

General Plan Safety Element Assessment

Board of Forestry and Fire Protection



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Purpose and Background

Upon the next revision of the housing element on or after January 1, 2014, the safety element is required to be reviewed and updated as necessary to address the risk of fire for land classified as state responsibility areas and land classified as very high fire hazard severity zones. (Gov. Code, § 65302, subd. (g)(3).)

The safety element is required to include:

- Fire hazard severity zone maps available from the Department of Forestry and Fire Protection.
- Any historical data on wildfires available from local agencies or a reference to where the data can be found.
- Information about wildfire hazard areas that may be available from the United States Geological Survey.
- The general location and distribution of existing and planned uses of land in very high fire hazard severity zones (VHFHSZs) and in state responsibility areas (SRAs), including structures, roads, utilities, and essential public facilities. The location and distribution of planned uses of land shall not require defensible space compliance measures required by state law or local ordinance to occur on publicly owned lands or open space designations of homeowner associations.
- The local, state, and federal agencies with responsibility for fire protection, including special districts and local offices of emergency services. (Gov. Code, § 65302, subd. (g)(3)(A).)

Based on that information, the safety element shall include goals, policies, and objectives that protect the community from the unreasonable risk of wildfire. (Gov. Code, § 65302, subd. (g)(3)(B).) To carry out those goals, policies, and objectives, feasible implementation measures shall be included in the safety element, which include but are not limited to:

- Avoiding or minimizing the wildfire hazards associated with new uses of land.
- Locating, when feasible, new essential public facilities outside of high fire risk areas, including, but not limited to, hospitals and health care facilities, emergency shelters, emergency command centers, and emergency communications facilities, or identifying construction methods or other methods to minimize damage if these facilities are located in the SRA or VHFHSZ.
- Designing adequate infrastructure if a new development is located in the SRA or VHFHSZ, including safe access for emergency response vehicles, visible street signs, and water supplies for structural fire suppression.
- Working cooperatively with public agencies with responsibility for fire protection. (Gov. Code, § 65302, subd. (g)(3)(C).)

The safety element shall also attach or reference any fire safety plans or other documents adopted by the city or county that fulfill the goals and objectives or contains the information required above. (Gov. Code, § 65302, subd. (g)(3)(D).) This might include Local Hazard Mitigation Plans, Unit Fire Plans, Community Wildfire Protection Plans, or other plans.

There are several reference documents developed by state agencies to assist local jurisdictions in updating their safety elements to include wildfire safety. The Fire Hazard Planning, General Plan Technical Advice Series from the Governor's Office of Planning and Research, referenced in Government Code section 65302, subdivision (g)(3) and available at

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(916) 322-2318

https://www.opr.ca.gov/docs/Final_6.26.15.pdf

provides policy guidance, information resources, and fire hazard planning examples from around California that shall be considered by local jurisdictions when reviewing the safety element of its general plan.

The Board of Forestry and Fire Protection (Board) utilizes this Safety Element Assessment in the Board's

review of safety elements under Government Code section 65302.5. At least 90 days prior to the adoption or amendment of their safety element, counties that contain SRAs and cities or counties that contain VHFHSZs shall submit their safety element to the Board. (Gov. Code, § 65302.5, subd. (b).) The Board shall review the safety element and respond to the city or county with its findings regarding the uses of land and policies in SRAs or VHFHSZs that will protect life, property, and natural resources from unreasonable risks associated with wildfires, and the methods and strategies for wildfire risk reduction and prevention within SRAs or VHFHSZs. (Gov. Code, § 65302.5, subd. (b)(3).)

The CAL FIRE Land Use Planning team provides expert fire protection assistance to local jurisdictions statewide. Fire captains are available to work with cities and counties to revise their safety elements and enhance their strategic fire protection planning.

Methodology for Review and Recommendations

Utilizing staff from the CAL FIRE Land Use Planning team, the Board has established a standardized method to review the safety element of general plans. The methodology includes

- 1) reviewing the safety element for the requirements in Government Code section 65302, subdivision (g)(3)(A),
- 2) examining the safety element for goals, policies, objectives, and implementation measures that mitigate the wildfire risk in the planning area (Gov. Code, § 65302, subd. (g)(3)(B) & (C)), and
- 3) making recommendations for methods and strategies that would reduce the risk of wildfires (Gov. Code, § 65302.5, subd. (b)(3)(B)).

The safety element will be evaluated against the attached Assessment, which contains questions to determine if a safety element meets the fire safety planning requirements outlined in Government Code, section 65302. The reviewer will answer whether or not a submitted safety element addresses the required information, and will recommend changes to the safety element that will reduce the wildfire risk in the planning area. These recommended changes may come from the list of sample goals, policies, objectives, and implementation measures that is included in this document after the Assessment, or may be based on the reviewer's knowledge of the jurisdiction in question and their specific wildfire risk. By answering the questions in the Assessment, the reviewer will determine if the jurisdiction's safety element has adequately addressed and mitigated their wildfire risk. If it hasn't, any specific recommendations from the reviewer will assist the jurisdiction in revising the safety element so that it does.

Once completed, the Assessment should provide clear guidance to a city or county regarding any areas of deficiency in the safety element as well as specific goals, policies, objectives, and implementation measures the Board recommends adopting in order to mitigate or reduce the wildfire threat in the planning area.

