

General Plan Safety Element Assessment Sacramento County Review

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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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: Sacramento	Notes:	CAL FIRE Unit: Amador-El Dorado	Date Received: 7/13/2017
County: Sacramento	LUPP Reviewer: Mitchell	UNIT CONTACT: Darin McFarlin	Date Reviewed: 7/28/2017

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		Located Figure IV-2
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		Located in LHMP, reference added to SE
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		Located page 64 of SE
Have local, state, and federal agencies with responsibility for fire protection, including special districts and local offices of emergency services, been identified?	X		Map Included (page 64 & 65) SE
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		
Any other relevant information regarding fire hazards in SRAs or VHFHSZs?	X		

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) (<u>SRA Fire Safe Regulations</u>) and title 14, CCR, division 1.5, chapter 7, subchapter 3, article 3 (commencing with section 1299.01) (<u>Fire Hazard Reduction Around Buildings and Structures Regulations</u>) for SRAs and/or VHFHSZs?		X		Not mentioned in Safety Element draft, Local Ordinances are in place, just not referenced in SE as equal to or more stringent. County does have SRA in the county rated at Moderate. **Suggest having a policy in place that states any new development in the SRA will apply Title 14. Same for LRA with Title 22.
Are there goals and policies to avoid or minimize new residential development in VHFHSZs?			X	For the small area of VHFHSZ, is it already built out
Has fire safe design been incorporated into future development requirements?	X			
Are new essential public facilities located outside high fire risk areas, such as VHFHSZs, when feasible?	X			This applies throughout entire County including SRA. SA-35 of SE
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	
Does the plan include policies to evaluate re-development after a large fire?	X			All new development/rebuild is required to be built to current CBC standards. No Exceptions.
Fuel Modification				
Is fuel modification around homes and subdivisions required for new development in SRAs or VHFHSZs?	X			SA -24 and SA- 27
Are fire protection plans required for new development in VHFHSZs?			X	
Does the plan address long term maintenance of fire hazard reduction projects, including community fire breaks and private road and public road clearance?	X			Local ordinance in place for annual management
Access				
Is there adequate access (ingress, egress) to new development in VHFHSZs?	X			Title 22 (LRA – County Land Development Document) and Title 14 (SRA)
Are minimum standards for evacuation of residential areas in VHFHSZs defined?	X			Sacramento County Evacuation Plan – is referenced
If areas exist with inadequate access/evacuation routes, are they identified? Are mitigation measures or improvement plans identified?	X			SA -23 – county wide policy
Are there policies or programs promoting public outreach about defensible space or evacuation routes? Are there specific plans to reach at-risk populations?	X			Page 69
Fire Protection				
Does the plan identify future water supply for fire suppression needs?	X			SA -23

Does new development have adequate fire protection?	X			SA -30
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			SA-23
Location of anticipated water supply?	X			Located under Master Plan Guidelines
Maintenance and long-term integrity of water supplies?			X	Insignificant due to geographic Area in question
Evacuation and emergency vehicle access?	X			SA-23, LHMP, etc.
Fuel modification and defensible space?	X			SA-24,25,26,27,
Vegetation clearance maintenance on public and private roads?	X			Local Ordinances - Title 22, Title 14 for SRA
Visible home and street addressing and signage?	X			Title 22 for LRA, Title 14 for SRA
Are community fire breaks identified in the plan? Is there a discussion of how those fire breaks will be maintained?			X	Insignificant due to geographic Area in question
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			
Does the plan include an assessment and projection of future emergency service needs?	X			
Are goals or standards for emergency services training described?			X	Local Fire Agencies training vary by location
Does the plan outline inter-agency preparedness coordination and mutual aid multi-agency agreements?	X			County has several plans and agreements in place

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.

General Plan

Safety Element

Adopted December 15, 1993
Amended November 9, 2011
Amended December 13, 2016
Amended Fall 2017

County of Sacramento
Community Planning and Development Department

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SACRAMENTO COUNTY GENERAL PLAN SAFETY ELEMENT

GOALS AND POLICIES

Introduction

The purpose of the Safety Element is to identify ~~and assess the potential for~~ hazards with the potential to occur in Sacramento County and to formulate ~~measures~~ policies that ~~avoid or minimize risk in order to provide adequate public protection. This Element focuses on policies which minimize and prevent hazards, both natural and man-made, related to seismic events, floods, and fires pursuant to the requirements of Government Code Section 65302(g)(1). The reader is referred to the Safety Element Background Section for a more detailed examination of these hazards. Sacramento County's physical setting and the projected rate of urban expansion create a potential for the residents of the County to be greatly affected by several hazards. Hazards can result from the action of nature, as in the case of earthquakes and floods; they can be man-made, as in the case of fires caused by arson or through carelessness. They can also originate from a combination of both natural and man-made causes, such as dam failure that results from an earthquake. This element examines both natural and man-made hazards, including seismic events, flooding, and fires. Minimizing and preventing these hazards are the focus of this Element.~~

