website.

**Calaveras County Community Wildfire Protection Plan (CWPP).** Prepared under the guidance of the Calaveras Foothill Fire Safe Council, the CWPP includes the Glencoe/Rich Gulch Community Wildfire Protection Plan. The CWPP is updated periodically. The current CWPP can be found online at the Calaveras Foothill Fire Safe Council's website.

## Geotechnical Hazards

### Background and Setting – Geotechnical Hazards

Geotechnical hazards in Calaveras County include seismic (earthquake) hazards, soil-related hazards and their associated effects and volcanoes.

#### **Seismic**

Calaveras County is in an area of historically low seismic activity within the Sierra Block of Seismic Risk Zone 3. The County is not in, adjacent to, or crossed by, an Alquist-Priolo Earthquake Fault Zone. The County's potentially active faults include the Bear Mountain and Melones Fault Zones, part of the Foothills Fault System, which pass through the western County near Valley Springs, Mokelumne Hill and south of Copperopolis. More distant is the Sierra Frontal Fault System along the eastern edge of the Sierra Nevada Range with a low likelihood of generating seismic activity in the County. The 2010 LHMP concludes that the most likely impacts to the County from earthquakes are associated with an overload of communication systems due to falling trees, landslides, and damage to electrical substations. Indirectly, a flood of evacuees from a major quake in the San Francisco metropolitan area could create a strain on local infrastructure, basic goods and medical capacity in the County as a result of activity along faults located south and across the Central Valley.

Liquefaction generally occurs in conjunction with seismically-induced ground shaking. Because no portion of Calaveras County is located in a Seismic Hazard Zone, Calaveras County is not considered to be at risk from liquefaction hazards.

#### **Soil-Related Hazards**

Soil-related hazards that have or may occur in the County include landslides, erosion, unstable slopes, mudslides, debris flows, rockfalls, expansive soils, asbestos-containing soils and related hazards. Calaveras County contains a wide range of soils that have varying levels of susceptibility to erosion, ranging from slight to extremely high (NRCS 2007; Calaveras County Farm Advisor's Office 1982). Areas with slopes greater than 20 percent may be susceptible to erosion, instability, or landslides -- especially during periods of high rainfall or snowmelt. In addition, steep slopes recently affected by wildfires can be the site of fast-moving, highly destructive debris flows in response to heavy rains. Several soil types in the County include potentially expansive materials (e.g., clay). Serpentinite, a type of rock with a high potential to contain asbestos, also is found throughout various portions of the County.

The 2010 LHMP reports a lack of previous occurrences of subsidence countywide and limited or no conditions existing in the county associated with land subsidence (e.g., soil types conducive to subsidence, high surface pressure due to loading from high rise buildings, high water table and large scale groundwater or oil extraction). Therefore, subsidence is considered unlikely to occur in Calaveras County. Should large scale groundwater or other extractions begin to occur in the County, the potential risks from subsidence should be re-evaluated.

#### **Volcanoes**

The State of California Multi-Hazard Mitigation Plan identifies the Long Valley Caldera (Mono County) as a slight, but potential hazard to Calaveras County. Specifically, the County could be impacted by ash fall of less than 5 cm thick in most areas and 5-20 cm in the eastern County.

### Associated Plans and Documents - Geotechnical Hazards

The County maintains the following text, maps and diagrams identifying the existing or potential location and nature of the County's geotechnical hazards. Text, maps and diagrams are updated on a regular basis. Current versions can be found in the *General Plan Background Report* available at the Calaveras County Planning Department at 891 Mountain Ranch Road, San Andreas, CA 95249 or in the Calaveras County Code available online.