General Plan Safety Element Assessment

Jurisdiction: Tuolumne County	Notes:	CAL FIRE Unit: TCU	Date Received: 6/20/2019
County: Tuolumne County	LUPP Reviewer: Kevin Lindo	UNIT CONTACT: DC Adam Frese	Date Reviewed: 8/5/2019

Background Information Summary

Specific background information about fire hazards in each jurisdiction.

Indicate whether the safety element includes the specified information. If YES, indicate in the comments where that information can be found; if NO, provide recommendations to the jurisdiction regarding how best to include that information in their revised safety element.

	Yes	No	Comments/Recommendations
Are Fire Hazard Severity Zones Identified? <i>CAL FIRE or Locally Adopted Maps</i>	X		CAL FIRE Fire Hazard Severity Zone maps identified: -Ref. Vol. I pg. 17-8 Recommend adopting CAL FIRE Fire Hazard Severity Zone maps by ordinance.
Is historical data on wildfires or a reference to where the data can be found, and information about wildfire hazard areas that may be available from the United States Geological Survey, included?	X		-Ref. Vol. II pg. 222
Has the general location and distribution of existing and planned uses of land in very high fire hazard severity zones (VHFHSZs) and in state responsibility areas (SRAs), including structures, roads, utilities, and essential public facilities, been identified?	X		-Ref. Vol. I pg. 17-8 & 17-9 Goal 17E -Ref. Vol. II pg. 217
Have local, state, and federal agencies with responsibility for fire protection, including special districts and local offices of emergency services, been identified?	X		-Ref. Vol II pg. 156
Are other fire protection plans, such as Community Wildfire Protection Plans, Local Hazard Mitigation Plans, CAL FIRE Unit or Contract County Fire Plans, referenced or incorporated into the Safety Element?	X		-Ref. Vol. I Policy 9.G.1 pg. 9-9
Any other relevant information regarding fire hazards in SRAs or VHFHSZs?			

Goals, Policies, Objectives, and Feasible Implementation Measures

A set of goals, policies, and objectives based on the above information to protect the community from unreasonable risk of wildfire and implementation measures to accomplish those stated goals, policies, and objectives.

Critically examine the submitted safety element and determine if it is adequate to address the jurisdiction's unique fire hazard. Answer YES or NO appropriately for each question below. If the recommendation is irrelevant or unrelated to the jurisdiction's fire hazard, answer N/A. For NO, provide information in the Comments/Recommendations section to help the jurisdiction incorporate that change into their safety element revision. This information may utilize example

recommendations from Sample Safety Element Recommendations and Fire Hazard Planning in Other Elements of the General Plan below, may indicate how high of a priority this recommendation is for a jurisdiction, or may include other jurisdiction-specific information or recommendations.

Avoiding or minimizing the wildfire hazards associated with new uses of land.

	Yes	No	N/A	Comments/Recommendations
Land Use				
Does local ordinance require development standards that meet or exceed title 14, CCR, division 1.5, chapter 7, subchapter 2, articles 1-5 (commencing with section 1270) (SRA Fire Safe Regulations) and title 14, CCR, division 1.5, chapter 7, subchapter 3, article 3 (commencing with section 1299.01) (Fire Hazard Reduction Around Buildings and Structures Regulations) for SRAs and/or VHFHSZs?	X			-Ref. Policy 9.E.3 pg.9-7
Are there goals and policies to avoid or minimize new residential development in VHFHSZs?	X			-Ref. Vol I Goal 17E pg.17-8 & 17-9
Has fire safe design been incorporated into future development requirements?	X			-Ref. Vol. I Goals and Policies 17E pg. 17-8 & 17-9
Are new essential public facilities located outside high fire risk areas, such as VHFHSZs, when feasible?	X			-Ref. Vol. I Policy 17.E.j pg. 17-9
Are there plans or actions identified to mitigate existing non-conforming development to contemporary fire safe standards, in terms of road standards and vegetative hazard?	X			-Ref. Vol. II pg. 224
Does the plan include policies to evaluate re-development after a large fire?	X			-Ref. Vol I Goal 9B pg. 9-4
Fuel Modification				
Is fuel modification around homes and subdivisions required for new development in SRAs or VHFHSZs?	X			-Ref. Local Ordinance Sec. 15.20.060 -Ref. Vol I Policy 17.E.d pg. 17-9
Are fire protection plans required for new development in VHFHSZs?	X			-Ref. Local Ordinance Sec. 15.20.060
Does the plan address long term maintenance of fire hazard reduction projects, including community fire breaks and private road and public road clearance?	X			-Ref. Local Ordinance Sec. 15.20.060 -Ref. Vol I Policy(s) 17.E.d, 17.E.h pg. 17-9
Access				
Is there adequate access (ingress, egress) to new development in VHFHSZs?	X			-Ref. Vol. I Policy 17.E.e pg. 17-9
Are minimum standards for evacuation of residential areas in VHFHSZs defined?	X			-Ref. Vol. II pg. 222-223
If areas exist with inadequate access/evacuation routes, are they identified? Are mitigation measures or improvement plans identified?	X			-Ref. Vol. II pg. 223-224