For a discussion of safety issues related to airports~~related safety issues~~, the reader is referred to the Noise Element. For a discussion of safety issues related to hazardous materials, the reader is referred to the Hazardous Material Element.

~~Sacramento County has been dealing with flood hazards since the Gold Rush, with dramatic flood events in 1862, 1878, 1902, and 1909. In response to the 1878 flood, State Engineer William Hammond Hall developed an integrated, comprehensive flood control plan for the Sacramento Valley. The plan subsequently came to include a system of levees, weirs and bypass channels to protect existing population centers. Construction began on Folsom Dam in 1951, and upon its completion, it saved Sacramento from a significant storm event in 1956. (Updated 2011)~~

~~The flood events of 1986 and 1997 demonstrated a need to reevaluate the protection afforded the community by its existing levee system and the control of American River flows at the Folsom Reservoir. Engineering analysis showed that improvement to Folsom Dam and to the American River levee system was of urgent concern. The levees along the American River have been recognized by FEMA as providing at least a 100-year level of flood protection. An additional reach of levee upstream of the Mayhew drain was recently improved and should be recognized by FEMA near the end of 2010 as providing 100-year level of protection as well. There are still various levee strengthening activities occurring along the American River and in 2008 improvements to Folsom Dam began that will allow improved management of flood water which could double the amount of flood protection along the American River. These improvements~~

~~should be completed around the 2015 to 2018 timeframe. In 2006, California voters approved Proposition 1E to fund flood protection projects statewide. The 2007 levee improvement project on the Sacramento River serves to protect urban areas north of Freeport. Also, in 2007, the State legislature sponsored several flood protection bills in an effort to reduce risk of catastrophic failure of structural flood control systems including language regarding 0.5% annual flood hazards (known as 200-year flood).~~

~~Sacramento County is less affected by seismic events and other geologic hazards than other portions of the state. Nevertheless, some property damage has occurred in the past. The damage that was experienced has largely been the result of major seismic events occurring in adjacent areas, especially the San Francisco Bay area and, to a lesser extent, the foothills of the Sierras. The areas of Sacramento County most vulnerable to seismic and geologic hazards are those areas subject to liquefaction, the action of expansive soils, and subsidence. Seismic activity could have a significant impact on Delta levees, particularly those that are wet year round. Additional policies related to the preservation of urban streams as floodways are discussed in the Conservation Element.~~

~~Fires, both urban and wildland, represent another type of hazard to which areas of the County may be exposed. Grass fires, caused by lightning, arson, or carelessness, can occur in the less developed portions of the County. Again, Sacramento County is less vulnerable to this type of hazard than surrounding counties with sparse and/or hillside development. Structure and other types of urban fires are a threat to any community and emergency planning must account for such a possible danger. The ability of government and other responsible agencies to respond to the needs of the population that has been subject to a hazard is another concern that this element assesses. An adequate circulation network is central to saving lives and minimizing property damage. Areas of special concern are those in the Delta near levees and the floodplains of rivers and streams where the danger from flooding is the greatest.~~

~~The Safety Element does not address issues involving the storage and/or transportation of hazardous materials in relationship to land use planning. The Sacramento County Hazardous Material Element addresses land use planning concerns associated with hazardous materials.~~

Goals and Policies

Seismic And Geologic Hazards

Seismic hazards are those associated with faulting, groundshaking, liquefaction, and seiches whereas geologic hazards are those associated with subsidence, expansive soils, landslides, and erosion. Geologic hazards are more prevalent than seismic hazards in Sacramento County. Because no major faults transect Sacramento County, the County is less affected by seismic events than other portions of the state. Nevertheless, some property damage has occurred in the past largely due to major seismic events occurring in adjacent areas, especially the San Francisco Bay area and, to a lesser extent, the foothills of the Sierras. The areas of Sacramento County most vulnerable to seismic and geologic hazards are those areas subject to liquefaction and subsidence, such as the downtown area and the Delta.

GOAL: Minimize the loss of life, injury, and property damage due to seismic and geological hazards.

