SAFETY


INTRODUCTION

This Safety Element contains goals, policies, objectives, and actions which seek to make the county a place that is safe for residents, businesses, and travelers. At the same time that these policies and actions are implemented, the County recognizes that those features which help contribute to Napa County’s beauty and wine industry—the steep mountains, the volcanic soils, the many rivers and streams, the forest-covered slopes—are themselves reminders of the ongoing potential for seismic activity, flooding, and fire. This Element therefore seeks to take a reasonable approach, making those improvements necessary to reduce hazards while recognizing that some hazards will remain despite the best efforts of the County and other agencies.

SAFETY HAZARDS IN NAPA COUNTY

Like many places in California, Napa County is subject to a variety of potential safety hazards. Some derive from the natural environment; others are manmade and result from human activities.
In general, the following hazards are present in Napa County. Maps illustrating known fire, seismic, and other hazards are shown on the following pages.

Seismic hazards, resulting from potential earthquakes and the collateral damage that often follows groundshaking: landslides and liquefaction (when water-saturated soil “liquefies” during an earthquake and buildings and other structures sink into the ground).

Fire, primarily as a result of the vast areas of timber, grassland, and other flammable vegetation, but also from buildings and structures.

Flooding, chiefly along the Napa River in the Napa Valley but also to a limited extent along creeks and streams throughout the county. Flooding is generally worsened when either natural or manmade activities limit the ability of the land to absorb rainfall, forcing streams and rivers to carry more storm runoff. A limited number of homes in the unincorporated area are protected by levees and subject to flooding in the event the levees are breached. A separate but related issue is dam inundation—areas in Napa County which would be subject to flooding if a dam is breached. A map showing inundation areas is shown in Figure SAF-5.

The Napa County Flood Control and Water Conservation District was established in 1951. The District is the local sponsor for the Napa River/Napa Creek Flood Protection Project, currently under construction. As portions of the Project become complete, the District submits information to FEMA to update FIRM maps for both the City of Napa and Napa County. The District also provides services within Napa County for watershed and stream concerns, including maintaining a countywide ALERT system that monitors local precipitation and stream stage in the Napa River and local creeks. This information is provided publically on the internet at http://napa.onerain.com.
Napa County has in operation a FEMA approved Flood Plain Management Ordinance. The ordinance is comprehensive, recognizing and mapping a number of special flood hazard areas along certain watercourses in Napa County that have been historically subject to periodic inundation (see Figure SAF-3). The ordinance manages development in these flood-prone areas to minimize the potential for flood-related losses, both public and private, thereby promoting the public health, safety and general welfare of the residents of Napa County.

The purpose of the County’s Flood Plain Management Ordinance is to reduce the potential for flood related damage within the County which may result in loss of life and property, pose possible health and safety hazards, disrupt commerce and governmental services, produce extraordinary public expenditure for flood protection and relief and impair the tax base, all of which adversely affect the public health, safety and general welfare. The ordinance seeks to perform the following:

- Protect human life and health;
- Minimize expenditure of public money for costly flood-control projects;
- Minimize the need for rescue and relief efforts associated with flooding;
- Minimize prolonged business interruptions;
- Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, and streets and bridges located in floodplain areas;
- Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard to minimize future blighted areas caused by flood damage;
- Assist prospective purchasers in receiving notification that property is in a flood insurance zone;
- To establish that those who occupy the special flood hazard areas assume responsibility for their actions; and
- To improve the normal functioning of floodplains and flood zones and effectively garner and preserve the numerous environmental benefits they afford.

The County’s Flood Plain Management Ordinance includes information required under GC § 65302 (g) where applicable, identifying flood hazard zones and incorporating by reference official flood insurance rate mapping (FIRM maps) approved by FEMA. The County further maintains floodway and floodplain mapping, identifying possible inundation areas related to the 100-year (floodway) and 500-year (floodplain) flood events, as well as a Dam Failure Inundation Map (see Figure SAF-5), documenting areas that may be subject to severe flooding in the event of catastrophic failure of one of sixteen major dams in the County. At this time, Napa County has no flooding hazards identified by the US Army Corps of Engineers or any area subject to inundation due to the possible failure of levees or floodwalls associated with the state flood protection or water supply projects. Napa County has no State defined levee protection zones, but levees do

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1 Flood Insurance Rate Map, Napa County, California, Map Number 06055CIND0A (index sheet), Effective Date: September 26, 2008
exist in the County, particularly in the Edgerley Island area. Levees in that area are within the jurisdictional area of the Napa River Reclamation District and the County’s Floodplain Management Ordinance applies to development behind those levees.