Are there policies or programs promoting public outreach about defensible space or evacuation routes? Are there specific plans to reach at-risk populations?	X			-Ref. Tuolumne-Calaveras Unit Fire Plan -Ref. Vol. II Sec. A.1.K pg. 73 Legacy Communities
Fire Protection				
Does the plan identify future water supply for fire suppression needs?	X			-Ref. Vol I Policy 17.E.d pg.17-9
Does new development have adequate fire protection?	X			-Ref. Vol. I Goal 9A pg. 9-2
Develop adequate infrastructure if a new development is located in SRAs or VHFHSZs.				
	Yes	No	N/A	Comments/Recommendations
Does the plan identify adequate infrastructure for new development related to:				
Water supply and fire flow?	X			-Ref. Local Ordinance 15.20.010 -Ref. Vol I Policy 17.E.d pg.17-9
Location of anticipated water supply?	X			-Ref. Local Ordinance 15.20.010 -Ref. Vol I Policy 17.E.d pg.17-9
Maintenance and long-term integrity of water supplies?	X			-Ref. Vol. I Goal 17F
Evacuation and emergency vehicle access?	X			-Ref. Vol. I Policy 17.E.h pg. 17-9
Fuel modification and defensible space?	X			-Ref. Tuolumne-Calaveras Unit Fire Plan -Ref. Local Ordinance Sec. 15.20.060
Vegetation clearance maintenance on public and private roads?	X			-Ref. Local Ordinance Sec. 15.20.060 -Ref. Vol. I Policy 17.E.h pg. 17-9
Visible home and street addressing and signage?	X			-Ref. Local Ordinance 15.20.040 -Ref. Vol. I Policy 9.G.5 pg. 9-10
Are community fire breaks identified in the plan? Is there a discussion of how those fire breaks will be maintained?	X			-Ref. Tuolumne-Calaveras Unit Fire Plan
Working cooperatively with public agencies responsible for fire protection.				
	Yes	No	N/A	Comments/Recommendations
Is there a map or description of existing emergency service facilities and areas lacking service, specifically noting any areas in SRAs or VHFHSZs?	X			-Ref. Vol. II pgs. 224, 231, 233
Does the plan include an assessment and projection of future emergency service needs?	X			-Ref. Vol. Policy 9.A.3 pg. 9-2
Are goals or standards for emergency services training described?	X			-Ref. Vol. I Policy 9.B.3 pg. 9-4

Does the plan outline inter-agency preparedness coordination and mutual aid multi-agency agreements?	X			-Ref. Tuolumne County Hazard Mitigation Plan -Ref. Vol. I Policy 9.B.5 pg. 9-4
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Sample Safety Element Recommendations

These are examples of specific policies, objectives, or implementation measures that may be used to meet the intent of Government Code sections 65302, subdivision (g)(3) and 65302.5, subdivision (b). Safety element reviewers may make recommendations that are not included here.

A. Maps, Plans and Historical Information
1. Include or reference CAL FIRE Fire Hazard Severity Zone maps or locally adopted wildfire hazard zones.
2. Include or reference the location of historical information on wildfires in the planning area.
3. Include a map or description of the location of existing and planned land uses in SRAs and VHFHSZs, particularly habitable structures, roads, utilities, and essential public facilities.
4. Identify or reference a fire plan that is relevant to the geographic scope of the general plan, including the Unit/Contract County Fire Plan, Local Hazard Mitigation Plan, and any applicable Community Wildfire Protection Plans.
5. Align the goals, policies, objectives, and implementation measures for fire hazard mitigation in the safety element with those in existing fire plans, or make plans to update fire plans to match the safety element.
6. Create a fire plan for the planning area.
B. Land Use
1. Develop fire safe development codes to use as standards for fire protection for new development in SRAs or VHFHSZs that meet or exceed the statewide minimums in the SRA Fire Safe Regulations.
2. Adopt and have certified by the Board of Forestry and Fire Protection local ordinances which meet or exceed the minimum statewide standards in the SRA Fire Safe Regulations.
3. Identify existing development that do not meet or exceed the SRA Fire Safe Regulations or certified local ordinances.
4. Develop mitigation measures for existing development that does not meet or exceed the SRA Fire Safe Regulations or certified local ordinances or identify a policy to do so.
C. Fuel Modification
1. Develop a policy to communicate vegetation clearance requirements to seasonal, absent, or vacation rental owners.

2. Identify a policy for the ongoing maintenance of vegetation clearance on public and private roads.
3. Include fuel breaks in the layout/siting of subdivisions.
4. Identify a policy for the ongoing maintenance of existing or proposed fuel breaks.
5. Identify and/or map existing development that does not conform to current state and/or locally adopted fire safety standards for access, water supply and fire flow, signing, and vegetation clearance in SRAs or VHFHSZs.
6. Identify plans and actions for existing non-conforming development to be improved or mitigated to meet current state and/or locally adopted fire safety standards for access, water supply and fire flow, signing, and vegetation clearance.
D. Access
1. Develop a policy that approval of parcel maps and tentative maps in SRAs or VHFHSZs is conditional based on meeting the SRA Fire Safe Regulations and the Fire Hazard Reduction Around Buildings and Structures Regulations, particularly those regarding road standards for ingress, egress, and fire equipment access. (See Gov. Code, § 66474.02.)
2. Develop a policy that development will be prioritized in areas with an adequate road network and associated infrastructure.
3. Identify multi-family housing, group homes, or other community housing in SRAs or VHFHSZs and develop a policy to create evacuation or shelter in place plans.
4. Include a policy to develop pre-plans for fire risk areas that address civilian evacuation and to effectively communicate those plans.
5. Identify road networks in SRAs or VHFHSZs that do not meet title 14, CCR, division 1.5, chapter 7, subchapter 2, articles 2 and 3 (commencing with section 1273.00) or certified local ordinance and develop a policy to examine possible mitigations.
E. Fire Protection
1. Develop a policy that development will be prioritized in areas with adequate water supply infrastructure.
2. Plan for the ongoing maintenance and long-term integrity of planned and existing water supply infrastructure.
3. Map existing emergency service facilities and note any areas lacking service, especially in SRAs or VHFHSZs.
4. Project future emergency service needs for the planned land uses.
5. Include information about emergency service trainings or standards and plans to meet or maintain them.
6. Include information about inter-agency preparedness coordination or mutual aid agreements.