- Calaveras County Regional Faults
- Calaveras County Ground Shaking Potential Map
- Earthquake Hazard Severity by County
- Volcanic Hazard Map, Calaveras County
- Calaveras County Soils Susceptible to Severe Erosion
- Potentially Unstable Slopes (Slopes Exceeding 20%), Calaveras County
- Chapter 15.05 Grading and Drainage Ordinance (Calaveras County Code)
- Identified Hazardous Materials or Hazard Sources in Calaveras County
- Abandoned Mines with Identified Hazards or Hazardous Materials Recognized by the Department of Conservation Office of Mine Reclamation, Calaveras County
- Acid Rock Drainage (ARD) Hazards from Abandoned Mines
- Arsenic Hazards from Abandoned Mines
- Mercury Hazards from Abandoned Mines (Placer Mines)

**Calaveras County Grading, Drainage and Erosion Control Design Manual.** Prepared by the Calaveras County Public Works Department, the manual provides procedures, standards, and requirements necessary to safeguard public health, safety, and welfare from geotechnical related hazards. The manual is updated periodically. The current version of the manual can be found at the Calaveras County Public Works Department.

## Hazardous Materials

### Background and Setting – Hazardous Materials

Threats from hazardous materials in the County are generally associated with their use, storage and transport. Primary sources of hazardous materials in the County include: water treatment plants, hazardous material transport along major highways, methamphetamine drug labs, medical facilities, leaking underground fuel tanks (LUFTs), underground storage tanks (USTs), landfills, industrial sites, mines and utility corridors.

The Calaveras County Environmental Health Department (EHD) is certified by Cal/EPA to implement the state's Unified Program as a Certified Unified Program Agency (CUPA). As a CUPA, EHD consolidates, coordinates and makes consistent the administrative requirements, permits, inspection activities, enforcement activities, and hazardous waste and hazardous materials fees countywide. EHD regulates establishments that use hazardous materials, dispose of hazardous wastes, or have USTs and/or above-ground storage tanks. Local businesses handling hazardous materials must prepare a business plan that provides emergency response guidelines for the release of hazardous materials. Local fire districts retain these records to help identify hazardous materials likely to be present on site during emergency response situations (e.g., fires, spills, leaks) and formulate an appropriate response. As of 2011, more than 200 businesses were permitted for hazardous materials in the County.

EHD also maintains public information on the County's website to assist in identifying, managing and disposing of hazardous materials for households and smaller businesses. Residents in Calaveras and Alpine Counties can dispose of household hazardous wastes at the Rock Creek Solid Waste Facility, a dual landfill and transfer station, in Milton. The Rock Creek Transfer Station building is a Waste Recovery and Transfer Center with a permanent hazardous waste facility permitted to accept hazardous waste from households and businesses generating less than 100 kilograms of hazardous waste monthly. A waste removal contractor transports hazardous waste out of the County after pick up. Transfer stations also are located in San Andreas, Wilseyville, Paloma, Copperopolis, Red Hill and Avery, within two miles or less of

92% of County residents. The California Asbestos Monofill (CAM) is located in Copperopolis and is permitted to landfill asbestos-containing waste and to accept/store used tires. CAM also accepts waste generated from outside the County.

#### Associated Plans and Documents

The previously referenced *Calaveras County Emergency Operations Plan* (EOP) identifies multi-agency, multi-disciplinary and multi-jurisdictional resources to respond to hazardous material emergencies. The County's Hazardous Materials Response Team (HMRT) is managed by the Calaveras County Sheriff's Department.

The *Calaveras County Hazardous Materials Area Plan* provides the response guidelines for hazardous materials incidents in compliance with state law. The plan is updated regularly. Copies of the plan are available at the Calaveras County Sheriff's Office.