In the unfortunate event of flooding, Napa County is committed to work cooperatively with all appropriate local, State and Federal agencies. A high level of coordination is already evident and documented in the County’s adopted Napa Operational Area Pre-Disaster Hazard Mitigation Plan2 maintained by the Napa County Office of Emergency Services (see following NAOHMP discussion).

At the time of this General Plan Update, a major flood control project is underway on the Napa River which will provide a much higher level of flood protection. The map in this Element of the 100-year floodplain will need to be revised after completion of the flood control project to reflect the smaller flood area.

**Landslides**, which are usually the result of rain-saturated soils. The landslides generated by the El Niño storms of 1992 and 1998 illustrated the hazards to life and property posed by debris flows and landslides.

**Manmade Hazards**, which include the sometimes hazardous chemicals used in modern businesses, traffic hazards, and the electromagnetic fields caused by high voltage electricity.

**Terrorism and Other Threats**, including crop pests such as the glassy-winged sharpshooter that could inflict significant damage on the county’s agricultural industry.

**NAPA OPERATIONAL AREA HAZARD MITIGATION PLAN**

In 2004, the County of Napa adopted the *Napa Area Operational Hazard Mitigation Plan* (NAOHMP), prepared in cooperation with the Cities of American Canyon, Calistoga, Napa and St. Helena, and the Town of Yountville. The NAOHMP addresses a wide variety of disasters that could affect Napa County and provides plans for reducing or mitigating these threats. So-called “major threats” addressed in the NAOHMP include:

- Flooding
- Earthquake
- Wildland Interface Fires (fires at the edge of wildland areas, chiefly affecting residential areas)
- Terrorism and Technological Hazards, including the glassy-winged sharpshooter, a vineyard pest that carries diseases deadly to grapevines.

The NAOHMP analyzes the risk of each of these hazards and includes a detailed analysis of how critical facilities (public buildings, hospitals, day care centers, etc.) would be affected by fire, earthquake, and other disasters.

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2 Napa Operational Area Pre-Disaster Hazard Mitigation Plan, Adopted December 2004 - Napa County, Cities of Calistoga, American Canyon, St. Helena, Town of Yountville and selected Operational Area Partners, Napa County Office of Emergency Services, 1195 Third St. Suite 310, Napa CA 94559
The NAOHMP is considered by the County to be critically important to the County’s efforts to maintain a safe environment for all the residents and businesses in Napa County. Implementing the NAOHMP will implement the goals and policies in this Safety Element, and the County has committed to updating the NAOHMP regularly to ensure that it remains current and useful.

The maps on the following pages illustrate the extent of several major hazards in Napa County:

- Earthquake faults;
- Fire hazard severity;
- Flood zones;
- Liquefaction susceptibility; and
- Dam inundation.

As new information about these hazards is developed, the County’s maps will be updated. The reader should refer to the Baseline Data Report for the most up-to-date information on these and other features of the County.
FIGURE SAF-1: EARTHQUAKE FAULTS
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FIGURE SAF-2: FIRE HAZARD SEVERITY MAP

Legend

<table>
<thead>
<tr>
<th>Fire Hazard Severity</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Responsibility Area (SRA) Very High</td>
<td>Orange</td>
</tr>
<tr>
<td>Moderate</td>
<td>Yellow</td>
</tr>
<tr>
<td>High</td>
<td>Red</td>
</tr>
<tr>
<td>Local Responsibility Area (LRA) Very High</td>
<td>Dark Red</td>
</tr>
<tr>
<td>Non-Very High LRA</td>
<td>Purple</td>
</tr>
<tr>
<td>Federal Responsibility Area</td>
<td>Light Gray</td>
</tr>
</tbody>
</table>