Fire Hazard Planning in Other Elements of the General Plan

When updating the General Plan, here are some ways to incorporate fire hazard planning into other elements. Wildfire safety is best accomplished by holistic, strategic fire planning that takes advantage of opportunities to align priorities and implementation measures within and across plans.

Land Use Element
Goals and policies include mitigation of fire hazard for future development or limit development in very high fire hazard severity zones.
Disclose wildland urban-interface hazards, including fire hazard severity zones, and/or other vulnerable areas as determined by CAL FIRE or local fire agency.
Design and locate new development to provide adequate infrastructure for the safe ingress of emergency response vehicles and simultaneously allow citizen egress during emergencies.
Describe or map any Firewise Communities or other fire safe communities as determined by the National Fire Protection Association, Fire Safe Council, or other organization.
Housing Element
Incorporation of current fire safe building codes.
Identify and mitigate substandard fire safe housing and neighborhoods relative to fire hazard severity zones.
Consider diverse occupancies and their effects on wildfire protection (group housing, seasonal populations, transit-dependent, etc).
Open Space and Conservation Elements
Identify critical natural resource values relative to fire hazard severity zones.
Include resource management activities to enhance protection of open space and natural resource values.
Integrate open space into fire safety planning and effectiveness.
Mitigation for unique pest, disease and other forest health issues leading to hazardous situations.
Circulation Element
Provide adequate access to very high fire hazard severity zones.
Develop standards for evacuation of residential areas in very high fire hazard severity zones.
Incorporate a policy that provides for a fuel reduction maintenance program along roadways.



Chapter 17

NATURAL HAZARDS

A place where all citizens enjoy opportunities to thrive in a safe, healthy, and productive community.
- The Tuolumne County Vision

Introduction

Section 65302(g) of the California Government Code requires that the General Plan include a Safety Element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence and other geologic hazards known to the legislative body; flooding, and wildland and urban fire, and climate change. The Natural Hazards Element addresses the information required by Section 65302(g).

Geologic hazards in Tuolumne County are associated with potential seismic activity along the Foothills fault zone and associated ground shaking. Hazardous situations could also result from development on unstable slopes within the County. Development on erosive soils, without proper environmental protection could result in significant soil loss, siltation of water bodies and visual impacts. The Natural Hazards Element aims at reducing death, injuries, property damage, and the economic and social dislocation resulting from natural hazards, thereby improving the quality of life within the County.

Purpose

Recognize that the County's identity, economy, and attraction are rooted in its rural nature, and as a result, establish policies to protect the public from increased hazards and promote the safety of existing and future development.

Overarching Vision

OAV1. Promote development in Tuolumne County that reflects the values and vision of the community and implement the latest legal, statutory, scientific, and technical changes and advances.

OAV2. Achieve, enable and preserve maximum flexibility within the constraints of state and federal law and an ever-evolving legal, cultural and environmental landscape.

OAV3. Recognize that the County has a unique role to collaborate with special districts/stakeholders within the County to promote the delivery of efficient and cost effective public services.



GOAL 17A:

Avoid the exposure of people and structures to potential substantial adverse effects, including the risk of loss, injury or death involving natural hazards.

POLICIES & IMPLEMENTATION PROGRAMS

Policy 17.A.1: Increase Tuolumne County’s capabilities to mitigate the effects of natural hazards.

Implementation Program

17.A.a - Implement the Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan to protect life, safety, and property by reducing the potential for future damages and economic losses that result from geologic-natural hazards.

Policy 17.A.2: Enhance existing policies that will reduce the potential damaging effects of hazards without hindering other County goals.

Implementation Program

17.A.b - Update the County’s General Plan and Ordinance Code as new Federal and State laws regarding geologic hazards and requirements are enacted.

Policy 17.A.3: Protect Tuolumne County’s most vulnerable populations, buildings and critical facilities through the implementation of cost-effective and technically feasible mitigation projects.

Implementation Program

17.A.c - Maximize the use of hazard mitigation grant programs to protect the most vulnerable populations and structures.

Policy 17.A.4: Protect public health, safety and welfare by increasing the awareness of existing hazards and by fostering both individual and public responsibility in mitigating risks due to those hazards.

Implementation Program

17.A.d - Increase the level of knowledge and awareness for Tuolumne County residents on the hazards that routinely threaten the area. Educate property owners on the affordable, individual mitigation and preparedness measures that can be taken before the next hazard event.

Policy 17.A.5: Enhance the County’s capability to conduct hazard risk assessments, demonstrate funding needs, and track mitigation activities.

