

- LU 7.2 Enact and enforce regulations that will limit development in environmentally sensitive areas, such as those adjacent to river or streamside areas, and hazardous areas, such as flood plains, steep slopes, high fire risk areas, and geologically hazardous areas.

**GOAL LU 8. Beneficial facilities, such as schools, parks, medical facilities, sheriff and fire stations, libraries, and other public uses, as well as potentially hazardous sites, will be equitably distributed throughout the County.**

#### POLICIES

- LU 8.1 Potentially polluting, hazardous, and other health risk facilities should be located no closer than one-quarter mile to a sensitive receptor and vice versa.
- LU 8.2 Review development proposals to minimize impacts, such as air emissions, on sensitive receptors.
- LU 8.3 Locate fire department facilities in such a fashion as to maximize service delivery in an equitable fashion to all portions of the County.

#### Programs

1. Create a County Fire Master Plan that will identify the various areas of the County and provide standards of coverage commensurate with the various characteristics of the County but whose goal is to achieve the levels of service established by the National Fire Protection Association (NFPA) 1710 and 1720.
2. Require developments to prepare a Fire Plan that will describe the impacts on the County Fire Department and the measures necessary to mitigate the cumulative impacts of that development on the existing service delivery system.
3. Apply the County Fire Master Plan standards to all developments and to areas that have a high potential for development such that the impacts of future developments are mitigated in advance by commensurate improvements to the fire service delivery system in the County.



- b. Review and evaluate proposed communication systems as a whole, rather than on a site-by-site basis, based on the proposed use of public or private lands, and coordinate the review process between the affected land management agencies.

## 5. FIRE PROTECTION

**GOAL CI 16. The County will protect its residents and visitors from injury and loss of life and protect property from fires through the continued improvement of existing Fire Department facilities and the creation of new facilities, but also through the improvement of related infrastructure that is necessary for the provision of fire service delivery such as water systems and transportation networks.**

### POLICIES

- CI 16.1 Continue the consolidation efforts of the Fire Department to maintain the continued operation, services, facilities, and current infrastructure but also to ensure the provision of operations, services, facilities, and internal infrastructures into the future.
- CI 16.2 Create a Fire Master Plan that can be used to identify areas in the County that are in need of increased levels of fire service delivery and thereby identify geographic areas that are in need of infrastructure improvements so that those areas can take the necessary steps to improve that infrastructure and eventually can adequately support the commensurate improvement in fire service delivery.
- CI 16.3 Encourage development in areas that have adequate infrastructures for the provision of fire service, which include, but are not limited to, water systems capable of delivering appropriate fire flow, and transportation networks that can provide access for fire apparatus and other emergency response vehicles as well as provide efficient egress for evacuees.
- CI 16.4 Create Community Facilities Districts (CFDs) or other long-term financial instruments within proposed developments and areas available for development to provide a fair-share funding mechanism to support pro-rata increases for the provision of long-term fire



protection. The CFDs should be designed to provide sustained long term levels of staffing operations, equipment, and facilities. The CFDs should also be designed specifically to respond to the impacts on the related development and thereby to minimize the impact to the general fund and other existing funding mechanisms that support the Fire Department.

## 6. LAW ENFORCEMENT

**GOAL CI 17. The County will provide adequate law enforcement facilities to deliver services to deter crime and to meet the growing demand for services associated with increasing populations and commercial/industrial developments.**

### POLICIES

- CI 17.1 Appropriately prioritize calls for service and seek sufficient staffing levels to ensure response times are reasonable and efforts to deter crime are optimized.
- CI 17.2 Seek and commit sufficient investigative resources for effective follow-up on criminal offenses.
- CI 17.3 Involve community members in crime deterrence and other public safety efforts through prevention programs, volunteer groups, and viable public information strategies.
- CI 17.4 Encourage interaction with local governments and community-based organizations to assess community concerns and expectations.
- CI 17.5 Staff and operate detention and correction facilities in a safe and secure manner, as required by law. Place an emphasis on programs for sentenced inmates that reduce rates of recidivism.
- CI 17.6 Ensure procedures for effective court security operations that are functional and appropriately balanced between judicial needs, state law, and department capability.
- CI 17.7 Assess and update training and equipment needs on a routine basis when possible to ensure policing methods are effectively executed while minimizing unnecessary liability.



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## VIII. SAFETY ELEMENT

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The purpose of the Safety Element is to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from fires, floods, earthquakes, landslides, and other hazards. Protecting the health, safety and welfare of the community is a fundamental responsibility of the County of San Bernardino.

### A. PURPOSE OF THE SAFETY ELEMENT

The Safety Element must identify hazards and hazard abatement provisions to guide local decisions related to zoning, subdivisions, and entitlement permits. The element should contain general hazard and risk reduction strategies and policies to minimize potential dangers to residents, workers, and visitors; reduce the level of property loss resulting from a potential disaster; and, identify ways to respond to a crisis situation.

#### 1. RELATIONSHIP TO OTHER ELEMENTS OF THE GENERAL PLAN

The Safety Element must address issues related to protecting the community from any unreasonable risks associated with seismically induced surface rupture, ground shaking, ground failure, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence, liquefaction, and other seismic hazards identified on seismic hazard maps; other known geologic hazards; flooding; and wildland and urban fires. It must also address the following as they relate to known fire and geologic hazards: evacuation routes and signage; peakload water supply requirements; minimum road widths and turnouts; and clearances around structures.

The Safety Element overlaps topics also mandated in the Land Use, Conservation, and Open Space Elements. Critical relationships exist between the Safety Element and other General Plan elements. The types and locations of land uses identified in the Land Use Element are influenced and regulated by the locations of natural hazards, while emergency evacuation routes and locations of critical facilities can be influenced by the goals and policies identified in the Circulation and Infrastructure Element. The Land Use and Conservation Elements preserve natural resources that may be affected by hazards.