Policies:

- SA-1. The County shall require geotechnical reports and impose the appropriate mitigation measures for new development located in seismic and geologically sensitive areas.
- SA-2. The County shall protect citizens from the hazards of old architecture affected by seismic activity.
- SA-3. The County shall support efforts by Federal, State, and other local jurisdictions to investigate local seismic and geological hazards and support those programs that effectively mitigate these hazards.
- SA-4. The County shall prohibit development on ground surfaces which exceed 40 percent in slope, such as the bluff areas along the American River. Development shall be set back from these slopes at a distance established by the Zoning Code

Implementation Measures:

- A. The County shall designate generalized areas subject to seismic and geological hazards. Development proposals falling within these areas shall include a geotechnical report with appropriate mitigation measures if a seismic or geological hazard is found to exist. (PLANNING)
- B. The County shall draft an ordinance for consideration by the Board of Supervisors to establish a program for the removal or strengthening of poorly anchored parapets or architectural detailing on existing buildings. (PUBLIC WORKS)

Flooding

GOAL: Minimize the loss of life, injury, and property damage due to flood hazards.

Sacramento County has been dealing with flood hazards since the Gold Rush, with dramatic flood events in 1862, 1878, 1902, and 1909. In response to the 1878 flood, State Engineer William Hammond Hall developed an integrated, comprehensive flood control plan for the Sacramento Valley. The plan subsequently came to include a system of levees, weirs and bypass channels to protect existing population centers. Construction began on Folsom Dam in 1951, and upon its completion, it saved Sacramento from a significant storm event in 1956. (Updated 2011)

The flood events of 1986 and 1997 demonstrated a need to reevaluate the protection afforded the community by its existing levee system and the control of American River flows at Folsom Lake. Engineering analysis showed that improvement to Folsom Dam and to the American River levee system was of urgent concern. The levees along the American River have been recognized on the FEMA Flood Insurance Rate Maps as providing at least a one in 100-year statistical flood protection. There are still various levee strengthening activities occurring along the American River and in 2017 improvements to the completed spillway construction at Folsom Dam will allow improved management of flood water improving the amount of flood protection along the American River. The next flood improvement project is the raising of Folsom Dam and its dikes. The goal is to improve American River flood protection to the California one in 200 year standard. In 2008, FEMA deaccredited the levee system in Natomas, since then, much work has been completed and more is underway to improve flood protection. In 2015, FEMA rewarded flood improvement efforts by mapping Natomas with the Zone 99 floodplain designation, allowing development to proceed.

Many of the planned development areas of Sacramento County are high ground and reasonably safe from catastrophic flooding. The County is ranked among the nation's best on the FEMA Community Rating System, implying that flood protection is very important to the leadership of the County. (Updated 2016)

Policies in this section address flood avoidance and emergency response, interagency coordination, location and design of public facilities, location and design of new development, floodplain fill, levee protection and the requirements of drainage plans. The policies required by Senate Bill-5 (Machado, 2007) on floodplain management are found in the Conservation Element, the Safety Element and the Safety Element Background document. Conservation Element policies CO-30 & CO-105a stress the importance of preserving natural drainage. Safety Element policies SA6a-c and SA-37 emphasize the importance of interagency coordination for maintenance of facilities and for emergency response. Policies SA-18a and b require levee setbacks that will allow regular maintenance or emergency repair. A key requirement of Senate Bill-5 is addressed in SA-22a which differentiates between flood-protection standards for project sites that are subject to the Urban Level of Flood Protection (ULOP) requiring 200-year flood protection, and project sites that are subject to the 100-year FEMA flood standard. (Added 2016)

The text and policies of this General Plan use the following definitions for classifying and managing areas subject to flooding. **(Added 2016)**

1. Flood Hazard Zone. This term is used to identify project sites that must be evaluated for potential flood hazards (SA-23) and to locate appropriate sites for public facilities (SA-7). It is defined by the State of California, and in this General Plan, as an area subject to flooding that is delineated as either a Special Flood Hazard Area or an Area of Moderate Flood Hazard on an official Flood Insurance Rate Map (FIRM) issued by the Federal Emergency Management Agency (FEMA).
 - a. Special Flood Hazard Area. This term is defined in the Sacramento County Flood Plan Management Ordinance as an area shown on the FEMA Flood Insurance Study and the FIRM as Zone A, AO, A1-30, AE, A99, AH or AR. These zones are lands covered by the floodwaters of the base flood (100-year) where the National Flood Insurance Program’s floodplain management regulations apply.
 - b. Area of Moderate Flood Hazard. These areas are shown by the letter “X” on the Flood Insurance Rate Maps (FIRM). (Older maps use the letters “B” or “C”.)
2. Local Flood Hazard Area. An area having risk of flooding in a base flood event as determined by the Floodplain Administrator, and which is supplemental to federally defined special flood hazard areas. The base flood elevation related to actual surveyed ground elevation is the local flood hazard area.