## SAF 1.2 Goals and Policies

### Goal and Policies: General

#### Goal

**SAF-1** People, property, economy, and natural resources safe from the risks of natural and man-made hazards.

#### Policies

- SAF 1.1** Ensure that discretionary actions involving new development will not prevent the implementation of emergency response plans or the viability of evacuation routes established by local, state or federal agencies.
- SAF 1.2** Require new development to incorporate design features that minimize vulnerability to natural and man-made hazards.
- SAF 1.3** Ensure that discretionary actions involving new development will not result in a reduction in the pre-project levels of service provided by emergency responders.
- SAF 1.4** Evaluate the public costs that would be incurred if emergency or remedial actions become necessary prior to approving new development in identified hazardous areas.
- SAF 1.5** Require new development to provide for the long-term maintenance and operation of essential facilities installed in conjunction with the new development during emergency situations (e.g. channel maintenance or debris removal adjacent to bridges along critical evacuation routes).
- SAF 1.6** Require new development to identify, and have available, an emergency water supply sufficient to maintain a minimum three day water supply to serve the development during emergency situations.
- SAF 1.7** Streamline the permitting process for the provision of communications systems to enhance emergency response and for post-disaster recovery.
- SAF 1.8** Locate new essential public facilities, utilities, and services away from identified hazard areas.
- SAF 1.9** Coordinate planning efforts between local, state and federal public safety and law enforcement agencies; the community; and other stakeholders to ensure cooperative, efficient and effective planning to minimize the risks associated with natural and man-made hazards.
- SAF 1.10** Continue to make available public education materials to assist residents and visitors in planning and responding to emergency situations.

## Goal and Policies: Flood Hazards

### Goal

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**SAF-2** Communities protected from unreasonable risks of death, injuries, property damage and economic and social dislocation resulting from floods, including flooding caused by seiches and dam failure.

### Policies

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**SAF 2.1** Apply consistent development standards for new development proposed in designated flood hazard zones, or areas identified by a qualified professional as flood-prone, to reduce potentially significant adverse impacts related to flooding.

**SAF 2.2** Deny discretionary or ministerial entitlements that place people or property at risk within identified flood hazard zones unless (1) findings can be made in accordance with California Government Code Section 65962(a) and (2) measures are identified and implemented to minimize flood hazards prior to occupancy.

**SAF 2.3** Ensure that post-development, off-site peak flow drainage from the area being developed does not exceed pre-development peak flow drainage.

## Goal and Policies: Fire Hazards

### Goal

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**SAF-3** Communities protected from unreasonable risks of death, injuries, property damage and economic and social dislocation resulting from fires.

### Policies

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**SAF 3.1** Apply consistent standards for new development commensurate with the severity of the fire hazard as reflected in designated fire hazard zones and as necessary to reduce potentially significant adverse impacts related to structural (urban) and wildland fires.

**SAF 3.2** Ensure that new development, including essential public facilities, complies with adopted fire codes and standards for fire protection.

**SAF 3.3** Review new development proposals in coordination with CAL FIRE and individual fire districts to ensure that impacts to fire protection districts are identified and, where necessary, require new development, including essential public facilities, to mitigate those impacts consistent with state law.

**SAF 3.4** All new development shall meet any applicable standards for access by emergency vehicles and egress by residents.

**SAF 3.5** Include professional fire planning experts, to the maximum extent feasible, in the planning review process for projects located in High and Very High Fire Hazard Areas to consistently evaluate fire safe design, potential impacts related to fire safety, and to identify effective measures to minimize potential impacts related to wildland fire.

**SAF 3.6** The County shall support the review and update of fire district impact fees to adequately fund minimum levels of service and staffing to meet the fire protection needs of existing and future residents and businesses.

## **Goal and Policies: Geotechnical Hazards**

### **Goal**

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**SAF-4** Communities protected from unreasonable risks of death, injuries, property damage and economic and social dislocation resulting from geotechnical hazards including seismic hazards, unstable slopes and soil-related hazards.

### **Policies**

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**SAF 4.1** Require new development to demonstrate that the site is physically suitable for the project and that projects will neither create nor significantly contribute to geological instability and will not unreasonably expose people or property to geological hazards.

**SAF 4.2** Avoid extreme topographic modification, and restore natural contours and vegetation after grading and other land disturbances in conjunction with new development.