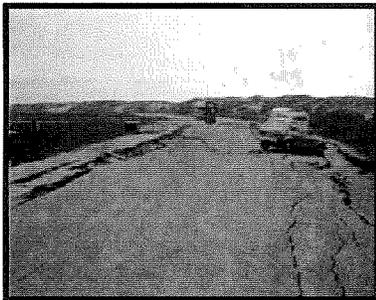
## 2. INPUT FROM PUBLIC PARTICIPATION PROGRAM

Through a public outreach process in preparation for the drafting of the County of San Bernardino's General Plan, the public identified the following issues that directly relate to the Safety Element:

- A large number of respondents were concerned with the drug use problem and called for more drug and alcohol addiction services.
- A significant number of residents called for increased access to health care through more affordable health care and clinics or hospitals.
- A small number of respondents were concerned with increased funding for counseling and psychological services, including more staff.
- A large number of respondents called for more law enforcement, and a smaller number asked for more consistent and community-oriented law enforcement with faster response times.
- A large number of respondents were concerned with neighborhood safety in terms of crime, blight, violence, and the growing number of gangs in the County.
- A significant number of respondents were concerned with the dead tree problem in the mountains.
- A small number of residents would like to see increased fire and emergency services.

## 3. SUMMARY OF EXISTING CONDITIONS

### Geologic Hazards



San Bernardino County is subject to many geologic hazards, especially in the heavily populated Valley Region, exposing residents and development to varying degrees of risk. These risks include seismic activity (earthquake-induced phenomena, such as fault rupture, ground shaking, liquefaction, seismically-generated subsidence, seiche, and dam inundation), landslide/mudslide (or mudflow), non-seismic subsidence, erosion, and volcanic activity. All of the above affect property and existing or potential uses.

Other geologic hazards include collapsible, expansive, and sulfate-reactive soils. These hazards, however, are controlled under current building and safety practices. An extensive discussion of geologic hazards (definitions and existing conditions) can be found in the “Geologic Hazards Background Report” (under separate cover), which is not adopted as part of the General Plan. Natural hazards are identified on the Hazard Overlay Maps. Information sources and levels of accuracy are also indicated on those maps. For more information, refer to the Safety Background Report.

### Seismic Activity

Perhaps the most life-threatening geologic hazards in the County are the numerous major faults traversing the area. These faults are designated on the Hazard Overlay maps and based on information developed by the California State Geologist under the Alquist Priolo Earthquake Fault Zone Act. Seismologists agree that the probability of a great earthquake on the San Andreas Fault is very high, with the potential of causing thousands of deaths and billions of dollars in damages. The San Andreas traverses the most populous portion of the County—the valley—as does the San Jacinto fault, considered to be the most active fault in California. Most of the Mountain Region and some portions of the Desert Region are also affected by seismic activity.



The majority of County residents would be subjected to the full range of seismically induced hazards, including ground shaking, liquefaction, subsidence, seiche, and dam inundation. Fault rupture causes more localized damage affecting development astride the faults. While the County is continuing emergency planning for such a possibility, many other responses are appropriate. Seismic hazards are more comprehensively discussed in the Safety Background Report.

### Landslides and Mudslides

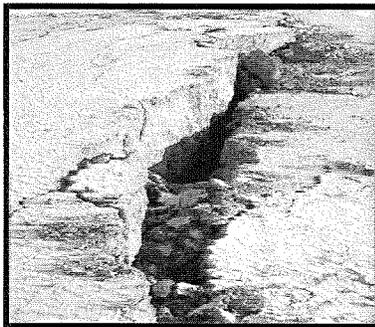


In San Bernardino County, the San Gabriel, San Bernardino, Little San Bernardino and Pinto Mountains comprise a portion of the Transverse Ranges. They are characterized by steep slopes, sharp narrow ridges, steep-walled incised canyons, valleys, and major faults. This setting can produce numerous landslides and mudslides, especially when combined with other adverse geologic conditions and heavy precipitation.

Steepness of slope and the nature of the bedrock, soil, and precipitation combine to determine County landslide locations.

The Wrightwood landslide area is of critical concern. It is an area whose primary movement is mudflow or mudslide. This is induced by high precipitation, especially in the spring when melting snow produces saturation levels. The San Andreas Fault bisects the community, causing additional concern. Though to a lesser degree, the steep fronts of the eastern San Gabriel and Southwestern San Bernardino Mountains present a major stability hazard, especially adjacent to faults. Many of these areas lie within the National Forest, so it is assumed the majority of these publicly owned lands will not be developed. The lack of stability may, however, result in major problems in highway construction and maintenance. Landslides and avalanches in this area also cause debris in flood control, dam, and reservoir facilities. Landslide deposits are often generation areas for large debris flows or mudflows that occur during periods of heavy precipitation, especially after vegetation has been destroyed by fire or off-road vehicle-generated erosion. In addition, in southwestern San Bernardino County, the Chino Hills is underlain by landslide-prone marine rocks, presenting the greatest potential slope stability problem in that area. Landslide and mudslide hazards are more comprehensively discussed in the Safety Background Report.

### Ground Subsidence



The two types of subsidence of major concern to San Bernardino County are tectonic subsidence and subsidence caused by groundwater withdrawal. Within geologic time, the County has undergone tectonic activity, including the uplifting of the San Bernardino mountains in relation to the San Bernardino Valley Region. Plate tectonics is the mechanism responsible for this movement, which has caused miniplates to be formed at major plate boundaries and has reoriented, folded, and faulted these small crustal pieces. This activity has raised some of these miniplates or blocks and has allowed others to subside. This tectonic subsidence is primarily of concern during very large earthquakes, when subsidence could occur instantaneously and may total many feet. Tectonic subsidence is uncontrollable by man.