Policy 17.A.6: Ensure that all new construction is completed in a way most resistant to loss or damage from natural hazards.

Implementation Programs

17.A.e - Through the development review process, ensure that projects located in or near areas that may pose public health and safety hazards are designed to minimize potential impacts on people and property.



17.A.f - Locate vital/critical facilities where they are protected from natural hazards, such as fault zones, flooding and inundation areas.

GOAL 17B:

Protect structures and land uses from flood hazards in order to minimize loss of life, injury, damage to property, and economic and social dislocations

POLICIES & IMPLEMENTATION PROGRAMS

Policy 17.B.1: Reduce the potential for future damages and economic losses that result from flood hazards by implementing the Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan.

Policy 17.B.2: Reduce the potential for damage to property within the 100 year floodplains as designated on the Federal Emergency Management Agency, Flood Insurance Rate Maps and other areas prone to flooding due to rain or dam failure, through limitations on land use.

Implementation Programs

17.B.a - Implement and enforce the Flood Damage Prevention Ordinance, Chapter 15.~~28-24~~ of the Tuolumne County Ordinance Code, as it pertains to designated "special flood hazard areas", as identified on the Flood Insurance Rate Maps.

17.B.b - Review and notify FEMA of errors or other information to correct or update FIRM maps.

Policy 17.B.3: Solve flood control problems in areas where existing development has encroached into a floodplain.

Implementation Programs

17.B.c - Encourage property owners with existing structures within areas subject to flooding, whether identified on the Flood Insurance Rate Maps or not, to conform to the requirements of the Flood Damage Prevention Ordinance.

17.B.d - Based upon the Flood Insurance Rate Maps, provide notification to the owners of property within designated floodplains of the consequences of constructing within the floodplain.

17.B.e - Encourage owners of land and improvements within floodplains not identified on the Federal Insurance Rate Maps (FIRM), to develop the property to meet the requirements of the Flood Damage Prevention Ordinance by implementing appropriate measures, such as:

- Identify owners of land and improvements within floodplains not identified on FIRMs.
- Develop and implement an outreach program to coordinate with these stakeholders.
- Prepare and distribute to the owner's informational literature describing the requirements of the Flood Damage Prevention Ordinance.

17.B.f - Continue to provide flood hazard information to the public. Information available includes flood zones, requirements of the Flood Damage Prevention Ordinance, and how to floodproof existing structures through relocation, or "dry" or "wet" floodproofing.

Policy 17.B.4: Projects proposed within areas identified on the dam failure inundation maps designated by the Office of Emergency Services and evacuation ~~plans-policies~~ on file with the County Office of Emergency Services shall not be approved if a project presents a direct threat to human life or structures. Projects should be modified to ensure public safety.



Implementation Program

17.B.g - Regularly update the Emergency Operations Plan for Tuolumne County, which addresses dam failures in the Flood Annex. In the event of a dam failure, the Emergency Operations Plan refers to the Emergency Action Plan of the owner agency of the dam. The County will notify and assist in evacuation along federally designated flood plains.

Policy 17.B.5: Prohibit the construction of facilities essential for emergencies and large public assembly in the 100-year floodplain, unless the structure and access to the structure are free from flood inundation.

Policy 17.B.6: Consult with local, regional, State and Federal agencies to achieve adequate flood protection. Cooperate with the Tuolumne Utilities District, surrounding jurisdictions, the City of Sonora, and other public, State and Federal agencies in planning and implementing regional flood control improvements.

GOAL 17C: Manage floodplains for their natural resource value.

POLICIES & IMPLEMENTATION PROGRAMS

Policy 17.C.1: Minimize the risk from flood hazards through land use planning and the avoidance of incompatible structural development in floodplains.

Implementation Programs

17.C.a - Utilize regulatory methods of flood control, such as designating identified floodplains and drainage easements as Open Space, where possible, rather than construction-related methods of flood control. Regulatory methods reduce the need for flood control projects, minimize losses in areas where flooding is inevitable, and attempt to notify those who own property in flood hazard areas of the risks and that they should assume responsibility for their actions.

17.C.b - Maintain stream carrying capacity by continuing to regulate new fill, grading, dredging, and other new development which may increase flood damage by increasing sedimentation in streams and watercourses, or by constricting water courses with structures for roads and driveways. Encourage owners of land and improvements within floodplains to maintain the stream carrying capacity by allowing thinning of dense vegetation, subject to approval of the Community Resources Agency.

Policy 17.C.2: Continue to require evaluation of potential flood hazards prior to approval of development projects and require on-site mitigation to minimize off-site flows.

Implementation Programs

17.C.c - Proponents of new development shall submit accurate topographic and flow characteristics information and depiction of the 100-year floodplain boundaries under fully-developed, unmitigated conditions.

17.C.d - Review policies and available data concerning development in floodplains to ensure lives and property are not at risk from future flood conditions.



17.C.e - Require new development to mitigate impacts on downstream drainages if new development results in increased peak flows due to project-generated stormwater runoff. Measures necessary to mitigate impacts will be attached to development entitlements issued by the County, which may include retention/detention facilities, permeable surfacing materials, greywater systems, and green roofs.