**SAF 4.3** Require new development on land with grades of 20% or steeper to demonstrate during the discretionary review process that the project can adequately control surface water runoff, erosion, and other potential geologic hazards.

**SAF 4.4** Locate high occupancy structures and essential public facilities outside of identified geological hazard zones unless they can meet design standards eliminating or minimizing risks associated with geological hazards to a level of less-than-significant.

**SAF 4.5** Require site-specific geological studies, where warranted, to verify the presence or absence and extent of geological hazards on properties proposed for new development and to identify measures to reduce those hazards to an acceptable level in conjunction with the review of discretionary entitlements and as part of review of ministerial permits in accordance with California Building Code.

## **Goal and Policies: Hazardous Materials**

### **Goal**

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**SAF-5** Communities protected from unreasonable risks of death, injuries, property damage and economic and social dislocation resulting from the use, transport, treatment and disposal of hazardous materials and wastes.

### **Policies**

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**SAF 5.1** Evaluate proposed new development for potential long-term risks related to hazardous materials to people, property, existing and planned land uses in the vicinity of the proposed use.

- SAF 5.2** Work cooperatively with local, state and federal agencies to manage the use, transport, treatment and disposal of hazardous materials.
- SAF 5.3** Strive to maintain the County's Certified Unified Program Agency (CUPA) "No deficiencies observed" status.
- SAF 5.4** Require new development to incorporate adequate separation between areas using or storing hazardous materials and sensitive land uses<sup>3</sup>.

## **SAF 1.3 Implementation Programs**

### **Programs: General**

- SAF 1-A** **Local Hazard Mitigation Plan**  
Include Planning Department and/or Public Works representation in the LHMP planning process to ensure that LHMP safety criteria applicable to the design of new development is fashioned in a manner that facilitates incorporation into County codes and conditions of project approval.
- SAF 1-B** **Level of Service**  
In consultation with emergency responders and other stakeholders, define criteria for, identify, and adopt a county-wide level of service threshold(s) for fire protection, ambulance service, EMS, and related emergency response providers to be met by new development.
- SAF 1-C** **Evacuation Routes, Sites and Centers**  
Identify evacuation routes included in adopted emergency response plans on the County GIS or equivalent, to assist planners in evaluating if a new development will impair or physically interfere with an adopted emergency evacuation plan when considering discretionary entitlements subject to CEQA.
- SAF 1-D** **Post-Disaster Recovery**  
Amend the County Code to streamline permitting procedures for repairing or reconstructing structures, infrastructure, and facilities destroyed or damaged as a result of an emergency affecting Calaveras County as declared by the Board of Supervisors or the State of California. As feasible, address safety improvements to prevent, or reduce the likelihood of, a reoccurrence of similar damage following natural disaster.
- SAF 1-E** **Emergency Provider Impact Fee**  
Investigate adopting a fire protection district building permit fee in compliance with the Mitigation Fee Act, Govt. Code section 66000 et. seq. to mitigate new development impacts to fire protection districts.
- SAF 1-F** **Water Supply Inventory**  
Inventory the County's major water storage facilities and map their locations to identify potential water supplies available during emergencies. Include locations of high-

<sup>3</sup> The following land uses are considered sensitive receptors for the purpose of exposure to hazardous materials: residentially designated land uses; hospitals, nursing/convalescent homes and similar board and care facilities; hotels and lodging; schools and day care centers; and neighborhood parks. Home occupations (i.e., Rural home industries) are excluded.

production wells and, where feasible, investigate the feasibility of using abandoned mines and the use of untreated or semi-treated (i.e., Title 22) water.

**SAF 1-G**

**Current Information**

Continue to monitor, maintain and update natural hazard information as it becomes available. Monitor flood mapping activities undertaken by state and federal agencies and provide comments on draft maps to ensure accuracy. Continue to monitor the California Department of Conservation, California Geological Survey website and related seismic and geological information centers for release of updated ground shaking maps, geotechnical data and soils information for Calaveras County. Update emergency plans, the general plan and the County Code, as necessary, in response to the release of new data.