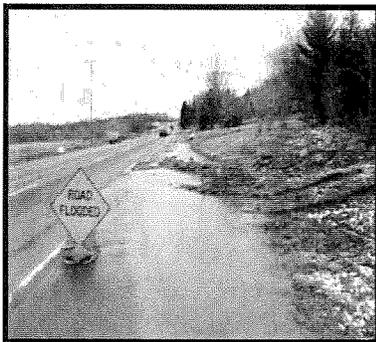
Subsidence caused by groundwater withdrawal has been and still remains of concern to the alluvial valleys of San Bernardino County. The entire alluvial valley area in southwestern San Bernardino County (the La Verne, Chino-Riverside, and Bunker Hill-Yucaipa areas) has experienced subsidence from

groundwater withdrawal. Subsidence from 0.8 to 5.8 feet is reportedly possible in these areas. As a result, local water agencies have elected to spread enough imported water to halt or impede further subsidence. Subsidence has been reported in the Antelope Valley area of northeastern Los Angeles County and may extend eastward into a small segment of San Bernardino County. It is anticipated that similar subsidence will occur in other desert basins as development increases and groundwater drafts increase accordingly. Groundwater studies, surveys, and field investigations are required for specific identification of hazardous subsidence areas and for information necessary to develop proper mitigation measures. Subsidence hazards are more comprehensively discussed in the Safety Background Report.

### **Volcanic Activity**

Volcanic eruptions have occurred in San Bernardino County intermittently during the geologic past and as late as 6,000 years ago. It is possible that renewed volcanic activity will occur. More recent volcanic areas of the County are classified as dormant but not necessarily extinct. The likelihood of volcanic eruption in the near future is very remote, considering the relatively long period of quiescence. Furthermore, most of these volcanic centers are located in sparsely populated areas. However, as part of a long-range land use plan, some consideration should be given to volcanic hazards. Volcanic hazards are more comprehensively discussed in the Safety Background Report.

### **Flooding**



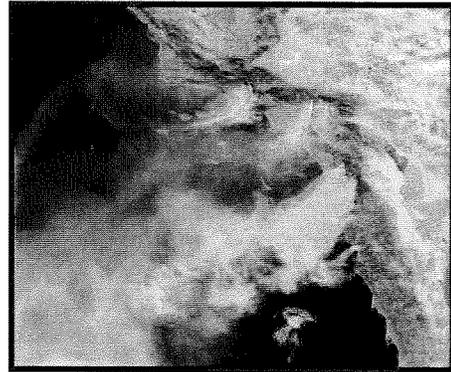
The County has experienced severe and widespread flooding throughout its history. Several major drainage basins have the potential to subject residents and structures to a high risk of flooding. In addition, the cumulative increase in impervious surfaces has increased problems related to surface run-off. While complete avoidance or protection through control facilities is not practical, considerable improvement can be made through both structural and non-structural methods.

The County currently utilizes land use zoning districts to prohibit habitable structures in floodways as defined by the federal requirements necessary to participate in the National Flood Insurance Program. The consistent adoption of overlays is needed to require special review, conditions, and the prohibition of some uses in floodplain areas (areas subject to 100-year floods), including dry lakes. In addition, there are land use policies and development standards that can

be implemented, including reduction of impervious surfaces; increase of percolation, infiltration, and recharge; and the control of urban run-off. There is a need for the County to identify all areas of flood and drainage hazards, especially in the Desert Region where mapping is sparse, as well as areas with a heavy concentration of debris or the potential for dam inundation. Flood hazards are more comprehensively discussed in the Safety Background Report.

### **Fire**

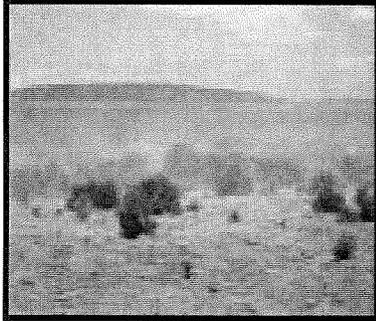
A combination of climate, topography, vegetation, and development patterns creates high fire hazard risks throughout the County, especially in the many areas of wildland/urban intermix located in foothills and mountainous areas countywide.



As development encroaches upon wildland areas, the potential for disastrous loss of watershed, structures, and life (human and wildlife) increases. Establishment of a coordinated program to condition development in some of these areas has been adopted through the Fire Safety Overlay provisions of the County Development Code. Continuous evaluation and application of Hazard Overlays and accompanying policies and standards for adequate services, facilities, mapping, and developmental regulation are required as pressure for development increases countywide. Included in developmental regulation are requirements for minimum road widths (to provide adequate access for both fire-fighting equipment and evacuating residents) and clearance around structures to prevent the rapid spread of fire from one structure to another.

In response to state law, the Peakload Water Supply System Guidelines were developed. These guidelines, designed to ensure an ample water supply, list the sum total of required fire flow, operational daily consumption, and emergency storage. However, increasing demands on groundwater can create deficiencies in the water supply. Fire hazards are more comprehensively discussed in the Safety Background Report. Also, the Fire Hazard Overlay maps are available in the Safety Background Report.

### Wind/Erosion



Residents of San Bernardino County know that winds—particularly Santa Ana winds—pose a hazard in the County, destroying property, exacerbating fire hazards and disrupting transportation and utility services. Continued development of canyon mouths and foothill areas, where the winds are most severe, assure that more residents will be exposed to this hazard. Because wind is a natural phenomenon that cannot be prevented, awareness of the hazard

posed is primary. However, as discussed in the Safety Background Report, there is relatively little information on wind as a hazard; there is not enough information to map. Beyond existing building and fire requirements (found in the CBC, the Fire Hazard Overlay, etc.), public awareness of the problem, vigilance during high winds in affected areas, and continued study (of both the hazard and mitigation techniques) are methods currently available to reduce the risk of wind hazards.