The Safety Element Background document contains data required by Senate Bill-5 primarily in the form of mapped data. **(Added 2016)**

Any development located within the Central Valley Flood Protection Board’s jurisdiction is required to apply for a permit from the CVFPB per the California Code of Regulations, Title 23 Waters, Division 1, Article 3, Section 6. Their authority extends over (a) the levee section, (b) the waterward area between project levees, (c) a 10-foot-wide strip adjacent to the landward levee toe, (d) within 30 feet of the top of the banks of unleveed project channels, (e) within Designated Floodways adopted by the CVFPB, and (f) activities outside of these limits which could adversely affect the flood control projects. **(Added 2011)**

Additional floodplain information may be obtained by contacting the Sacramento County Department of Water Resources. The Sacramento County Floodplain Management Ordinance contains additional information regarding safety and development in or near designated floodplains. Historical data on flooding, including locally prepared maps of areas that are subject to flooding, areas that are vulnerable to flooding after wildfires, and sites that have been repeatedly damaged by flooding is available in the Sacramento County Multi-Hazard Mitigation Plan. **(Added 2011)**

Policies:

SA-5. A comprehensive drainage plan for major planning efforts shall be prepared for streams and their tributaries prior to any development within the 100-year floodplain and/or the 200-year floodplain in areas subject to the Urban Level of Flood Protection, defined by full watershed development without channel modifications. The plan shall:

- a. Determine the elevation of the future 100-year flood and/or the 200-year flood in areas subject to the Urban Level of Flood Protection, associated with planned and full development of the watershed;
- b. Determine the boundaries of the future 100-year floodplain and/or the 200-year floodplain in areas subject to the Urban Level of Flood Protection, for both flood elevations (planned and full development) based on minimum 2-foot contour intervals;
- c. Assess the feasibility of gravity drainage into the existing flowline of the stream;
- d. Assess the feasibility of alternative means of drainage into the stream;
- e. Identify potential locations for sedimentation ponds and other stormwater treatment facilities;
- f. Determine practical channel improvements and/or detention basins to provide the flood control needs of the proposed development;
- g. Determine the location and extent of marsh, vernal pool and riparian habitat;
- h. Develop measures for protecting and mitigating natural habitat;
- i. Develop measures for protecting and mitigating for federal and state listed endangered species;
- j. Develop and ensure implementation of measures that would reduce vector larvae;
- k. Identify appropriate plant species to be included as part of the natural features of the comprehensive drainage plan. **(Modified 2016)**

SA-6. The County will coordinate with the City of Sacramento, the Army Corps of Engineers, the Sacramento Area Flood Control Agency, and other Federal, State and local governments and agencies to develop a plan to finance, develop and construct flood control project improvements to reduce flooding potential in Sacramento County. The construction of flood control projects along the Sacramento and

American Rivers and the immediate connection of local streams to these rivers shall be included in these projects. Such projects should provide 200-year flood protection.

- SA-6a. The County will continue to coordinate with parties responsible for flood management facilities and structures (e.g., pump stations, levees, canals, channels, and dams) to provide proper maintenance and/or improvements. **(Added 2016)**
- SA-6b. The County will continue to coordinate with relevant organizations and agencies (e.g., Federal Emergency Management Agency (FEMA) and State of California Department of Water Resources (CADWR)) when updating floodplain mapping, flood management plans, local hazard mitigation plans, and other emergency response plans to consider the impacts of urbanization and climate change on long-term flood safety and flood event probabilities. **(Added 2016)**
- SA-6c. The County will continue to coordinate with local, regional, state, and federal agencies to maintain an adequate flood management information base, prepare risk assessments, and identify strategies to mitigate flooding impacts. **(Added 2016)**
- SA-7. In accordance with the County Floodplain Management Ordinance, the County shall locate, when feasible, new essential public facilities outside of flood hazard zones¹, including hospitals and health care facilities, emergency shelters, fire stations, emergency command centers, and emergency communications facilities; or identify construction methods or other methods to minimize damage if these facilities are located in flood hazard zones.
- SA-8. Maintain the structural and operational integrity of essential public facilities during flooding.
- SA-9. New and modified bridge structures should minimize any increase in water surface elevations of the 100-year floodplain, or the 200-year floodplain in areas subject to the Urban Level of Flood Protection. **(Modified 2016)**
- SA-10. Fill within the 100-year floodplain of creeks outside of the Urban Service Boundary is permissible to accommodate structures (e.g., residential, commercial, accessory) and septic systems, and only when the Board of Supervisors finds that the fill will not impede water flows or storm runoff capacity. Such development shall not cause an increase in base flood elevation of the 100-year floodplain exceeding 0.10 feet, unless analysis clearly indicated that the physical and/or economic use of adjacent property within the floodplain will not be adversely affected. A permit is required if the fill is within the jurisdiction of the Central Valley Flood Protection Board.
- SA-11. The County shall implement the improvement of natural drainage channels and certain floodplains for urbanized or urbanizing portions of the County to reduce local