**SAF 1-H**

**Public Safety Information**

Continue to provide and expand the availability of safety hazard reduction information on the County website and via handouts available at the Building Department (e.g., flood hazard prevention information, links on the County's website to other sites, fire-resistant building materials and best practices in building a fire safe zone around homes and buildings, fire-resistant plants and vegetation clearing methods, emergency response preparedness for residents including emergency evacuation plans, and the identification, reduction, recycling and proper disposal of hazardous materials.)

## **Programs: Flood Hazards**

**SAF 2-A**

**Flood Damage Prevention Ordinance**

Continue to maintain a Flood Damage Prevention Ordinance consistent with state law. The Flood Damage Prevention Ordinance shall continue to be used to evaluate whether (and if so, where and how) new development, including essential public facilities, shall be located in a flood hazard zone and to identify construction or other methods to minimize damage to new development in flood hazard zones.

**SAF 2-B**

**Zoning**

Avoid incompatible new development in flood prone areas through appropriate zoning.

**SAF 2-C**

**Project-Specific Run-off Management Standards**

Update existing development standards to offset cumulative direct and indirect impacts of runoff from individual projects and their subsequent contribution to increased stormwater, flood hazards and overtaxing County drainage systems.

**SAF 2-D**

**Storm Water Run-Off and Storm Drainage Facility Management Strategy**

Pursue funding for and, if successfully funded, prepare a Storm Water Management Strategy including, but not limited to, a Drainage Basin Master Plan and Storm Drainage Facilities Management Plan or their equivalents. Collaborate with responsible local, state and federal agencies and stakeholders, including the Department of Water Resources, to the extent feasible. The Plan(s) should evaluate run-off on a regional scale that cannot readily and economically be addressed by individual development projects.

**SAF 2-E**

**Bridge Damage**

Amend the Calaveras County Code and/or associated documents to require new pedestrian and vehicular bridges to incorporate design features that reduce or avoid damage during major flood events, to the extent feasible (e.g., pedestrian bridges designed to pivot at an upstream corner and break away to reduce debris collection).

## Programs: Fire Hazards

- SAF 3-A**      **Calaveras Code Consistency with Adopted Fire Code**  
Review the County Code (e.g., Chapters 8.08, 8.10, 12.02, 15.04.050) for consistency with the County's adopted International Fire Code, 2009 Edition, and as may be amended<sup>4</sup> (hereinafter, "**Fire Code**") and adopt or otherwise integrate the Fire Code standards as specified for: water supply, fire flow, fire sprinklers (including a residential fire sprinkler ordinance), fire alarms, fire hydrants, water delivery systems for fire suppression facilities; fire safe roads, driveways, and emergency access standards; premises identification standards; built-in fire suppression equipment and other applicable standards. Where applicable, modify the Fire Code standards to reflect unique County conditions that achieve the same or increased levels of fire protection as required in the Fire Code.
- SAF 3-B**      **Calaveras Code Consistency with State Fire Safety Standards**  
Review the County Code for consistency with state fire safety regulations. Adopt and integrate CAL FIRE's Fire Hazard Severity Zone Map for State Responsibility Areas and their associated standards. Amend the County Code to implement uniform defensible space standards consistent with Public Resources Code 4291 for State Responsibility Areas. Include provisions for defensible space exceptions, maintenance, reduced fuel zones, and establishing building setbacks or easements for all new construction to allow for adequate defensible space. Continue to update Title 15 of County Code to incorporate fire protection measures required by the current editions of the California Building Code and the California Fire Code for new construction. Amend the County Code to implement uniform defensible space standards consistent with Government Code Section 51182 for land designated as a very high fire hazard severity zone in a Local Responsibility Area<sup>5</sup>
- SAF 3-C**      **Local Fire Safety Standards**  
Review applicable fire safety standards adopted by local fire districts and assess their consistency with adopted County fire safety regulations. .
- SAF 3-D**      **Comprehensive Fire Safety Standards**  
Create a comprehensive fire safety standard(s) reference for use by planners and applicants to facilitate incorporating these standards in new development, including new essential public facilities, to the extent feasible.
- SAF 3-E**      **Exception Procedures for Fire Hazard Management**  
Continue to maintain the provisions of County Code Section 8.10.840 (Exceptions) recognizing the value of the "same practical effect" or "exception" process when the letter of the law may not be practically applied, but the intent of the law may be achieved, through application of other measures to achieve the same or improved level of protection.
- SAF 3-F**      **Fire Fuel Treatments for County Rights of Way**  
Maintain and improve fuel treatments within County rights of way. Continue to pursue funding for maintaining and improving fuel treatments for County rights-of-way (e.g., Federal Fuels Grant Program). Continue coordination efforts between the Calaveras County Department of Public Works, the Calaveras Foothills Fire Safe Council and local fire districts to create public roadway fire breaks with an emphasis on improving fire

