

BOARD OF FORESTRY AND FIRE PROTECTION

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Matt Walsh
Principal Planner
Solano County Department of Resource Management
Planning Division
675 Texas Street, Suite 5500
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December 4, 2014

Dear Mr. Walsh:

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

Enclosed is the final review and recommendations titled "*Solano County General Plan Safety Element Assessment*." The Board has prepared this document in cooperation with members of the Solano-Lake-Napa Unit.

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

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

Sincerely,

Keith Gilles
Chair, Board of Forestry and Fire Protection

CC: Linda Green, Assistant Chief, LNU

SOLANO COUNTY

SONOMA-LAKE-NAPA UNIT

General Plan Safety Element Assessment Version 1

November 19, 2014

**Board of Forestry and Fire
Protection**



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Purpose and Background: The State Board of Forestry and Fire Protection (BOF/Board) is required to review and make recommendations for the fire safety element of general plan updates in accordance with Government Code (GC) §65302.5. The review and recommendations apply to those general plans with State Responsibility Area (SRA) (Public Resources Code 4125) or Very High Fire Hazard Severity Zones (VHFHSZ) (GC 51175).

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

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

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

Enclosed is the most expansive set of recommendations suggested by the Board. These recommendations are directed at communities that include:

- Most counties
- Widespread Very High Fire Hazard Severity Zone acreage and/or State Responsibility Area acreage
- Extensive financial and physical resources
- Broad community support
- Previous wildfire protection planning efforts

The General Plan Safety Element of each jurisdiction that fits those criteria will be assessed based on the recommendations below.

Review Process and Timeline

The county, local jurisdiction, and local fire unit will receive and review technical guidance documents, the BOF checklist, and other relevant information from the Governor's Office of Planning and Research and CAL FIRE.



The county or local jurisdiction will work closely with the local fire unit during the development of the general plan and the safety element in particular.



90 days prior to the adoption or amendment of the General Plan: The county or local jurisdiction will submit the safety element to the Board of Forestry for review.



No more than 30 days later: The Board will work with the unit to develop findings and recommendations.



No more than 60 days later: The Board will consider the fire unit's recommendations and will approve or approve with amendments the recommendations at the next Board meeting.

Standard List of General Plan Safety Element Recommendations

Please click on the appropriate box to “check” whether the plan satisfies each point. Standard recommendations are included in the checklist but please highlight or add additional comments as necessary.

1.0 Wildfire Protection Planning

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

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

Priority: High Medium Low N/A

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

Priority: High Medium Low N/A

Additional Wildfire Protection Planning Recommendations:
No CWPP has been developed for Solano County.

2.0 Land Use Planning:

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

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

Priority: High Medium Low N/A

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

Priority: High Medium Low N/A

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

Priority: High Medium Low N/A

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

Priority: High Medium Low N/A

Recommendation: Consider mitigation of previously developed areas that do not meet Title 14 California Code of Regulations Section 1270 et seq. or equivalent local ordinance.

Priority: High Medium Low N/A

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

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

Priority: High Medium Low N/A **VHFSZ's are identified on map.**

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

Priority: High Medium Low N/A

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

Priority: High Medium Low N/A **Figure HS-13 does not accurately reflect the SRA line (page HS-49)**

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

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

Priority: High Medium Low N/A

On-going policy. See HS.P-33 on pg. HS-65. Also ongoing effort as identified in HS.I.-37 on pg. HS-65.

Need to update GP to reflect 100 ft. clearance per PRC 4291. (HS-Figure 14, pg. 51-52)

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

Priority: High Medium Low N/A

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

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

Priority: High Medium Low N/A

Additional Land Use Planning Recommendations:

3.0 Housing/Structures and Neighborhoods:

3.1 Incorporation of current fire safe building codes. Yes Partial No Uses Cal. **Fire Code 2013CFC**

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

Priority: High Medium Low N/A

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

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

Priority: High Medium Low N/A **Needed for identification of said structures for wild-land urban interface operations**

Recommendation: Identify plans and actions to improve substandard housing structures and neighborhoods. Plans and actions should include structural rehabilitation, occupancy reduction, demolition, reconstruction, neighborhood –wide fuels hazard reduction projects, community education, and other community based solutions.