In addition, wind is a cause of erosion in the County. Therefore, erosion policies are also included here. However, erosion is not only wind-generated. Natural causes include landslide, fire, flood, and wind. Man-made causes include irresponsible grading and other construction practices, use of off-road vehicles, and other indiscriminate disruption of fragile ecological surfaces. In the urban portions of the Valley Region, especially at the base of the mountain ranges, erosion control is an important consideration by the individual property owner. In the desert areas, wind-blown sand is the most prevalent form of erosion. There are areas that cannot be used for development without extensive stabilization measures. While identification of all of these areas is beyond the scope of this issue, these areas should be delineated. Severe erosion can be a problem anywhere in the County. In any area where precipitation combines with ground areas denuded of their natural covering, potential for erosion exists.

### Hazardous Waste



Proper hazardous waste management constitutes one of the state's major environmental concerns. Statewide recognition of the need for better methods of hazardous waste management came about from the intense media focus on improper disposal practices. Hazardous chemicals play an important role in our modern society. They contribute to the manufacture



of a vast array of consumer products (e.g., televisions, computers, automobiles, and medicines) and the convenience of consumer services (e.g., dry cleaners, automotive repair). While these goods and services add to our quality of life, they also cause the generation of hazardous wastes. Reducing our reliance on hazardous materials should reduce the generation of hazardous waste. Hazardous waste will continue to be generated, however, because some materials have no substitutes.

San Bernardino County generates about 65,000 tons of hazardous waste per year. The County's waste stream represents about 5 percent of the wastes generated in the Southern California region. The major categories of waste produced in the County include metal containing liquids, waste oil, oily sludge, and baghouse waste. These wastes come from a variety of industries ranging from small businesses, such as automotive services and plating companies, to large industries, such as steel manufacturing.

AB 2948 (Chapter 1504, Statutes of 1986), commonly known as the Tanner Bill, authorized counties to prepare Hazardous Waste Management Plans (HWMPs) in response to the need for safe management of hazardous wastes. On March 31, 1987, the County of San Bernardino Board of Supervisors authorized the preparation of the County's HWMP. The preparation of the HWMP included extensive public participation. Consistent with state law, an advisory committee was established to advise County staff and local government officials on issues pertaining to management of hazardous wastes. The HWMP was adopted by the County of San Bernardino Board of Supervisors and approved by the California Department of Health Services in February 1990.

The HWMP serves as the primary planning document for the management of hazardous waste in San Bernardino County. The HWMP identifies the types and amounts of wastes generated in the County; establishes programs for managing these wastes; identifies an application review process for the siting of specified hazardous waste facilities; identifies mechanisms for reducing the amount of waste generated in the County; and identifies goals, policies, and actions for achieving effective hazardous waste management.

## B. GOALS AND POLICIES OF THE SAFETY ELEMENT

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| <p><b>GOAL S 1. The County will minimize the potential risks resulting from exposure of County residents to natural and man-made hazards in the following priority: loss of life or injury, damage to property, litigation, excessive maintenance and other social and economic costs.</b></p> |
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### POLICIES

**S 1.1** Inform and educate the public of the risks from natural and man-made hazards, methods available for hazard abatement, prevention, mitigation, avoidance, and procedures to follow during emergencies.

#### Programs

1. Enact an ordinance requiring that geologic hazard information be recorded for each affected property so that all prospective homebuyers may be informed.
2. Make geotechnical data and mapping readily available to the public through the countywide Geographic Information System coordinated by the County Geologist as described below under Policy S 1.2.

**S 1.2** Continuously integrate data on natural and man-made hazards into adopted land use and overlay maps, policies, and review procedures for land use proposals and enforcement of development standards.

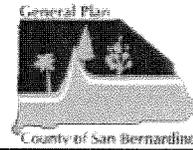
#### Programs

1. Establish a countywide geotechnical information collection, storage, and retrieval system that will:
  - a. Solicit and coordinate geological studies by the United States Geological Survey (USGS), California Geological Survey, the County, and other local agencies and make the resultant data available to the public and other agencies.
  - b. Incorporate all new research for the prediction and mitigation of geologic hazards.
  - c. Be coordinated, filed, and maintained by the County Geologist.

- d. Maintain clear and comprehensive mapping of all geologic hazards.
  - e. Incorporate newly acquired data and technology into the mapping, policies, and procedures of this component of the General Plan.
  - f. Because specific mapping of erosion-susceptible areas countywide is difficult to access, maps developed by the Resource Conservation Districts delineating erosion areas will be adopted by the County. Until such time as maps can be incorporated into the Hazard Overlays, the Division of Building and Safety will evaluate all ministerial and discretionary actions for minimization of erosion hazards.
2. Continue to monitor the state-of-the-art post-wildfire debris flow hazard evaluation and prediction methodologies and incorporate scientifically based mapping into the Geologic Hazard Overlay when available. Evaluate and implement advance public notification methods to warn of impending hazardous conditions.
- S 1.3** Support and expand emergency preparedness and disaster response programs and establish comprehensive procedures for post-disaster planning in affected areas.

**Programs**

1. Continue to fund and staff the existing Office of Emergency Services and maintain and update the Emergency Preparedness Management Plan.
2. Continue coordination with public and private agencies and initiate coordination in residential areas through Neighborhood Watch, homeowners associations and other neighborhood groups.
3. Provide for the needs of dependent and immobile populations in emergency response and recovery operations through identification and prioritization of rescue needs.
4. Require disaster plans and provisions in the design, location, and management of all public facilities.



5. Plan, design, and use public facilities according to the requirements of the County Emergency Management Plan.
6. Ensure adequate access routes to and from potential devastation areas as required by the County's Emergency Management Plan.
7. Establish a standing committee for disaster recovery to plan for a disaster by providing contingency planning for the rapid and effective reconstruction of affected areas. The committee will include representatives of Planning, Public Works, Community Development and Housing, and Building and Safety, as well as liaison to the local utilities and any state and federal redevelopment, housing and reconstruction programs.