City Boundaries
Evaluation Areas
Major Roads
Major Streams
Major Water Bodies

Napa County Fire Hazard Severity
Cal Fire
Napa County

Unit = 1/15 feet

Source: Napa County, 2004; EDAW, 2004; Cal Fire, 2008

Disclaimer: This map was prepared for informational purposes only. No liability is assumed for the accuracy of the data delineated hereon.
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FIGURE SAF-3: FLOOD ZONES

Legend
- Evaluation Areas
- Major Roads
- 100 year zone
- 500 year zone
- Major Streams
- City Boundaries
- Major Water Bodies

Flood Zones

Napa County

Update: 05/28/2009

Source: Napa County, 2004; EDAW, 2004; California Department of Forestry, 2004

Disclaimer: This map was prepared for informational purpose only. No liability is assumed for the accuracy of the data delineated hereon.

0 9,600 19,200 28,800 38,400 48,000 Feet

Horizontal Datum: NAD 83, CA State Plane Coordinates, Zone II, feet

1 inch = 18,292 feet
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Figure SAF-4: Liquefaction Susceptibility

LEGEND

Liquefaction Susceptibility
- Very Low
- Low
- Moderate
- High

Evaluation Areas
- Lakes
- Water
- Streams
- Major Roads

Napa County

Source: James & Stohler, EDAW

Horizontal Datum: NAD 83
CA State Plane Coordinates, Zone II, East
Source: Napa County, 2009
FIGURE SAF-5: NAPA DAM INUNDATION AREAS

Legend

Dam / Levee
Indundation Areas

- Milliken Dam
- Bell Canyon Dam
- Kimball Dam
- Kimball Dam Overflow Pond
- Lake Camille Dam
- Lake Curry Dam
- Lake Cynthia Dam
- Lake Marie Dam
- Monticello Dam
- Olson Dam
- Rector Creek Dam
- Silverado Lakes
- St Helena Lower Dam
- St Helena Upper Dam
- Summit Reservoir
- Conn Dam

Water Bodies

City Boundaries

County of Napa

Conservation Division

Napa County
Dam Inundation Areas

Revised Date: 10/2007

Horizontal Datum: NAD 83, CA State Plane Coordinates, Zone II, feet

Disclaimer: This map was prepared for informational purposes only. No liability is assumed for the accuracy of the data delineated hereon.

Revised Date: 10/2007
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SAFETY GOALS AND POLICIES

Goal SAF-1: Safety considerations will be part of the County’s education, outreach, planning, and operations in order to reduce loss of life, injuries, damage to property, and economic and social dislocation resulting from fire, flood, geologic, and other hazards.

Policy SAF-1: The County supports and will promote intergovernmental cooperation among local, state and federal public agencies to reduce known hazards and further define uncertain hazards. In particular, the County will work to develop cooperative working relationships with agencies having responsibility for flood and fire protection.

Policy SAF-2: Individuals and businesses should have access to up-to-date information and be able to make informed decisions about potential safety hazards and the level of risk they are willing to accept.

Action Item SAF-2.1: Participate in local, regional, and state education programs regarding fire, flood, and geologic hazards.

Policy SAF-3: The County shall evaluate potential safety hazards when considering General Plan Amendments, rezonings, or other project approvals (including but not limited to new residential developments, roads or highways, and all structures proposed to be open to the public and serving 50 persons or more) in areas characterized by:

1) Slopes over 15 percent,
2) Identified landslides,
3) Floodplains,
4) Medium or high fire hazard severity,
5) Former marshlands, or
6) Fault zones.

Policy SAF-4: Encourage intergovernmental and regional cooperation directed toward providing for a continuing high level of public services and coordination of services during a disaster.

Policy SAF-5: The County shall cooperate with other local jurisdictions to develop intra-county evacuation routes to be used in the event of a disaster within Napa County.

Policy SAF-6: Planning and outreach should recognize that Napa County may be cut off from surrounding areas following a natural disaster and may need to be self-sufficient in terms of providing emergency services, information, and support to residents and businesses.