Priority: High Medium Low N/A **New construction typically triggers need to upgrade to current codes. Process of attrition.**

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

Priority: High Medium Low N/A **New construction typically triggers need to upgrade to current codes. Process of attrition.**

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

Yes Partial No

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

Priority: High Medium Low N/A Continue to identify structures that have “people with access functional needs (PAFN)”

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

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

Priority: High Medium Low N/A

Additional Housing/Structures and Neighborhoods Recommendations:
The “Concept of Operations” in the county emergency operation plan-evacuations annex should be fleshed out better.

4.0 Conservation and Open Space:

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

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

Priority: High Medium Low N/A Parks such as Lake Solano, Cold Canyon Loop Trail, etc.

4.2 Inclusion of resource management activities to enhance protection of open space and natural resource values. Yes Partial No Parks such as Lake Solano, Cold Canyon Loop Trail, etc.

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

Priority: High Medium Low N/A

Recommendation: Establish goals and policies for reducing the wildland fire hazards within the entity’s boundaries, especially on vacant residential lots and greenbelts and, with the relevant partners, on adjacent private wildlands or federal lands with fire hazards that threaten the entity’s jurisdiction.

Priority: High Medium Low N/A

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

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

Priority: High Medium Low N/A

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

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

Priority: High Medium Low N/A

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

Priority: High Medium Low N/A

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

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

Priority: High Medium Low N/A

Additional Conservation and Open Space Recommendations:

A CWPP would address many of these issues. Need to address public safety on remote areas such as Cold Canyon Loop Trail.

5.0 Circulation and Access:

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

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

Priority: High Medium Low N/A

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

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

Priority: High Medium Low N/A

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

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

Priority: High Medium Low N/A

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

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

Priority: High Medium Low N/A

Additional Circulation and Access Recommendations:

CWPP

6.0 Defensible Space

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

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

Priority: High Medium Low N/A

6.2 Fuel modification around homes. Yes Partial No

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

See http://www.bof.fire.ca.gov/pdfs/Copyof4291finalguidelines9_29_06.pdf

Priority: High Medium Low N/A **Need to update GP to reflect the 100 ft. zone.**

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

Priority: High Medium Low N/A

6.3 Fire suppression defense zones. Yes Partial No

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

Priority: High Medium Low N/A

Additional Defensible Space Recommendations:

Update code to reflect 100 ft clearance around structures per PRC 4291.
Opportunity exists for development of Fire Safe Councils within the county.

7.0 Emergency Services:

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

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

Priority: High Medium Low N/A

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

Priority: High Medium Low N/A **On-going review by LAFCO**

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

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

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

Priority: High Medium Low N/A **On-going review by LAFCO**

7.3 Adequacy of training. Yes Partial No

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

Priority: High Medium Low N/A

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

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

Priority: High Medium Low N/A **NIMS/SEMS are in standard use**

Additional Emergency Services Recommendations:

8.0 Post Fire Safety, Recovery and Maintenance:

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

8.1 Evaluation of redevelopment. Yes Partial No

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

Priority: High Medium Low N/A

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

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

Priority: High Medium Low N/A

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

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

Priority: High Medium Low N/A

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

Priority: High Medium Low N/A

8.4 Post fire life and safety assessments. Yes Partial No

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

Priority: High Medium Low N/A

Recommendation: Identity flood and landslide vulnerability areas related to post wildfire conditions.

Priority: High Medium Low N/A

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

Priority: High Medium Low N/A

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

Priority: High Medium Low N/A

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

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

Priority: High Medium Low N/A

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

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

Priority: High Medium Low N/A

8.7 Native species reintroduction. Yes Partial No

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

Priority: High Medium Low N/A

Additional Post Fire Safety, Recovery and Maintenance Recommendations:

Given that several areas of the county are prone to slides, even absent the effects of fire, post-fire analysis should be given more forethought. The county already recognizes the need for a recovery process for floods and earthquakes. Next logical step is to identify their process for wildland fires.