<sup>4</sup> The International Fire Code, also known as the "California Fire Code –California Code of Regulations Title 24, Part 9, California Building Standards Commission, Based on the 2009 International Fire Code" [Calaveras County Code 15.04.050(F)]

<sup>5</sup> San Andreas and Angels Camp are located in Local Responsibility Areas.

safety in the wildland urban interface and incorporating provisions for maintaining fuel treatments along roadways in conjunction with new development.

- SAF 3-G**      **Fire Safety Committee**  
Consider forming a Fire Safety Committee, or equivalent, bringing together the multiple local, state and federal fire districts and agencies countywide to review the effectiveness of the fire protection policies in the General Plan and Calaveras County Code at least once every five years.
- SAF 3-H**      **Coordinated Fire Prevention and Response Planning Efforts**  
Continue to participate in and support coordinated fire prevention and response planning efforts. Improve interdepartmental communications to enhance coordinated fire emergency response and planning between the Calaveras County Sheriff's Office of Emergency Services, the County's multiple fire districts, CAL FIRE, the U.S. Forest Service, Planning, Public Works, the Calaveras Council of Governments and other affected agencies. Keep apprised of recommendations contained in the CAL FIRE, *Tuolumne/Calaveras Unit Strategic Fire Plan* and *Calaveras County Community Wildfire Protection Plan*. Coordination efforts should include evaluations of proposed road improvements in the County's Circulation Element and Regional Transportation Plan that may improve emergency evacuation routes. Support may be in the form of hosting a strategic planning session for emergency response personnel and planners.
- SAF 3-I**      **Fire Protection District Funding**  
Assist, as needed, with local fire protection district impact fee review and adoption to support minimum levels of service.

## Programs: Geotechnical Hazards

- SAF 4-A**      **New Soils Information**  
Update the County's soils data when the United States Department of Agriculture Natural Resources Conservation Service completes the updated County soil survey (estimated in 2015). When available, incorporate hazardous soil locations on the County's GIS maps, if feasible.
- SAF 4-B**      **Grading, Drainage and Erosion Control Manual and Grading Ordinance**  
Continue to update and maintain the County's *Grading, Drainage and Erosion Control Manual* (December, 2012, as may be amended) and consider incorporating portions of the manual into the Calaveras Code Grading Ordinance. Continue to update and maintain grading standards as contained in the Chapter 15.05 of the Code. Together, both documents shall continue to address: procedures, standards, and requirements necessary to safeguard public health, safety, and welfare from geotechnical related hazards; implementing and maintaining erosion and sediment control measures to reduce offsite sediment discharge; grading on slopes; controlling drainage and runoff; standards for consultants qualified to prepare geological and soils related technical studies and testing; and the required contents of geological and soils related technical studies.
- SAF 4-C**      **Geological Hazards Risks**  
Update the County's *Grading, Drainage and Erosion Control Manual* to:
- Include provisions for when or if geotechnical evaluations of potential geological hazards will be required in conjunction with the environmental review process
  - Require geological evaluations for critical use and high occupancy structures (e.g., schools, hospitals, dams)