Policy SAF-7: The County supports and encourages the development of individual self-reliance in the wake of a disaster and supports and encourages individual, family, and community disaster plans.
Policy SAF-7.5: Increasing the supply of workforce housing will increase the likelihood that Napa County’s first responders will live locally and be immediately available in the event of a disaster or other emergency.

Goal SAF-2: To the extent reasonable, protect residents and businesses in the unincorporated area from hazards created by earthquakes, landslides, and other geologic hazards.

Policy SAF-8: Consistent with County ordinances, require a geotechnical study for new projects and modifications of existing projects or structures located in or near known geologic hazard areas, and restrict new development atop or astride identified active seismic faults in order to prevent catastrophic damage caused by movement along the fault. Geologic studies shall identify site design (such as setbacks from active faults and avoidance of on-site soil-geologic conditions that could become unstable or fail during a seismic event) and structural measures to prevent injury, death and catastrophic damage to structures and infrastructure improvements (such as pipelines, roadways and water surface impoundments not subject to regulation by the Division of Safety of Dams of the California Department of Water Resources) from seismic events or failure from other natural circumstances.

Action Item SAF-8.1: The County’s seismic fault maps shall be reviewed regularly to ensure that they reflect the latest information available.

Action Item SAF-8.2: Updated maps should be made available to the public at County offices, on the County’s Web site, and through other appropriate channels.

Policy SAF-9: As part of the review and approval of development and public works projects, planting of vegetation on unstable slopes shall be incorporated into project designs when this technique will protect structures at lower elevations and minimize the potential for erosion or landslides. Native plants should be considered for this purpose, since they can reduce the need for supplemental watering which can promote earth movement.
Policy SAF-10: No extensive grading shall be permitted on slopes over 15 percent where landslides or other geologic hazards are present unless the hazard(s) are eliminated or reduced to a safe level.

Policy SAF-11: Newly created hillside parcels shall be large enough to provide flexibility in finding a stable buildable site and driveway location.

Policy SAF-12: The County shall not accept dedication of roads (a) on or jeopardized by landslides, (b) in hilly areas, or (c) in areas subject to liquefaction, subsidence, or settlement, which, in the opinion of the Public Works Department, would require an excessive degree of maintenance and repair costs.

Policy SAF-13: Facilities constructed in caves shall be required to conform to access/egress and fire suppression requirements as determined by the County based on the cave's use or occupancy. Mechanical, electrical, and plumbing permits are required for cave improvements, a building permit is required for the cave's portal, and a grading permit is required for movement or disposal of cave spoils.

Goal SAF-3: It is the goal of Napa County to effectively manage forests and watersheds, and to protect homes and businesses from fire and wildfire and minimize potential losses of life and property.

Policy SAF-14: The County will prepare a fire management plan and will continue, enhance, and implement programs seeking to reduce losses and costs associated with catastrophic fires.

Policy SAF-15: The County shall coordinate with CAL FIRE and fire agencies in neighboring counties to plan for future fire prevention and suppression needs.

Policy SAF-16: Consistent with building and fire codes, development in high wildland fire hazard areas shall be designed to minimize hazards to life and property.

Action Item SAF-16.1: Develop site criteria and construction standards for development in high fire hazard areas, and adopt standards to restrict urbanizing these areas as defined in Policy AG/LU-27 unless adequate fire services are provided.

Action Item SAF-16.2: Continue to implement “Napa Firewise” through information and education programs, community outreach, and fuel modification.

Note to the Reader: Please see the Agricultural Preservation and Land Use Element for policy related to the reconstruction of uses destroyed by fire or natural disaster.

Policy SAF-17: The County supports the use of prescribed fuel management programs, including prescribed burns and brush clearing, for managing fire hazardous areas; to reduce wildfire hazard, improve watershed capabilities, promote wildlife habitat diversification, and improve grazing.
Policy SAF-18: The County should set a good example and meet or exceed fire safety standards and defensible space requirements for all County buildings and roads.

Policy SAF-19: The County supports the development and use of new technology in the suppression and prevention of fires.

Action Item SAF-19.1: The County will work with CAL FIRE to develop improved methods of fire planning and firefighting for use in Napa County.