9.0 Terrorist and homeland security impacts on wildfire protection:

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

9.1 Emergency response barriers. Yes Partial No

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

Priority: High Medium Low N/A

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

Yes Partial No

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

Priority: High Medium Low N/A

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

Priority: High Medium Low N/A

9.3 Communication channels during incidents. Yes Partial No

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

Priority: High Medium Low N/A **work in progress**

Additional Terrorist and Homeland Security Recommendations:

Additional Recommendations:

The development of a CWPP at the county level would go a long ways towards addressing many of the concerns relative to wildland fire operations, planning and mitigation measures.

FIRE SAFETY

Planning Context

This section describes a variety of actions that can be taken to prevent property damage and loss of life caused by wildfires. The County's wildfire planning and prevention strategy focuses on techniques that reduce wildfire potential, support firefighting in rural areas, and ensure use of fire-safe building methods by:

- directing non-farm-related development toward areas with low fire risk;
- working with fire districts during development review and enforcing fire-safe site and building design standards;
- promoting wildfire prevention measures such as grazing, disking, or plowing of agricultural lands; and
- requiring adequate on-site water supply for buildings lacking access to public water.

The County's fire safety policies and implementation programs were created to support the County's vision; specifically the desire to develop in a way that supports the needs of both humans and the environment. While promoting natural fire ecology is good for the environment, the damage it may cause can have devastating effects on people and property. The County seeks to find a sustainable balance between these outcomes by directing development away from known fire hazard areas and buffering the effects of a wildfire away from developed areas.



Fire trucks at the Valley Station in Suisun Valley are ready to be deployed.

Potential Wildfire Areas

Solano County is threatened by both urban and rural fires with the potential to cause property damage, injury, and loss of life. Wildfires pose the greatest danger in the unincorporated county area. Topography, weather, and native vegetation provide the ingredients for destructive fires that can spread rapidly. In California, development activities within hazard areas have worsened the problem by placing people into hazard areas, disrupting natural fire processes and allowing buildup of flammable brush and vegetation. Such development has also moved the urban-wildland interface (the area where human development meets undeveloped wildlands) closer to higher-risk wildfire hazard areas, increasing the number of people and buildings at risk (**Figure HS-11**). The rugged, rural terrain found in the western hills of the county makes firefighting all the more difficult.

The desire to live in remote areas has put people and their homes at risk of wildland fires, land slides, and other natural disasters.