Policy 17.C.3: Strive to maintain natural conditions within the 100-year floodplain of rivers and streams in order to maintain stream capacity except under the following circumstances:

- a. Where work is required to restore the stream's drainage characteristics and where such work is done in accordance with the Tuolumne County Water Quality Plan, County Flood Damage Prevention Ordinance, California Department of Fish and Wildlife regulations, and Clean Water Act provisions administered by the U.S. Army Corps of Engineers; or
- b. When facilities for the treatment of development generated runoff can be located in the floodplain provided that there is minimal destruction of riparian vegetation, and such work is done in accordance with the County Flood Damage Prevention Ordinance and California Department of Fish and Wildlife regulations.

Implementation Program

17.C.f - Maintain essential public facilities, such as culverts and drainage facilities along County maintained roads and eliminate logjams and other obstructions from bridges.

GOAL 17D:

Protect new and existing structures and land uses from geologic hazards in order to minimize loss of life, injury, damage to property, and economic and social dislocations.

POLICIES & IMPLEMENTATION PROGRAMS

Policy 17.D.1: Direct development away from areas with known seismic and geologic hazards as required by local, state, and federal codes.

Implementation Program

17.D.a - Designate areas within 100 feet of capable faults as non-urban, including, but not limited to, Open Space, Agriculture or Parks and Recreation on the General Plan land use diagrams and zone these areas for open space preservation, agriculture, recreation or other non-urban uses. For lands owned by a public agency, the designation of Public is also compatible.

Policy 17.D.2: Map areas determined to be potentially seismically active or otherwise subject to geologic hazardous and apply restrictions to development within the affected areas.

Implementation Programs

17.D.b - Apply zoning and other land use controls to regulate development in known hazardous areas capable of seismic activity.

17.D.c – Require as part of the application review process when a potential hazard exists, a geologic, seismic, and/or geotechnical engineering report to be provided by the applicant.



17.D.d - Establish a program for geologic, seismic, and geotechnical engineering reports required for proposed developments to be reviewed by a technically qualified consultant under contract to the County of Tuolumne.

17.D.e - Identify the public costs which would be incurred if emergency or remedial actions became necessary in populated areas where seismic hazards exist.

17.D.f - Review contingency plans for major disasters and emergencies and update as necessary to verify that the potential for damage and destruction due to earthquakes and geologically induced dam failure with accompanying flooding continues to be addressed.

17.D.g - Use the General Plan's Geotechnical Interpretive Maps, which show the approximate boundaries of various hazard and resource zones (such as fault zones, erosive soil areas, limestone deposits, etc.) as a basis for future planning.

17.D.h - Update the Geotechnical Interpretive Maps on a periodic basis to reflect new geologic and seismologic information.

17.D.i - Increase public awareness of geoseismic hazards, their location, and their severity by making the Geotechnical Interpretive Maps readily available to the public.

Policy 17.D.3: Incorporate criteria into the design for dams and other important structures possibly affected by capable fault zones that provide an acceptable level of safety.

Implementation Programs

17.D.j - Require developers of dams and critical-use and high occupancy structures within 100 feet of capable fault zones to submit plans to the County of Tuolumne demonstrating that the proposed design and construction can accommodate the expected fault offset of the design earthquake and the structure can continue to function. The capable fault zones are defined along presently identified capable faults on the Geotechnical Interpretive Maps.

17.D.k - Establish design review procedures that address safety issues for structures proposed for human occupancy which are to be located within 100 feet of a capable fault zone.

17.D.l - Apply special requirements to critical use and high occupancy structures proposed within 100 feet of capable fault zones. These requirements should:

- Require special geologic and seismic studies to accurately locate all capable fault traces.
- Establish requirements for existing critical use and high occupancy structures within the capable fault zones and initiate a special building inspection program whose purpose is to locate existing critical-use and high occupancy structures within 100 feet of the capable fault zones and to evaluate the safety of such structures under expected seismic conditions.
- Require necessary training for building inspectors to evaluate the safety (under probable earthquake accelerations) of critical-use and high occupancy structures.

17.D.m - Consider developing a hazardous structures mitigation program and enforcement regulations for critical-use and high occupancy buildings located within 100 feet of a capable fault zone.

Policy 17.D.4: Ascertain that existing or proposed structures, particularly critical-use and high occupancy structures, can withstand the ground motion of the design earthquake without catastrophic failure or loss of critical services.



Implementation Programs

17.D.n - Review plans for existing and proposed structures to see that they are designed and built in accordance with the California Building Code standards for Seismic Category C or D.

17.D.o - Require that critical-use and high occupancy structures be designed and built to retain their structural integrity when subjected to probable ground accelerations generated by the design earthquake.

17.D.p - Prior to approval of proposed critical-use and high occupancy facilities, require that the plans demonstrate that the proposed building can withstand, without collapse, the probable ground acceleration generated by the design earthquake. Require development plans to show that critical facilities, such as utilities and access roads, for critical-use and high occupancy structures are adequately designed and constructed to withstand the design earthquake. Also require plans to show that, in the event of the failure of these structures, potential hazards created by the loss of utilities, roads, etc. have been identified and mitigated.

17.D.q - Periodically inspect existing critical-use and high occupancy buildings within the County to identify and require correction of potential hazards in the event of a major earthquake.

17.D.r - Develop a hazardous structures mitigation program and enforcement regulations for critical-use and high occupancy buildings. This shall include a database of the identified critical-use and high occupancy buildings existing in the County that do not meet modern standards for earthquake safety, and are, therefore, considered "hazardous". Descriptions of the buildings shall be included along with possible hazard mitigation measures.