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| <b>GOAL S 2.</b> <b>The County will minimize the generation of hazardous waste in the County and reduce the risk posed by storage, handling, transportation, and disposal of hazardous wastes.</b> |
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#### POLICIES

- S 2.1 Because reducing the amount of waste generated in this County is an effective mechanism for reducing the potential impact of these wastes on the public health and safety and the environment, and because legislation encourages the reduction, to the extent feasible, of hazardous waste, this jurisdiction will encourage and promote practices that will, in order of priority: (1) reduce the use of hazardous materials and the generation of hazardous wastes at their source; (2) recycle the remaining hazardous wastes for reuse; and (3) treat those wastes that cannot be reduced at the source or recycled. Only residuals from waste recycling and treatment will be land disposed.
- S 2.2 Include extensive public participation in the County's application review process for siting hazardous waste facilities and coordinate among agencies and County departments to expedite the process. Apply a uniform set of criteria to the siting of these facilities for the protection of public health and safety and the environment.
- S 2.3 Ensure that environmental review is conducted for projects proposed on sites that have been identified as contaminated.

### **Programs**

1. Require a conditional use permit and a General Plan Amendment from applicants for hazardous waste facilities. The applicant will meet all provisions of the specified hazardous waste facility overlay as well as other General Plan and Development Code provisions.
- S 2.4 Protect vital groundwater resources and other natural resources from contamination for present and future beneficial uses.
- S 2.5 Minimize the risk of exposure to hazardous substances by residential and other sensitive receptors through the application of program review and permitting procedures.

### **Programs**

1. The County shall provide 24-hour response to emergency incidents involving hazardous materials or wastes in order to protect the public and the environment from accidental releases and illegal activities.
2. The County shall operate collection facilities and events for residents of San Bernardino County to safely dispose of household hazardous waste.
3. The County shall provide affordable waste management alternatives to businesses that generate very small quantities of waste through the Conditionally Exempt Small Quantity Generator program.
4. The County shall inspect hazardous material handlers and hazardous waste generators to ensure full compliance with laws and regulations.
5. The County shall implement CUPA programs for the development of accident prevention and emergency plans, proper installation, monitoring, and closure of USTs, and the handling, storage, transportation, and disposal of hazardous wastes.
6. The County shall conduct investigations and take enforcement action as necessary for illegal hazardous waste disposal or other violations of federal, state, or local hazardous materials laws and regulations.



7. The County shall manage the investigation and remediation of environmental contamination due to releases from USTs, hazardous waste containers, chemical processes, or the transportation of hazardous materials.
8. The County shall provide access to records for potential buyers of property to perform due diligence research and environmental assessment.
9. The County shall use the County's Certificate of Occupancy process to address identification of new facilities that may handle hazardous materials, including facilities subject to the California Accidental Release Prevention Program, accordance with Government Code 65850.2.

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| <b>GOAL S 3.      The County will protect its residents and visitors from injury and loss of life and protect property from fires.</b> |
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**POLICIES**

**S 3.1** Continue the Fire Department's consolidation efforts to develop an integrated approach to coordinate the County's present and future needs in fire protection services in response to fire hazards and risks and to serve as a basis for program budgeting, identification, and implementation of optimum cost-effective solutions with the goal of providing necessary Service Levels and achieve Deployment Goals. These Service Levels and Deployment Goals are as follows:

The deployment of fire companies with appropriate levels of staffing and apparatus within the service area plays an important role in effective community fire protection and provision of a higher standard of care for life threatening health emergencies and thereby increasing the quality of life for our citizens. Consolidation provides the most effective option for streamlining the delivery of service and simplifying budget, fiscal, operational, and asset management and creates a single countywide Fire Protection District. It also provides the longest projection of financial solvency for the County Fire Department based on a special district deliver system. A tiered response, including staffing levels, response times and performance goals seems the only reasonable conclusion for the near future as the Department works towards establishing service planning goals for all areas of the County. Matching service levels with the various characteristics of

a geographic area will provide several things including: base line service, knowledge of when the area will move to the next level of service, reasonable stabilization of current service, allow for community identity and choice, allow for the projection of future service levels, and lay the basic foundation for strategic planning and future growth of the Department.

### **Programs**

1. Fund, adopt and implement a countywide Fire Protection Master Plan (FPMP).
2. The FPMP will use National Fire Protection Association Standards 1710 and 1720 as goals for creation of the Standards of Cover.
3. The FPMP will be created in coordination with the Departments consolidation efforts to ensure consistency with community needs and input.
4. Develop, adopt and implement a recommended schedule of fees to finance the fire protection infrastructure that is tied to land use categories and specific community needs as prescribed by the countywide Fire Protection Master Plan.
5. Develop, adopt and implement a recommended schedule of fees for Fire Department's Fire Protection Planning Section within the Office of the Fire Marshall that is adequate to meet the staffing and operation needs of the program.
6. Continue to coordinate fire protection services countywide, with all city fire departments, self-governed special districts providing fire protection services, the California Department of Forestry and Fire Protection, the United States Forest Service, Bureau of Land Management.
7. Require applicants for new land developments to prepare a site-specific fire protection plan, with special emphasis in areas of high and very high fire risk.
8. Require applicants to fund incremental improvements for the improvement of local fire protection services commensurate with the impacts of large developments (e.g., planned developments) in excess of 50 units.

9. Implement monitoring of fire-prevention measures (such as fuels reduction) to prevent damage to biological habitats in high fire hazard areas such as chaparral areas.
10. The following Peakload Water Supply System guidelines (Figure II-5) shall be met for all new development or be adequately served by water supplies for domestic use and community fire protection in accordance with standards as determined by the County Fire Department.
  - a. Limit or prohibit development or activities in areas lacking water and fire fighting facilities.
  - b. Approve high intensity uses such as theaters, motels, restaurants and schools, and uses requiring the handling or storage of large amounts of highly flammable materials only in areas with year round fire protection and adequate water systems with hydrants.