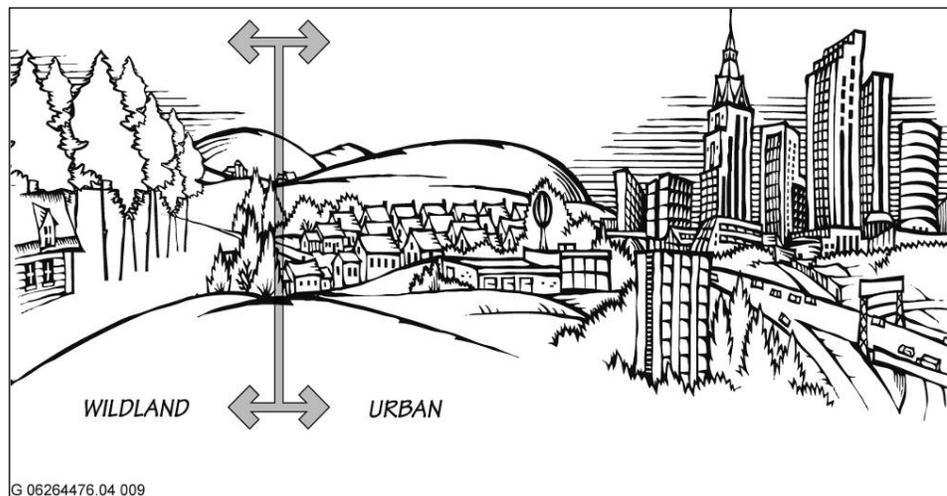


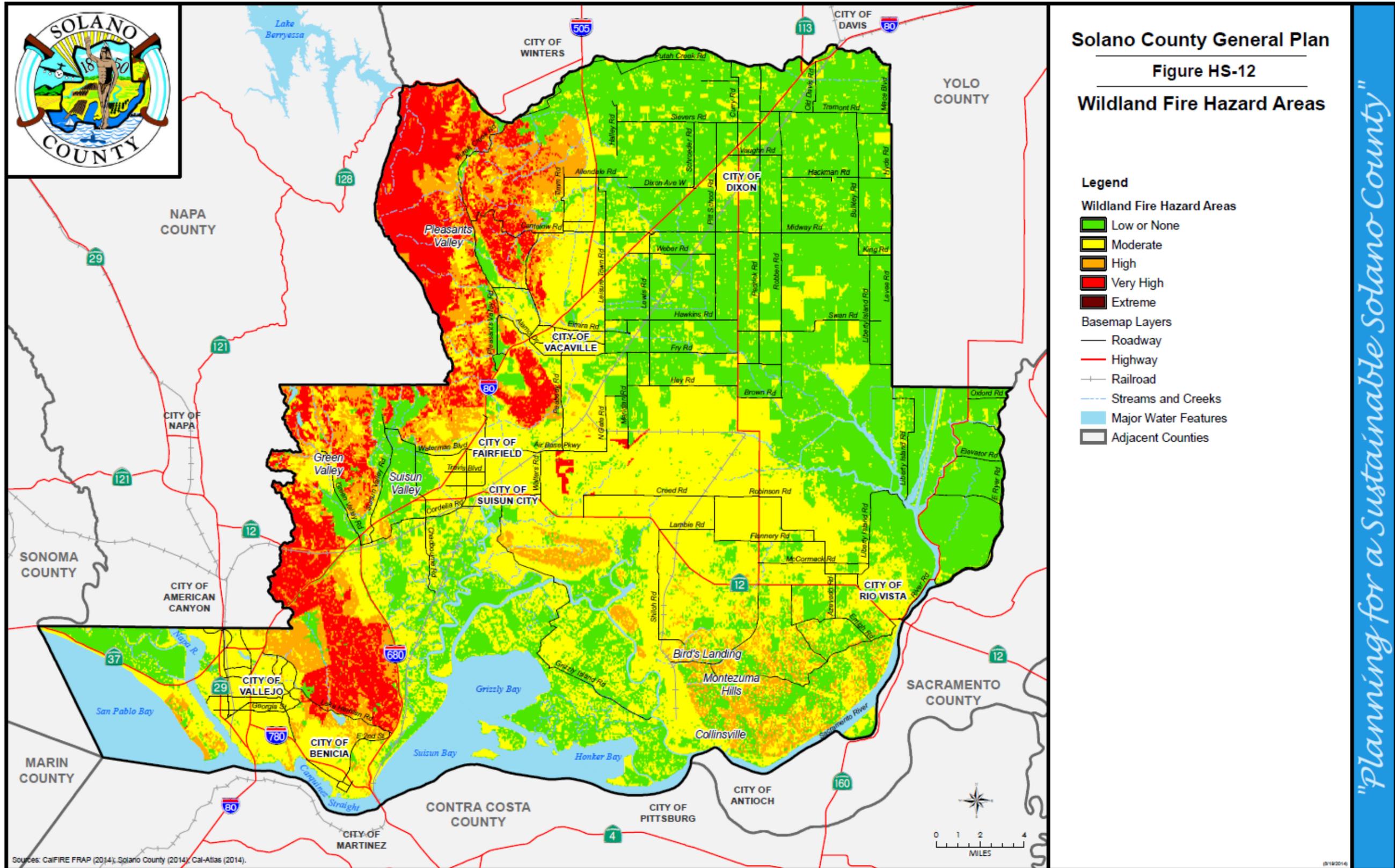
Figure HS-11
Urban-Wildland Interface

Areas at risk for extreme wildfires are designated by the California Department of Forestry and Fire Protection (CAL FIRE) as those lands where dense vegetation with severe burning potential prevails.