Policy 17.D.5: Monitor development to see that construction in landslide or unstable slope areas is accomplished safely.

Implementation Program

17.C.s - Require detailed engineering studies in unstable slope or landslide areas, including, but not limited to those areas delineated on the Geotechnical Interpretive Maps, prior to approval of urban development. The studies should identify the extent of instability or potential for landsliding, and recommend design alterations, considerations or other features which could reduce the potential hazards to an acceptable level. The feasible recommendations from the study(s) shall be required as part of the project approval process.

Policy 17.D.6: Reduce the potential for erosion and sedimentation from earthmoving and construction activities.

Implementation Programs

17.D.t - Apply Chapter 12.20 of the Tuolumne County Ordinance Code, the Grading Ordinance, in order to protect soil stability and natural topography and to prevent soil erosion and creation of unstable slopes. Areas identified as having erosive soils, either by the Geotechnical Interpretive Maps or by other means, shall receive special consideration related to the erosive potential of grading and earthmoving activities.

17.D.u - Apply Chapter 12.20 of the Tuolumne County Ordinance Code, the Grading Ordinance, to address the impacts of earth-disturbing development activities on any slope, whether or not it is shown as potentially unstable on the geotechnical maps.



GOAL 17E:

Provide protection to County residents and natural resources from the losses associated with wildland fire.

POLICIES & IMPLEMENTATION PROGRAMS

Policy 17.E.1: Reduce the exposure to risk from wildland fire to an acceptable level by only allowing development in high or very high fire hazard areas if it can be made safe by planning, construction, or other fire safety measures.

Implementation Programs

17.E.a - Utilize the CAL FIRE Forest and Resource Assessment Program "Fire Hazard Severity Zone Map", including revisions thereto, as a basis for determining the significance of fire hazards when reviewing development applications.

17.E.b - Recognize that new development, including urban or clustered development, is acceptable in moderate, high and very high fire hazard zones, provided that project design meets California Building and Fire Codes including Wildland-Urban Interface Building Codes. Such developments may be required to provide and maintain additional off-site fire defense improvements.

Policy 17.E.2: Require the maintenance of defensible space setbacks in areas proposed for development if wildland fire hazards exist on adjacent properties.

Policy 17.E.3: Require new development to have adequate fire protection and to include, where necessary, design and maintenance features that contribute to the protection of the County from the losses associated with wildland fire.

Implementation Programs

17.E.c - Require new development to mitigate wildland fire hazards in such a manner that it minimizes the chance of wildland fire originating outside the development from entering the development and minimizes the chance of fire originating within the development escaping to adjoining property and adjacent wildland.

17.E.d - Require developers to incorporate fire protection improvements into project designs where determined necessary by the Tuolumne County Fire Department and require maintenance of these improvements. Fuelbreaks, green belts, long-term comprehensive fuel management programs, access to developed water sources, strategic helispots (with water supply), and perimeter road systems can all serve to reduce the fire hazard on project sites as well as adjacent property.

17.E.e - Require new development in areas subject to wildland fire to provide safe ingress and egress in accordance with Chapter 11.12 of the Tuolumne County Ordinance Code. Encourage new development that complies with Chapter 11.12 to provide multiple access routes, especially in very high fire hazard severity zones or where one access route is susceptible to closure by landslide, loss of a bridge or other cause.

17.E.f - Support the efforts of the Tuolumne County Fire Department to prevent loss of life, property and resources. Refer land development applications which would permit structures in areas subject to wildland fire to the Tuolumne County Fire Department/CAL FIRE for review and identification of measures necessary to mitigate the fire hazard.



17.E.g - Consult the U.S. Forest Service, National Park Service and other federal land management agencies regarding applications for development on privately owned lands located adjacent to or within these agencies' boundaries to obtain comments regarding the impact of the project on the wildland fire protection mission of that agency.

17.E.h - Revise and enforce County fire protection regulations such that new development in areas subject to wildland fire provides for clearing adjacent to access roads in order to reduce radiant heat received by vehicles on the roadway and thereby facilitate safe evacuation of residents and response by emergency vehicles in the event of wildland fire.

17.E.i - Periodically update the County's fire protection standards to reflect new information and technology concerning fire prevention in wildland areas.

17.E.j - Locate new essential public facilities including, but not limited to, hospitals, health care facilities, emergency shelters, emergency operations centers and emergency communications facilities, outside very high fire hazard severity zones if feasible. If essential public facilities must be located in high or very high fire hazard severity zones, incorporate design, construction or other measures to minimize damage in the event of a wildland fire.

Policy 17.E.4: Promote public awareness of wildland fire hazards present within the County, as well as proper fire prevention and protection practices.

Implementation Programs

17.E.k - Actively seek funding to develop fire prevention public awareness and education programs.

17.E.l - Educate residents in forested areas about wildfire hazards and the steps to avoid excessive risk.

17.E.l.1 - Evaluate safety deficiencies in existing structures that were constructed prior to contemporary fire safe standards and assess, where feasible, improving infrastructure in these areas, including possible physical renovations to structures.