§ 3.2 The County will endeavor to prevent wildfires and continue to provide public safety from wildfire hazards.

§ 3.3 Minimize the fire hazard posed by expanding development in wildland/urban intermix areas.

#### **Programs**

1. Apply the regulations of the Fire Safety Overlay Ordinance, as found in the Development Code; to all County areas subject to wildland/urban intermix fire hazards including all mountain and foothill areas.

§ 3.4 Identify and map all such areas on a continuous basis, amending the Fire Hazard Overlay maps where needed.

§ 3.5 Evaluate the Fire Hazard Overlay Ordinance regularly and revise when necessary to reflect the most current fire-safe building and development techniques and standards (e.g., provision of life safety fire sprinklers in new construction of dwelling units).

§ 3.6 Continue to work with Fire Safe Councils (FSC) and their Chapters to:

- a. Develop educational programs to create awareness and disseminate information among citizens about fire safety and fire safety programs.
- b. Continue efforts supporting FSC programs that physically reduce or eliminate fuels such as Chipper Days and community fuels reduction programs.
- c. Continue to support FSC efforts in creating Community Wildfire Protection Plans (CWPPs).
- d. Continue to encourage participants in the Mountain Area Safety Taskforce (MAST) to support FSC efforts in community education and behavior modification.

§ 3.7 Continue to support existing County Fire Department Public Education Programs.

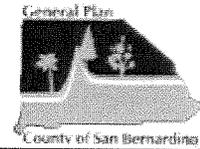
#### **Programs**

1. Continue to increase awareness through Safety Fairs, Open Houses, Places of Worship, Community Centers and School Visits and Curriculum Presentations.
2. Continue to disseminate informational brochures on topics such as Residential Fire Sprinkler Maintenance, commercial design and construction standards, development and construction requirements in the Fire Hazard Overlay.
3. Target high-risk groups such as children and senior citizens with specific programs such as Risk Watch, Learn not to Burn, Stop Drop and Roll and 911 programs.
4. Continue public education programs in topics such as Home and Children Safety including: Pool Safety, Drowning Prevention, Smoke Detectors, Car Seat Safety, Home Emergency Plans and Fire Sprinkler Systems.

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| <b>GOAL S 4. The County will minimize damage due to wind and water erosion where possible.</b> |
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#### **POLICIES**

§ 4.1 Map high wind areas as part of the hazard overlay.



### Programs

1. Conduct detailed mapping of potential blowsand hazard areas for use as a hazard overlay.
  2. Map potential wind erosion areas on the basis of soil characteristics for use as a hazard overlay.
- S 4.2 Apply the provisions of the Revised Erosion and Sediment Control Ordinance countywide.
- S 4.3 Tailor grading, land clearance, and grazing to prevent unnatural erosion in erosion susceptible areas.
- S 4.4 Establish an education program for homeowners emphasizing land use for erosion control in conjunction with the Resource Conservation District.
- S 4.5 Restrict use of off-road vehicles in areas susceptible to erosion.

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| <b>GOAL S 5. The County will provide adequate flood protection to minimize hazards and structural damage.</b> |
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### POLICIES

- S 5.1 Participate in the National Flood Insurance Program (NFIP), which provides flood insurance within designated floodplains.

### Programs

1. Designate Floodway and Floodplain areas, as identified by the Federal Emergency Management Agency (FEMA) on flood insurance rate maps and flood boundary maps, as Floodway (FW) on the Land Use Maps and Floodplain Overlays on the Hazards Overlay Maps.
2. Designated floodway areas will be preserved for non-structural uses through restrictions of the FW Land Use Zoning District.
3. All new development, including filling, grading, and construction, proposed within designated floodplains, will require submission of a written assessment prepared by a qualified hydrologist or engineer, in accordance with the latest "San Bernardino County Hydrology Manual" and the various detention basin policies [see

Existing Policy FL-11], to determine whether the development will significantly increase flood hazard and to show that all new structures will be adequately protected. Development will be conditioned on receiving approval of this assessment by the San Bernardino County Surveyor Division of the Public Works Department.

4. All new construction in a Floodplain Overlay area will be required to be flood-proofed, located, and designed to allow unrestricted flow of floodwaters.
5. The Land Use Compatibility Chart for 100-Year Flood Plains (Table S-1) will apply to County reviews of all discretionary and ministerial actions in County-designated floodplains.
6. Lands within floodplain areas may be developed with non-critical and non-essential uses if mitigation measures are incorporated to ensure that the proposed development will not be hazardous, increase flood depths or velocities downstream, or degrade water quality, especially uses such as parks, trails, and open space.
7. Provide known flood hazard information with every discretionary or ministerial application.
8. When no mapped data exist, existing topographical, watershed, and drainage course data will be evaluated for a determination of potential flood hazard for every discretionary and ministerial action.

S 5.2 Update data and maps with newly identified flood hazard areas in the County, as new information becomes available.

### **Programs**

1. As new overflow studies and mapping are completed and approved by either the County's Land Development Engineer or the San Bernardino County Flood Control District, they will supplement the FEMA mapping and will be incorporated into Flood Hazard Overlay mapping.
2. Initiate and finance programs for the continuous evaluation and designation of floodway, floodplain, and drainage areas.

3. Timely application for FEMA mapping changes will be initiated to reflect any additions to or alterations in identified Floodways or Floodplains by the County Floodplain Management Administrator.
4. Continued evaluation of all County areas through application of development conditions in the preconstruction flood hazard inspection process.
5. Site studies will be conducted where development is proposed in areas tentatively identified as subject to flooding.
6. Construction will comply with study recommendations as described in site study required under FL-2f.