Figure HS-12 shows that the highest current areas at risk for fires are found in western Solano County, in the foothills and mountainous watershed areas, and also in grasslands located throughout the county. The Benicia Hills, Potrero Hills, Cement Hills, and western English Hills are all designated as high or very high fire hazard severity zones. Before nearby lowlands were urbanized, vegetation in these west foothill and mountainous communities was naturally maintained by periodic fire. As nearby lands were developed, natural wildfires were suppressed, resulting in the further buildup of fire-prone brush and woodlands. These efforts to suppress natural processes have resulted in larger, more damaging fires.

Public Health and Safety Chapter

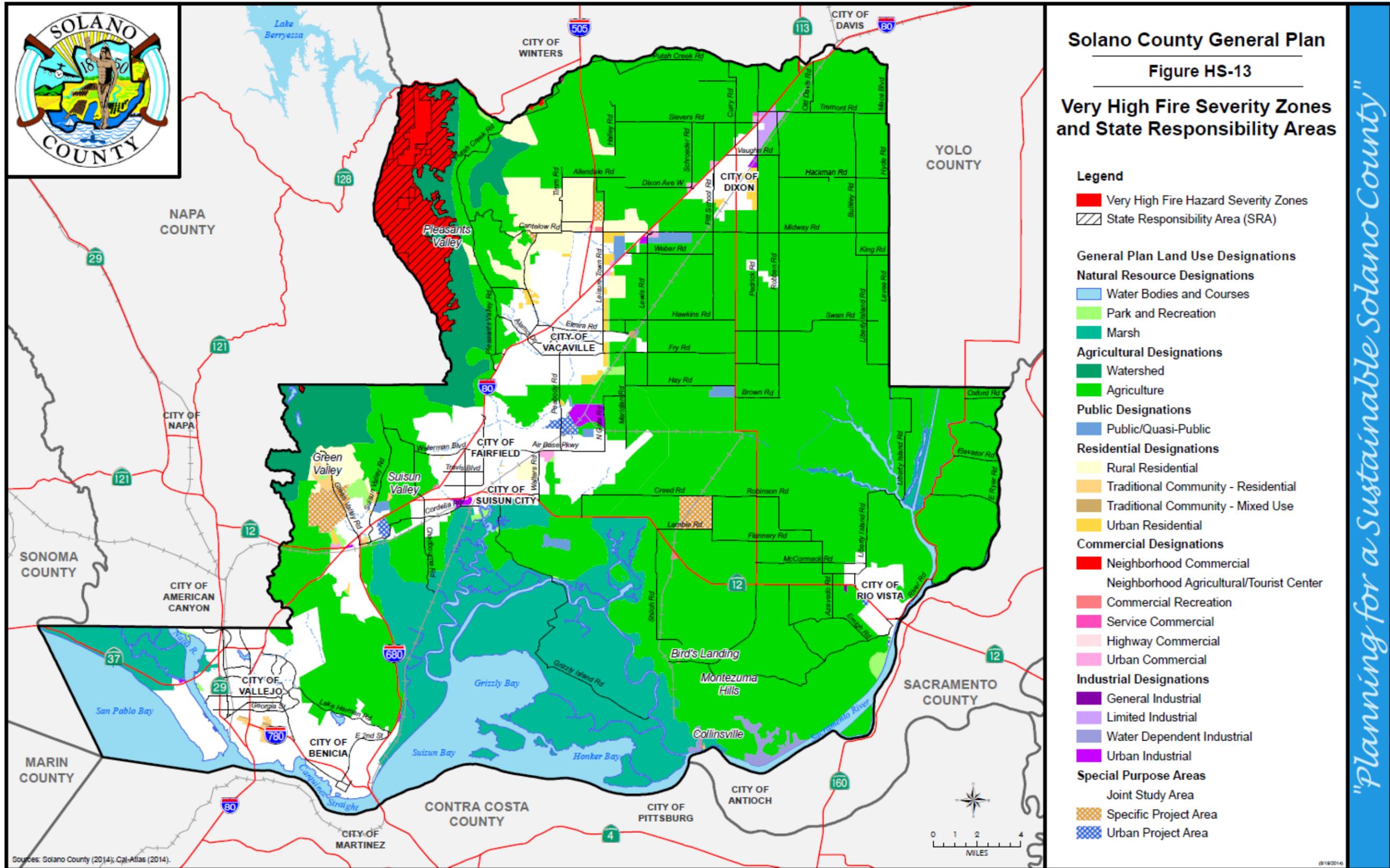
CAL FIRE maps identify wildfire hazards in state responsibility areas (SRA). Local jurisdictions do not have financial responsibility for wildland fire protection in SRAs. **Figure HS-13** shows the location of very high fire severity zones with land use designations. All very high fire hazard severity zones in Solano County are located in SRAs.