- flooding. Such improvements shall comply with the General Plan policies contained in the Conservation Element, Urban Streams, and Channel Modification Section.
- SA-12. The County shall continue local efforts that encourage implementation of the Federal Flood Insurance Program.
- SA-13. Where new upstream development in Sacramento County will increase or potentially impact runoff onto parcels downstream in a neighboring jurisdiction, such as the City of Sacramento, Sacramento County will coordinate with the appropriate neighboring jurisdiction to mitigate such impacts.
- SA-14. The County shall require, when deemed to be physically or ecologically necessary, all new urban development and redevelopment projects to incorporate runoff control measures to minimize peak flows of runoff and/or assist in financing or otherwise implementing Comprehensive Drainage Plans.
- SA-15. The County shall regulate, through zoning and other ordinances, land use and development in all areas subject to potential flooding and prohibit urban uses on unprotected flood land.
- SA-16. Deny creation of parcels that do not have buildable areas outside the 100-year floodplain, or the 200-year floodplain in areas subject to the Urban Level of Flood Protection, unless otherwise allowed in the Floodplain Management Ordinance. **(Modified 2016)**
- SA-17. For residential zoning, the area outside the 100-year floodplain, or the 200-year floodplain in areas subject to the Urban Level of Flood Protection, must be contiguous or reasonably situated to provide buildable area for a residence and associated structures. Examples of structures include swimming pools, sheds, barns, detached garages, and other outbuildings that are normally associated with residential development. There may be exceptions (such as the Delta area) as allowed in the Floodplain Management Ordinance. **(Modified 2016)**
- SA-18. Vehicular access to the buildable area of newly created parcels must be at or above the 10-year flood elevation. Exceptions may be made when the existing public street from which access is obtained is below the 10-year flood elevation. There may be exceptions (such as the Delta area) as allowed in the Floodplain Management Ordinance.
- SA-18a. Provide unobstructed access to levees on county-owned lands, whenever practicable, for maintenance and emergencies. Require setbacks and easements to provide access to levees from private property. **(Added 2016)**
- SA-18b. Urban flood control levees should have adequate setbacks consistent with local, regional, State, and federal design and management standards. **(Added 2016)**

- SA-19. Creation of lots that require watercourse crossings for single lots, or that will likely encourage watercourse crossings to be built by property owners (lots with useable area on both sides of a watercourse) will not be allowed unless a detailed hydraulic study is approved by Water Resources and there is found to be no adverse impact in accordance with the County Floodplain Management Ordinance.
- SA-20. Levees for the purpose of floodplain reclamation for development shall be strongly discouraged. Floodplain restoration shall be encouraged to provide flood protection and enhancement and protection of a riparian ecosystem.
- SA-21. If levee construction is approved to reclaim floodplain for new development, 200-year flood protection is required.
- SA-22. Areas within a 100-year floodplain, or within the 200-year floodplain in areas subject to the Urban Level of Flood Protection, shall not be upzoned to a more intensive use unless and until a Master Drainage Plan is prepared that identifies areas of the floodplain that may be developed. **(Modified 2016)**
- SA-22a. Sacramento County will evaluate development projects and all new construction located within a defined Flood Hazard Zone (FHZ) to determine whether the 200-year Urban Level of Flood Protection or 100-year FEMA flood protection applies, and whether the proposed development or new construction is consistent with that standard. Prior to approval of development projects or new construction subject to either standard, the appropriate authority must make specific finding(s) related to the following:
- a. Urban Level of Flood Protection standard (200-year) applies to projects in a Flood Hazard Zone that meet certain criteria, developed by the State of California Department of Water Resources, related to urbanization, watershed size and potential flood depth.
 - b. Federal Emergency Management Agency (FEMA) standard of protection (100-year) applies to projects in a Special Flood Hazard Area that are not subject to the Urban Level of Flood Protection. **(Added 2016)**
- SA-22b. New development shall be elevated as required by the applicable flood standards (100-year, or 200-year in areas subject to the Urban Level of Flood Protection) and should be constructed to be resistant to flood damage consistent with the Floodplain Management Ordinance. **(Added 2016)**