- Illustrate best management practices (e.g., erosion and sediment control methods)

**SAF 4-D**

**Hillside Management Guidelines**

Draft a Hillside Management Ordinance and Hillside Development Guidelines addressing:

- Standards for avoiding or minimizing extreme topographic modifications,
- Appropriate slope-related densities,
- Flexible alternatives for hillside construction to reduce grading and, where feasible, reduce project costs,
- Vegetation retention,
- Minimizing runoff,
- Visual impacts,
- Retaining wall design,
- Fire-safe construction and design
- Best management practices for hillside development,
- Minimizing the potential to create geotechnical hazards, including mudslides and landslides,
- Restoring natural contours, where necessary,
- Reducing potentially significant adverse environmental impacts to a level of less-than-significant, and
- Other provisions as necessary to determine that the site is physically suitable for the proposed development and will neither create nor significantly contribute to geological instability and will not unreasonably expose people or property to geological hazards.

**SAF 4-E**

**Development on 20% Slopes**

Development applications on slopes of 20% or greater shall be required to include geotechnical and engineering data to identify what improvements will be necessary to control erosion and surface water runoff and address the potential for landslides, mudslides, and other geologic hazards.

**SAF 4-F**

**Historical Mine Hazards**

Acquire maps of historical mines to assist in identifying potential hazards to existing and new development related to collapse or hazardous materials and to alert property owners to areas with potential subsidence issues [e.g., Office of Mine Reclamation, Abandoned Mine Lands Unit, Government Land Office (GLO) maps, United States Geological Survey topographical maps, Sanborn maps].

**Programs: Hazardous Materials**

**SAF 5-A**

**Hazardous Material Data Consolidation**

Initiate a program consolidating hazardous materials information from multiple agencies in a single location (e.g., local hazardous materials business plans, historic mine locations, state and federal sources). Ensure that emergency response agencies and planners have access to this data to facilitate emergency response, facilitate environmental review, and guide decisions on future development.

**SAF 5-B**

**Developing and Remediating Contaminated Sites**

Update the Calaveras Code to require development projects proposed on sites known or likely to be contaminated by hazardous materials and/or that are identified in local, state or federal databases as likely to contain hazardous materials, to be assessed and, if

necessary, remediated to a level appropriate for the proposed land use in accordance with all local, state, and federal regulations prior to development.

**SAF 5-C Certified Unified Program Agency (CUPA)**

Continue to maintain the County's status as a CALEPA-Certified Unified Program Agency (CUPA) as implemented through the Calaveras County Environmental Health Department.

**SAF 5-D Local, State, and Federal Hazardous Materials Management Regulations**

Continue to monitor changes in state and federal regulations and enforce local, state and federal regulations governing land uses involving the use or production of hazardous materials including, but not limited to, the Surface Mining and Reclamation Act (SMARA) as it pertains to the use and clean-up of hazardous materials associated with mining.

**SAF 5-E Plans Addressing Hazardous Materials Management**

Continue to maintain, update, and implement County emergency response plans and the County's hazardous waste management plan as necessary to protect lives and property from risks associated with hazardous materials including, but not limited to the Calaveras County Operational Area Hazardous Materials Response Plan (Area Plan); Calaveras County Emergency Operations Plan (hazardous materials incidents and hazmat emergency response plans) and Calaveras County Hazardous Waste Management Plan.

**SAF 5-F Land Use Compatibility**

Review Chapter 17.49 (Specified Hazardous Waste Facilities Combining Zone) and, if necessary, identify best management practices that may be implemented to address compatibility between hazardous materials and sensitive land uses.

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