"Planning for a Sustainable Solano County"

"PLANNING FOR A SUSTAINABLE SOLANO COUNTY"

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Figures HS-12 and HS-13 convey two aspects of wildfire hazard: the ignition potential of high-use roads and urbanized areas and the burning potential of various types of vegetation. For example, grassland adjacent to a heavily traveled roadway has a high ignition potential because of the high probability and ease with which grass will ignite. A dense woodland canopy, on the other hand, has low ignition potential because of heavier fuels, but would burn with a much higher intensity and ultimately have a worse effect on the ecosystem. The worst fire hazard occurs where easily ignitable grass is growing with brush, which in turn serves as an extremely effective fuel link to the dense woodland canopy.

Water Pressure and Supply

Insufficient water pressure and supply also contribute to wildfire danger. Most of the higher-risk wildfire areas in the county are not served by public water. Fire districts serving these areas are typically equipped with tank trucks. Properties designated for residential use in areas without public water service are required to maintain sufficient on-site water storage and new development must show that it has sufficient water pressure for firefighting purposes.

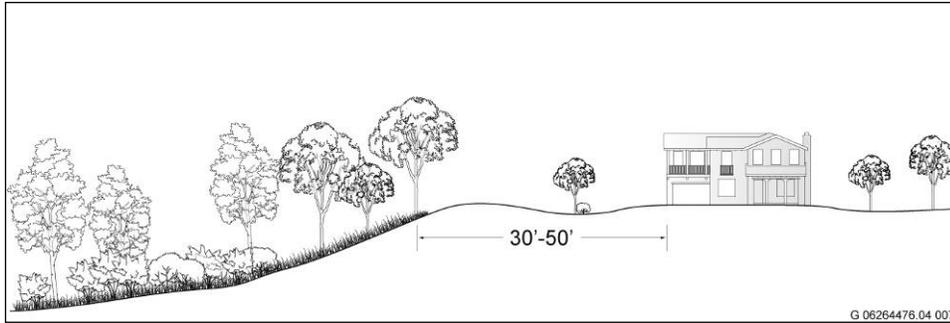
Climate Change

Research conducted at the U.S. Department of Energy's Lawrence Berkeley National Laboratory indicates that climate change will increase the frequency and size of wildfires in California. Hotter, drier climates will promote increased accumulation of fire-prone vegetation, aided by prolonged drought, and stronger winds will continue to fan the flames spreading fires faster and farther than previously experienced. This will expand the size of the urban-wildland interface because more residential communities will be within reach of wildfire activity. An expanded urban-wildland interface will require increased resources, planning, and funding to maintain and defend.