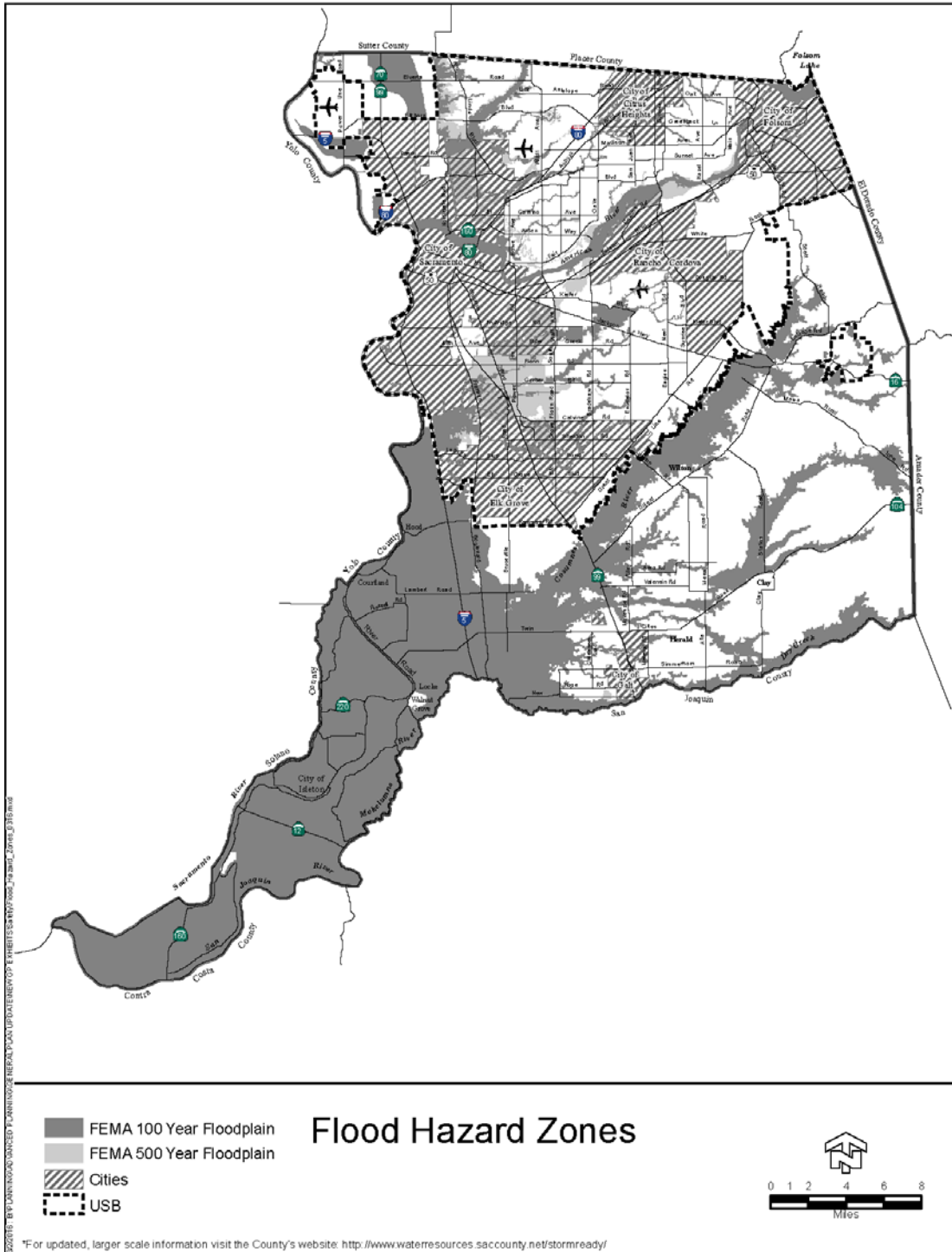
Implementation Measures:

- A. Amend the Flood Combining Zone to further limit development within the 100-year floodplain. This zone should enhance flood protection and provide opportunities for reclamation of riparian habitats and recreation. (PLANNING, MSA - DWR)

- B. Update the County's zoning grid maps to reflect current Flood Insurance Rate Maps (FIRM). (PLANNING, MSA - DWR)
- C. The County shall implement the improvement of natural drainage channels in urbanized or urbanizing portions of the County to reduce local flooding. (PLANNING, MSA - DWR)
- D. Update the County's floodplain elevations by coordinating with the California Department of Water Resources (CADWR) and the Federal Emergency Management Agency (FEMA). (PLANNING, MSA - DWR)

FIGURE 1

(Modified 2016)



Fire Hazards

Fires, both urban and rural, represent another type of hazard to which the County may be exposed. Sacramento County is less vulnerable to major wildland fires than surrounding counties due to flatter topography and development policies that limit urbanization in wildland areas. However, wildfires caused by lightning, arson, or carelessness, can still occur in the less developed portions of the County, such as the American River Parkway or the grasslands of east Sacramento County.

GOAL: Minimize the loss of life, injury, and property damage due to fire hazards.

Policies:

- SA-23. The County shall require that all new development meets the local fire district standards for adequate water supply and pressure, fire hydrants, and access to structures by firefighting equipment and personnel.
- SA-24. The County shall require, unless it is deemed infeasible to do so, the use of both natural and mechanical vegetation control in lieu of burning or the use of chemicals in areas where hazards from natural cover must be eliminated, such as levees and vacant lots.
- SA-25. The County shall work with local fire districts to develop high visibility fire prevention programs, including those which provide voluntary home inspections and awareness of home fire prevention measures.
- SA-26. The County and fire districts shall develop programs to provide citizens with self-preparedness and community readiness skills for large or extended accidental, natural, and terrorist emergencies/incidents.
- SA-27. The County shall require, where appropriate, the use of fire resistant landscaping and building materials for new construction developments that are cost effective.
- SA-28. The County shall encourage and require, to the maximum extent feasible, automatic fire sprinkler systems for all new commercial and industrial development to reduce the dependence on fire department equipment and personnel.
- SA-29. The County and fire districts will work together to regulate hazardous materials to mitigate emergency responses.

SA-30. The County, medical community, and fire districts shall work to improve EMS response system that includes first responder emergency care and transportation services.

- Properly locating resources to provide timely response
- Paramedic services from every fire station

Implementation Measures:

- A. The County shall request the Fire Advisory Board to propose measures that will assist in the prevention of fire in new and existing structures throughout the County. (FIRE ADVISORY BOARD)
- B. The County, fire districts, and the public should explore and develop standards for property development incentives to reduce the cost of automatic fire sprinkler systems to developers and the end user who will live in these units.

Emergency Response

The ability to implement any emergency response plan can be strongly affected by land use decisions made by the County. In a major disaster, there may be a need to evacuate large numbers of people from a given area. If the road network has been poorly planned and/or maintained and not designed to serve existing population densities, it could hamper the ability of emergency response workers to move people out of the area in a timely manner. It can also hamper the arrival and delivery of emergency response personnel and supplies. If high density or other sensitive land uses are allowed to develop near facilities or areas where major disasters are more likely to occur, such as tank farms, airports, deep floodplains or railyards, the potential for catastrophic loss of life and property increases and evacuation of any remaining population becomes difficult. In terms of response, an adequate circulation network and land use decisions that consider the potential for disaster equally with the potential for economic development are key to saving lives and minimizing property damage.

The Sacramento County Local Hazard Mitigation Plan forms the foundation for a community's long-term strategy to reduce disaster losses by breaking the repeated cycle of disaster damage and reconstruction. The Local Hazard Mitigation Plan for Sacramento County is hereby incorporated by reference in to this General Plan.

GOAL: An Emergency Preparedness System that can effectively respond in the event of a natural or manmade disaster.