17.E.l.2 - Work with Federal, State, and local agencies to improve road infrastructure to residential areas in the County which have been identified as having deficient emergency access. This could include the development of new secondary access roads, maintenance or clearing of existing secondary roads which do not meet Title 11 standards, implementing projects identified within a Community Wildfire Protection Plan (CWPP) such as fuel break development or vegetation clearing, or the development of a Temporary Refuge Area.

Policy 17.E.5: Maintain firefighting assets within the County at necessary levels.

Implementation Programs

17.E.m – Support the operation of a fully-staffed CAL FIRE Columbia Air Attack Base at the Columbia Airport.

17.E.n - Continue to make County airports available to facilitate fire suppression aircraft operations.

Policy 17.E.6: Encourage rapid post-fire assessment and rehabilitation of burned lands to limit soil erosion, protect water quality, minimize flooding and restore damaged landscapes.

Implementation Program

17.E.o - Support the efforts of fire protection organizations and property owners to develop burn area recovery plans that include rapid post-fire assessment and implementation actions that



encourage salvage of burned trees and reforestation activities, create resilient and sustainable landscapes and restore functioning ecosystems.

Policy 17.E.7: Protect natural resources from the effects of wildland fire.

Implementation Programs

17.E.p - In the event of major wildland fires that exceed the capability of local fire protection resources to control, implement the Wildland Fire Plan contained in the *Emergency Services Operations Plan for Tuolumne County*.

17.E.q - Coordinate revisions of the *Tuolumne County Community Wildfire Protection Plan* and individual community wildfire protection plans with the current version of the CAL FIRE *Strategic Fire Plan for the Tuolumne/Calaveras Unit* to include projects to reduce the wildland fire in the County.

17.E.r - Utilize the *Tuolumne County Community Wildfire Protection Plan*, the *Highway 108 Strategic Plan*, the CAL FIRE *Strategic Fire Plan for the Tuolumne/Calaveras Unit* and other adopted fire prevention, protection and response plans to identify the maximum acceptable wildfire size and acceptable initial attack success rate for protection of wildland areas and provide the resources necessary to achieve these standards.

Policy 17.E.8: Require property owners to maintain wildlands in a fire-resistant manner consistent with Section 4291 of the Public Resources Code. Assist fire protection agencies in their efforts to enforce Section 4291.

Implementation Programs

17.E.s - Maintain the County's policies concerning development in the Tuolumne County Ordinance Code in the wildland urban interface area to further reduce the risk of life and property loss from future wildfires.

17.E.t - Require property owners to remove trees killed by drought, disease, insects and other pests to utilize the timber value and reduce the wildland fire hazard consistent with Section 4291 of the Public Resources Code unless a tree is determined to have significant wildlife habitat value by a qualified biologist.

Policy 17.E.9: Consider effects on cultural resources, wildlife habitat and special status species when developing wildfire prevention, protection and recovery plans.

Implementation Programs

17.E.u - Evaluate the effects on wildlife habitat and special status species when developing wildfire prevention, protection and recovery plans. Incorporate measures to mitigate potentially significant impacts into adopted plans.

17.E.v - Incorporate the habitat needs of native wildlife species into wildfire prevention, protection and recovery plans. Utilize plant species native to the area when designing revegetation plans.

17.E.w - Evaluate the effects on cultural resources when developing wildfire prevention, protection and recovery plans. Incorporate measures to mitigate potentially significant impacts into adopted plans.



Policy 17.E.10: Identify assets that require protection from wildland fire and prioritize their protection needs.

Implementation Program

17.E.x - When updating the *Tuolumne County Community Wildfire Protection Plan* or updating or preparing other community wildfire protection plans, include the following:

1. A prioritization of physical assets that require protection from wildland fire; and
2. Fire defense strategies that provide fire protection without dependence on air attack and could serve as safety zones for the public or emergency support personnel.

Policy 17.E.11: Encourage resolution of conflicts between wildland fire protection and habitat conservation for wildlife.

Implementation Program

17.D.y - Coordinate with CAL FIRE, the Tuolumne County Fire Department and the California Department of Fish and Wildlife to identify acceptable levels of wildland fuel reduction in areas conserved for biological resources to mitigate impacts of development.

Policy 17.E.12: Acknowledge that wildland areas provide natural resource values to the citizens of the County, visitors and other persons throughout the State, including watershed resources, timber resources, visual resources, carbon sequestration, wildlife habitat and special status species habitat.

GOAL 17F:

Plan, prepare for, and adapt to significant drought impacts on the water supply.

POLICIES & IMPLEMENTATION PROGRAMS

Policy 17.F.1: Educate the public regarding droughts.

Implementation Programs

17.F.a - Educate the public on preparedness, planning, and response for drought and other emergencies affecting the water supply. Consider conducting annual water forums as public outreach.

17.F.b - Effectively communicate the procedures and available resources information to the community in the event of drought.

Policy 17.F.2: Minimize the impacts of drought on residents by developing short-term and long-term approaches to drought preparedness, response and recovery.

Implementation Programs

17.F.c - Closely monitor drought conditions and assist water agencies to implement the least drastic mitigation measures required.

17.F.d - Work with water agencies to develop a Drought Preparedness Plan.



17.F.e - Consider updating the Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan to specifically address preparedness for short-term and long-term droughts.

~~**17.F.f** - Continue to work with the State to implement the California Disaster Assistance Act, or similar assistance, to assist residents whose wells have gone dry due to a drought.~~

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