Fire-Safe Planning

Several site design and planning methods can be employed to minimize dangers to life and property within wildfire hazard areas. Methods advocated by County policies and programs include buffering, creating fuel breaks, clustering, and fire-safe construction.

Buffering for fire safety refers to the removal of combustible vegetation around a building within a given distance, usually 30–50 feet (see **Figure HS-14**). This creates a fire defensible space, which can limit fire from spreading to nearby buildings and provides better access to the property for firefighters.

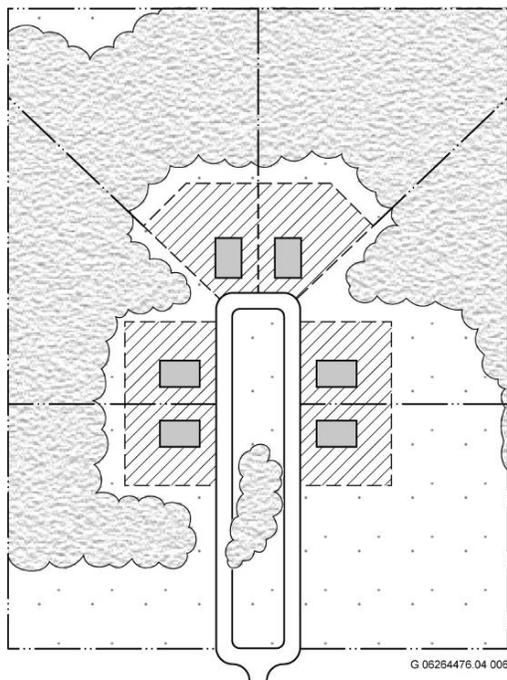


Removing vegetation within the 30–50' buffer provides fire defensible space for homeowners. The same technique can be applied along roadways as fuel breaks to provide accessibility during wildfire events.

Figure HS-14
Buffering

Similarly, fuel breaks are large-scale buffers used to prevent fire from approaching communities or blocking roadway access for firefighting equipment. To create fuel breaks, small trees and light fuels within a 50-foot strip of land are removed. These fuels would otherwise allow fire to climb up to the treetops where firefighting is more difficult.

Clustered development (**Figure HS-15**) for fire safety describes buildings that are placed closer to one another and closer to roads to decrease the amount of space fire districts must protect in the event of a wildfire and to increase access to that space (see below graphic). When homes are placed closer to one another, firefighters are able to maximize their resources, which is especially important in rural environments that lack public water sources.



Clustering homes within a wildfire hazard area allows fire fighters to maximize their resources by concentrating in one area rather than moving from house to house.

Figure HS-15
Clustering

Fire-safe construction incorporates fire-resistant materials into various parts of a house including the roof, siding, vents, windows, and patios to minimize the risk of burning. Particular attention is given to locating propane and oil tanks in protected locations.

Related Plans, Programs, and Agencies

Local Fire Protection Agencies

Solano County does not have its own fire department. Several individual fire protection districts serve the unincorporated county area. Certain fire protection districts may consist of full- or part-time firefighters, but most firefighters in the unincorporated county are volunteers. Additional information and policies addressing fire protection agencies may be found in the Public Facilities and Services chapter of the General Plan.

California Department of Forestry and Fire Protection

CAL FIRE is a state agency responsible for protecting and maintaining privately owned wildland, providing emergency services, and responding to wildland fires throughout California. CAL FIRE provides fire protection to several unincorporated communities in Solano County including Green Valley, Vaca Valley, Lagoon Valley, and Pleasants Valley.

Policies



Disking agricultural fields helps to minimize the potential for wildfires.

-
- HS.P-20: Require that structures be built in fire defensible spaces and minimize the construction of public facilities in areas of high or very high wildfire risk.
 - HS.P-21: Prohibit non-farm-related development and road construction for public use in areas of extreme wildfire risk.
 - HS.P-22: Require new developments in areas of high and very high wildfire risk to incorporate fire-safe building methods and site planning techniques into the development.
 - HS.P-23: Work with fire districts or other agencies and property owners to coordinate efforts to prevent wildfires and grassfires through fire protection measures such as consolidation of efforts to abate fuel buildup, access to firefighting equipment, and provision of water service.
 - HS.P-24: Seek an appropriate balance between preventing and fighting fires and retaining the County’s valuable visual and natural resources.
 - HS.P-25: Continue to encourage the consolidation of fire districts through the LAFCO process.