**S 5.3** Protect residents and properties from the risk of dam failure as a result of earthquake or other causes.

**Programs**

1. Require an engineering geology report for all new or proposed public and private reservoirs. This report will be completed by a registered engineering geologist, conform to County standards, and be approved by the County Geologist.
2. Include reservoirs as Dam Inundation areas on the Hazard Overlay Maps as required by the State of California.
3. Prohibit new dams and reservoirs in areas designated as Geologic Hazards on the Hazard Overlay Maps.
4. Prohibit critical, essential and high-risk land uses from Dam Inundation areas as shown on the Hazard Overlay Maps and Figure II-4.

**S 5.4** Protect existing development in floodways and floodplains.

**Programs**

1. Continue to identify natural drainage courses and designate San Bernardino County Drainage Easements as a means to preserve natural drainage flow paths and/or constructed drainage facilities.

2. Require implementation of flood protection measures when additions valued at 25 percent or greater of the original structure are proposed.
3. Establish funding mechanisms when flood control facilities are warranted.

S 5.5 Require specific hydrology and hydraulic studies for development proposals to avoid spot flooding from small streams or unmapped areas adjacent to mapped flood areas.

**Programs**

1. Identify existing drainage conditions, upstream and downstream drainage conditions, and measures that must be taken within the development project or downstream from the project to preclude impacts on the proposed development or increased impacts to downstream development. These studies will be submitted to and reviewed by the Land Use Services Department and the Department of Public Works.
2. Fully account for all planned flood control facilities within or adjacent to the project site. Where sections of flood control facilities cannot be constructed, provision should be made for their ultimate construction—that is, rights-of-way reserved and construction funds secured. Additional, interim facilities must be provided that will be able to handle the additional run-off from the proposed development until the planned flood control facilities are constructed.

S 5.6 Prevent flood hazard resulting from drainage from adjacent development.

**Programs**

1. The run-off provisions of the Erosion and Sediment Control Ordinance will apply countywide.
2. Surface run-off from new development will be controlled by on-site measures including but not limited to structural controls. Restrictions regarding changes in topography, removal of vegetation, creation of impervious surfaces and periods of construction, such that the need for off-site flood and drainage

control improvements is minimized and that run-off from the development will not result in downstream flood hazards.

§ 5.7 Initiate public education programs that will play a vital role in minimizing flood hazard.

**Programs**

1. Establish a public information system through the Office of Emergency Services outlining emergency operations and measures to reduce personal losses in the event of a flood disaster.
2. Develop a flood warning system where possible through the Flood Control District.
3. Develop dam failure and flood plain inundation evacuation plans through the Office of Emergency Services and the Department of Public Works where possible.

§ 5.8 Design flood control and drainage measures as part of an overall community improvement program that advances the goals of recreation, resource conservation, preservation of natural riparian vegetation and habitat, and the preservation of the scenic values of the County's streams and creeks.

**Programs**

1. Consider ecological significance and aesthetic quality of natural drainage ways in the design of all drainage projects.
2. Require that storm waters be used for groundwater recharge when possible and that existing groundwater recharge areas be considered for retention as unbuilt open areas.
3. Preserve all existing "unlined" and "natural" drainage channels and water courses, such as creeks and river beds, as resource management areas or linear parks and recreation trails, whenever technically and economically feasible. Linear parks and/or recreation trails will be part of a master-planned system.

§ 5.9 Coordinate with local, regional, state, federal, and other private agencies to provide adequate flood protection to County residents.

### Programs

1. Continue the development of intergovernmental coordination with cities, adjacent counties, the Army Corps of Engineers, and other agencies that have an interest in flood control projects that cross jurisdictional boundaries.
2. Coordinate land use and flood control planning through continued improvement of staff contacts between the Land Use Services Department, Flood Control District, Special Districts Department, and cities within the County, and through annual review of the Capital Improvements Program.

**S 5.10** Continue to develop local area drainage plans and establish funding mechanisms to provide the backbone drainage system for watershed areas.

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| <b>GOAL S 6. The County will protect residents from natural and manmade hazards.</b> |
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### POLICIES

- S 6.1** Require development on hillsides to be sited in such a manner that minimizes the extent of topographic alteration required to minimize erosion, to maintain slope stability, and to reduce the potential for off-site sediment transport.
- S 6.2** Utilize the Hazard and Resources Overlay Maps to identify areas suitable or required for retention as open space. Resources and issues identified on the Overlays which indicate open space as an appropriate use may include: flood, fire, geologic, aviation, noise, cultural, prime soils, biological, scenic resources, minerals, agricultural preserves, utility corridors, water supply, and water recharge.

- S 6.3 Because public health and safety can be protected through the use of open space, the County may maintain open space where flood, fire, geologic, seismic hazards, noise, or other conditions endanger public health and safety.
- S 6.4 To protect public safety, the County will seek to retain areas within the Prado Dam inundation area as permanent public open space. Consideration will be given to retain this area as natural open space wherever possible.
- S 6.5 Where possible, consistent with safety and operational considerations, encourage the use of active and inactive utility easement corridors (especially railway corridors, which have gentle grades that make them suitable for whole-access trails) as public open space areas and trail alignments.

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| <b>GOAL S 7. The County will minimize exposure to hazards and structural damage from geologic and seismic conditions.</b> |
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#### POLICIES

- S 7.1 Strive to mitigate the risks from geologic hazards through a combination of engineering, construction, land use, and development standards.

#### Programs

1. Consider the formation of Geologic Hazard Abatement Districts as authorized by Public Resources Code Section 26500 et seq., where existing or proposed development is threatened by such hazards and prevention, mitigation, abatement or control of a geologic hazard is deemed feasible.
2. Require sites to be developed and all structures designed in accordance with recommendations contained in any required geotechnical or geologic reports, through conditioning, construction plans, and field inspections.
3. Require that all recommended mitigation measures be clearly indicated on all grading and construction plans.

4. Require all facilities to meet appropriate geologic hazard specifications as determined by the County Geologist for discretionary and ministerial authorizations.
5. Because of the potential for displacement along faults not classified as active, the County will reserve the right to require site-specific geotechnical analysis and mitigation for development located contiguous to potentially active faults, if deemed necessary by the County Geologist.