Policy SAF-20: All new development shall comply with established fire safety standards. Design plans shall be referred to the appropriate fire agency for comment as to:

1) Adequacy of water supply.
2) Site design for fire department access in and around structures.
3) Ability for a safe and efficient fire department response.
4) Traffic flow and ingress/egress for residents and emergency vehicles.
5) Site-specific built-in fire protection.
6) Potential impacts to emergency services and fire department response.

Policy SAF-21: Achieving desired levels of fire protection in Napa County is directly related to the community’s values and its participation, as well as available financial resources.

Policy SAF-22: While the County supports preservation and maintenance of existing fire trails, professional practices have shifted to emphasize defensible space and community fire breaks.

Goal SAF-4: To protect residents and businesses from hazards caused by flooding.

Policy SAF-23: New construction in flood plains shall be evaluated and placed above the established flood elevation or flood-proofed to minimize the risks of flooding and provide protection to the same level as required under County’s Floodplain Management Ordinance.

Policy SAF-24: The County recognizes that agricultural open space also serves a valuable purpose in promoting safety, and that maintaining areas subject to flooding in agricultural or open space uses minimizes the impacts of flooding on homes and businesses.

Note to the Reader: Please see also Policy CON-11 for related policy statements on this topic.
Policy SAF-25: The review of new proposed projects in a floodway as mapped on the County’s Flood Insurance Rate Maps (FIRM)\(^3\) (Figure SAF-3) shall include an evaluation of the potential flood impacts that may result from the project. This review shall be conducted in accordance with the County’s FEMA approved Flood Plain Management Ordinance, incorporated herein by reference, and at minimum include an evaluation of the project’s potential to affect flood levels on the Napa River; the County shall seek to mitigate any such effects to ensure that freeboard on the Napa River in the area of the Napa River Flood Protection Project is maintained.

Policy SAF-26: Development proposals shall be reviewed with reference to the dam failure inundation maps in order to determine evacuation routes.

Policy SAF-27: Dam and levee maintenance is considered by the County to be the responsibility of the owner/operator of each dam and/or levee. The County will support other agencies in their efforts to ensure that proper maintenance and repairs are accomplished.

Note to the Reader: The Conservation Element should also be consulted for policies related to short- and long-term erosion control on construction sites, vineyards, and other projects.

Goal SAF-5: To protect residents and businesses from hazards caused by human activities.

Policy SAF-28: The County shall continue to monitor research being conducted under the auspices of the California Public Utilities Commission (CPUC) to define acceptable levels of exposure to electromagnetic fields (EMF). Once a specific numerical standard for EMF exposure has been adopted by the CPUC, the County’s policy shall be that residential development (and other sensitive land uses such as schools, hospitals, child care sites) that would expose persons to EMF which exceeds the standard should generally not be permitted.

Policy SAF-29: The County shall seek to be part of the decision-making process for the location of new or relocated electrical transmission lines in order to ensure that line locations are coordinated with the County’s land use plans and aesthetic policies.

Policy SAF-30: Potential hazards resulting from the release of liquids (wine, water, petroleum products, etc.) from the possible rupture or collapse of aboveground tanks should be considered as part of the review and permitting of these projects.

Policy SAF-31: All development projects proposed on sites that are suspected or known to be contaminated by hazardous materials and/or are identified in a hazardous material/waste search shall be reviewed, tested, and remediated for potential hazardous materials in accordance with all local, state, and federal regulations.

\(^3\) Flood Insurance Rate Map, Napa County, California, Map Number 06055CIND0A (index sheet), Effective Date: September 26, 2008
Action Item SAF-31.1: The County shall require written confirmation from applicable local, regional, state, and federal agencies that known contaminated sites have been deemed remediated to a level appropriate for land uses proposed prior to the County approving site development or require an approved remediation plan that demonstrates how contamination will be remediated prior to site occupancy. This documentation will specify the extent of development allowed on the remediated site as well as any special conditions and/or restrictions on future land uses.