Implementation Programs

Regulations

HS.I-24: Update the Zoning Ordinance to limit development in areas of extreme, very high, and high wildfire risk.

Development within the extreme risk area will be limited to farm-related development served by private roads.

Land divisions within the very high and high risk areas will be restricted, unless the availability of adequate water supply can be demonstrated and guaranteed; more than one access point for firefighting equipment can be provided; defensible space is permanently maintained around any buildings; and, fire-resistant materials are used in construction.

Related Policies: HS.P-20, HS.P-21, HS.P-22

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Amend by 2018

Funding, Physical Improvements, and Capital Projects

HS.I-25: Collaborate with fire districts to establish funding mechanisms, including impact fees to offset fire protection costs for new developments in areas of high wildfire risk.

Related Policies: HS.P-20, HS.P-22, HS.P-23

Agency/Department: Fire Protection Districts; Department of Resource Management

Funding Source: May include special assessments, mitigation fees

Time Frame: Ongoing

Development Review

HS.I-26: Work with fire districts to ensure that new development is built to support effective firefighting. Continue to seek fire district input on new development projects and ensure that such projects incorporate fire-safe planning and building

measures. Such measures may include clustering housing, buffering properties, creating defensible space around individual units, using fire-resistant building materials, installing sprinkler systems, and providing adequate on-site water supplies.

Related Policies: HS.P-20, HS.P-22, HS.P-23, HS.P-24

Agency/Department: Fire Protection Districts; Department of Resource Management

Funding Source: Project Applicant

Time Frame: Ongoing

HS.I-27: Ensure access for firefighting equipment in rural areas by clustering residential units that are located in areas of high fire risk and maintaining emergency access routes. These routes are designated as part of an emergency preparedness plan maintained under HS.I-37 in the Disaster Preparedness section.

Related Policy: HS.P-22

Agency/Department: Department of Resource Management; Fire Protection Districts; Office of Emergency Services

Funding Source: General Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach and Education

HS.I-28: Identify areas of overlap between important visual and natural resources and fire hazard areas. The County will work with federal and state agencies and local fire districts to develop management plans for these lands that protect these resources while still allowing for appropriate fire maintenance.

Related Policy: HS.P-24

Agency/Department: Department of Resource Management; Fire Protection Districts

Funding Source: General Fund

Time Frame: Ongoing

Coordination with Other Agencies and Organizations

HS.I-29: Create fire buffers along heavily traveled roads by promoting grazing, thinning, mowing, plowing, disking, or controlled burning of roadside grass. Coordinate with the California Department of Transportation to ensure that adequate fire buffers are established along state highways. Favor those methods that have the least impact on air quality, such as grazing.

Related Policies: HS.P-23, HS.P-24

Agency/Department: California Department of Transportation; Department of Resource Management

Funding Source: Caltrans, Road Fund

Time Frame: Ongoing

HS.I-30: Increase cooperative efforts among fire districts, public agencies, and landowners. The County will continue to collaborate with the U.S. Forest Service, CAL FIRE, fire departments of adjacent counties, city fire departments, fire districts, and property owners to prevent and manage wildland fires. Efforts may include monitoring regional fuel buildup, maintaining fuel breaks, sharing firefighting equipment, and providing necessary water supplies. The County will continue to encourage the consolidation of fire districts.

Related Policies: HS.P-23, HS.P-25

Agency/Department: Department of Resource Management; Fire Protection Districts; Solano Local Agency Formation Commission

Funding Source: General Fund; Fire District funds; Local Agency Formation Commission

Time Frame: Ongoing