~~The Sacramento County Multi-Hazard Mitigation Plan contains all relevant information regarding emergency response in the event of a catastrophic event. This document should be~~

~~referenced for additional information relating to evacuation plans and emergency response for potential disasters such as flooding, dam failure, seismic activity, fire, and explosions,~~

Policies:

- SA-31. The County shall continue to maintain, periodically update, and test the effectiveness of its Emergency Response Plan.
- SA-32. The County will implement the Local Multi-Hazard Mitigation Plan in the planning and operations of the County to achieve the goals, objectives, and actions of the County's Local Multi-Hazard Mitigation Plan.
- SA-33. The County shall continue its coordinative efforts, including evacuation planning, with service agencies, the cities within the County, and cities within surrounding counties.
- SA-34. The County shall increase its efforts to inform and educate the general public of disaster response and emergency preparedness procedures.
- SA-35. The County shall ensure that the siting of critical emergency response facilities such as hospitals, fire, sheriff's offices and substations, and other emergency service facilities and utilities have minimal exposure to flooding, seismic and geological effects, fire, and explosions.
- SA-36. The County shall require that high intensity land uses proposed in areas highly susceptible to multiple hazards, such as the Delta, provide mitigation measures that include emergency evacuation routes. Consideration shall be given to the need for additional roads, particularly in the Delta, that may serve as evacuation routes. The County Regional Emergency Operations Office has a study of evacuation routes for various levee breach scenarios for reaches of the Sacramento River north of Freeport and for the American River.
- SA-37. The County shall continue to maintain its response to flood emergencies by maintaining and updating the following:
- a. Flood Emergency Action Plan, to address potential flooding in levee and dam inundation areas, consistent with the California Water Code, and;
 - b. Community flood evacuation and rescue maps, making them available to the public, as appropriate. **(Added 2016)**

Implementation Measures:

- A. The County shall continue to provide a high visibility promotional program to inform the general public of disaster response and emergency preparedness procedures. (GENERAL SERVICES DEPARTMENT - EMERGENCY OPERATIONS)
- B. The County shall revise its zoning designations to include zones not suitable for essential services due to potential hazards. (PLANNING)

Appendix (Modified 2016)

The following information is provided as a part of this General Plan, in compliance with the subsections of California Government Code Section 65302(g)(2)(A):

- (i) **Flood Hazard Zones:** Map is included in Safety Element, Figure 1.
- (ii) **Floodplain Map:** Map is included in Safety Element Background, Figure III-3.
- (iii) **US Army Corps of Engineers Flood Hazard Information:** Information is available from the FEMA Flood Map Service Center (MSC).
- (iv) **Designated Floodway Map:** Map is included in Safety Element Background, Figure III-4.
- (v) **Dam Failure Inundation Map:** Text is provided in Safety Element Background, Page 39, and map is included in Safety Element Background, Figure III-10.
- (vi) **Awareness Flood Plain Map:** Map is included in Safety Element Background, Figure III-5.
- (vii) **Levee Protection Zones:** Maps are included in Safety Element Background, Figure III-7 and Figure III-8.
- (viii) **Project and Non-project Levee or Floodwall Failure Inundation Map:** Map is included in Safety Element Background, Figure III-11.
- (ix) **Historical Data on Flooding:** Text is provided in Safety Element Background, starting on Page 21, and map is included in Safety Element Background, Figure III-2.
- (x) **Existing and Planned Development in Flood Hazard Zones:** Map is included in Safety Element Background, Figure III-9.
- (xi) **Local, State and Federal Agencies with Responsibility for Flood Protection:** The following agencies participate in flood-related data collection, planning and construction, and emergency response:

Local and Regional

Sacramento County Department of Water Resources
Sacramento County Office of Emergency Services (OES)
American River Flood Control District (ARFCD)
Sacramento Area Flood Control Agency (SAFCA)

State of California

California Department of Water Resources (CADWR)
Central Valley Flood Protection Board (CVFPB)

Federal

Federal Emergency Management Agency (FEMA)
California-Nevada River Forecast Center (CNRFC)

Reclamation Districts: Information on Reclamation Districts is available at the Local Agency Formation Commission’s (LAFCo) webpage. Reclamation Districts are as follows:

<u>District Name</u>	<u>District Number</u>
Grand Island_____	RD 3
Lower Andrus Island_____	RD 317
Sherman Island_____	RD 341
Sutter Island_____	RD 349
Libby McNeil_____	RD 369
Andrus Island_____	RD 407
Pierson District_____	RD 551
Walnut Grove_____	RD 554
Upper Andrus Island_____	RD 556
Tyler Island_____	RD 563
(South of Freeport)_____	RD 744
Randall Island_____	RD 755
Cosumnes River_____	RD 800
Ehrhardt Club_____	RD 813
Natomas_____	RD 1000
Glanville Tract_____	RD 1002
Twitchell Island_____	RD 1601
Brannan Island_____	RD 2067
McCormack Williamson Tract_____	RD 2110
Deadhorse Island_____	RD 2111