Policy SAF-32: Safety shall be considered in the maintenance and construction of all new roadways and related improvements to provide a safe environment for all modes of transportation. The special needs of elder and disabled persons shall be addressed when designing new or modifying signs. Examples of features specific to the elderly include:

- Signals which provide pedestrians with slower mobility the opportunity to cross roadways in greater safety by providing for longer crossing times.
- Increased lighting at pedestrian crossings.
- Pedestrian crossing surfaces which provide greater traction to reduce slips and falls.
- Audible and/or “countdown” crossing signals.

Policy SAF-33: For maximum safety, all land uses and zoning within airport areas shall be reviewed for compatibility with the adopted plans for the Napa County Airport, Angwin Airport, and other general aviation facilities in the county.

Policy SAF-34: All new commercial and multi-family development shall be referred to the Sheriff’s Department for review of public safety issues. If the proposed project is adjacent to or within an incorporated city/town, consultation with their law enforcement agency shall also be required.

Policy SAF-35: The County will prepare for and respond to emergencies related to terrorism and civil unrest in the same way as natural and man-made disasters.

Goal SAF-6: The County will be able to respond in the event of a disaster to protect residents and businesses from further harm and begin reconstruction as soon as reasonable.

Policy SAF-36: The County encourages the involvement of the private sector in disaster response and in post-disaster recovery efforts.

Policy SAF-37: The County will seek to coordinate with state and federal agencies for use of land and facilities to reduce risks and avoid unreimbursed costs related to emergency preparedness and response.

Policy SAF-38: The County will continue to implement the Napa Operational Area Hazard Mitigation Plan (NOAHMP), which is incorporated here by reference, in the planning and operations of the County to achieve the goals, objectives, and actions of the NOAHMP, including:
• Promoting a flood safer community.
• Promoting an earthquake safer community.
• Promoting a fire safer community.
• Promoting a technological and biological safer community.
• Reducing impacts from flooding.
• Reducing impacts of earthquakes.
• Minimizing the risk of wildfire at the urban interface.
• Improving the County’s ability to mitigate technological hazards and agricultural threats.

**Action Item SAF-38.1:** Provide staffing and other resources as necessary to regularly update and implement the Napa Operational Area Hazard Mitigation Plan (NOAHMP). Consider new information regarding climate change and the expected severity and/or frequency of weather events in updates to the NOAHMP.

**Policy SAF-39:** The County supports the use of communication technologies to get information to other agencies and the public during emergencies, including:

• Cellular telephone systems in Napa County should be designed to allow their use in emergency situations.
• The use of automated telephone systems to call residents in areas affected by disasters or hazards to provide information.
• The use of “2-1-1” phone systems to allow residents to call a central location for disaster information.
• Other systems to provide outreach to residents without telephone or Internet service.

**Policy SAF-40:** The County will seek to maintain the structural and operational integrity of essential public services during the event of flooding and other natural disaster, including the possible location, when feasible, of new essential public facilities outside of flood hazard zones. All critical public infrastructure intended for emergency use shall be provided with a source of alternate power.

**Policy SAF-41:** The County’s emergency services program shall be authorized to review and expedite implementation of appropriate federal, state, regional, and local disaster recovery programs. This may include but not be limited to:

• Preparation of potential mass care facilities,
• Hospital reserve disaster inventory modules,
• Packaged disaster hospitals,
• Disaster assistance centers,
• Multi-purpose staging areas,
• Emergency water, food, and medical supplies,
• Instruction leaflets,
• Emergency operating centers, and
• Emergency broadcast systems.

Policy SAF-42: The County shall work with municipalities, emergency response providers, and others to develop plans and procedures to identify frail individuals, contact or alert these persons during weather emergencies (including heat waves, storms, and floods), and mobilize resources to provide transport, shelter, or other assistance as needed.

Policy SAF-43: Consistent with state and federal requirements, critical facilities should be provided with additional earthquake resistance and damage control to allow such facilities to remain operative after a disaster.

Policy SAF-44: Encourage local governments to develop search and rescue programs, emergency communication systems, and emergency services and facilities programs.

Policy SAF-45: Mental health concepts and programs should be considered in any updates to the County’s Emergency Services planning process, and the County shall seek to identify frail adults and other persons who may require special assistance in emergency situations. To the extent the County is aware of special needs populations requiring special assistance following a disaster, responders should be aware of these populations and implement programs to reach out to these persons.