**S 7.2** Minimize the risk of potential seismic disaster in areas where inadequate structures exist.

**Programs**

1. Have a structural hazards identification and abatement program through the Division of Building and Safety with priority given to the identification and abatement of hazards in critical, essential, and high-occupancy land uses; in structures located within areas of severe geologic hazard; and in structures built prior to enactment of applicable local or state earthquake design standards.
2. Support regional or statewide programs providing funding or technical assistance to local governments to allow accurate identification of existing structural hazards in private development and providing assistance to public and private sectors to facilitate and to minimize the social and economic costs of abatement.

**S 7.3** Coordinate with local, regional, state, federal, and other private agencies to provide adequate protection against seismic hazards to County residents.

**Programs**

1. Continue to work with public utilities, school districts, railroads, the state Department of Transportation (Caltrans), and other agencies supplying critical public services to ensure that they have incorporated structural safety and other measures to be adequately protected from seismic hazards for both existing and proposed facilities.
2. Coordinate with utility companies to institute orderly programs of installing cut-off devices on utility lines, starting with the lines that



appear to be most vulnerable and those that serve the most people. Adequate emergency water supplies will be established and maintained in areas dependent upon water lines that cross active fault zones.

- S 7.4 Designate areas identified by the Alquist-Priolo Earthquake Fault Zoning Act (Public Resource Code, Division 2, Chapter 7.5) on the Hazard Overlay Maps to protect occupants and structures from high level of risk caused by ground rupture during earthquake.

### **Programs**

1. Apply the definitions, provisions, and mapping of the Alquist-Priolo Earthquake Fault Zoning Act.
2. Apply the Land Use Compatibility Chart in Earthquake Fault Zones (Table S-2) when reviewing all discretionary and ministerial applications.
3. Withhold public financing from buildings within the Earthquake Fault Zone where there is a confirmed fault trace unless it can be established that there is no potential for surface fault displacement or ground rupture that would injure the public investment or fulfillment of its purpose.
4. Do not create new lots within the Earthquake Fault Zone unless an appropriate geologic investigation establishes sufficient and suitable land area for development according to existing land use designations and other applicable County ordinances. Reassess the fault investigation exemption for single family one- and two-story residential construction within the zone.
5. Plan transportation facilities (i.e. roads, freeways, rail, rapid transit) and utility systems to cross active fault traces a minimum number of times and to be designed to accommodate fault displacement without major damage that would cause long-term and unacceptable disruption of service. Utility lines will be equipped with such mechanisms as flexible units, valving, redundant lines, or auto valves to shut off flows in the event of fault rupture.

§ 7.5 Minimize damage cause by liquefaction, which can cause devastating structural damage and a high potential for saturation exists when the groundwater level is within the upper 50 feet of alluvial material.

**Programs**

1. Require that each site located within the Liquefaction Hazard Overlay be evaluated by a licensed geologist prior to design, land disturbance or construction, for soil type, history of the water table's fluctuation, and adequacy of the structural engineering to withstand the effects of liquefaction.
2. Apply the Land Use Compatibility Chart in Liquefaction Potential Zones (Table S-3) when reviewing all discretionary and ministerial applications.
3. Evaluate potential areas of liquefaction susceptibility that are not currently identified on the Geologic Hazard Overlay. Add areas to the Geologic Hazard Overlay based on the evaluation of susceptibility

§ 7.6 Protect life and property from risks resulting from landslide, especially in San Bernardino and San Gabriel Mountains that have high landslide potential.

**Programs**

1. Require that a stability analysis be required in Landslide Hazard areas designated “Generally Susceptible” and “Most Susceptible” on the Hazards Overlay Maps and where required by the County Geologist.
2. Require site development and construction comply with soil and geologic investigation report recommendations.
3. Apply the Land Use Compatibility Chart in Landslide Susceptibility Zones (Table S-4) when reviewing all discretionary and ministerial applications.
4. Fund and prepare a land use plan that is in conformance with the Land Use Compatibility Chart in Landslide Susceptibility Zones in Wrightwood and other designated high landslide hazard areas as they are identified.

5. Restrict avoidable alteration of the land that is likely to increase the hazard within areas of demonstrated or potential landslide hazard, including concentrations of water through drainage or septic systems, removal of vegetative cover, steepening of slopes, and undercutting the base of a slope.
6. Restrict grading to minimal amounts necessary to provide access and require grading permits to have an approved site plan that conforms to the recommendations of any required geologic investigation.

**GOAL S 8. The County will minimize exposure and potential of damage posed by aviation activity.<sup>7</sup>**

#### POLICIES

**S 8.1** Ensure the safety of airport operations and surrounding land uses.

#### Programs

1. Adopt the Land Use Compatibility/Aviation chart (Table S-4) as applicable to all discretionary and ministerial applications for Safety Overlay delineated on the Hazards Overlay Maps. Safety areas are defined as follows:
  - a. That area defined within an adopted Airport Comprehensive Land Use Plan;
  - b. That area defined within an adopted Interim Airport Land Use Plan (where there is no adopted Airport Comprehensive Land Use Plan); and
  - c. That area defined within a low-altitude/high-speed corridor designated for military aircraft operations.
2. Continue airport safety reviews of all land uses proposed within any Airport Safety Area in the County; updating existing and initiating new comprehensive Land Use Plan studies for each public-use airport in the County. The following review standards will be included:

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<sup>7</sup> Noise related aviation hazard are included in the Noise Element Goals, Objectives, and Policies.

- a. Safety areas will be designated and mapped.
  - b. Airport Safety reviews will be required for all discretionary projects (as defined by CEQA) proposed in the County within an Airport Safety Area, including:
    - All airport creation or expansion proposals;
    - Projects and land use recommendations outside designated Safety Areas when statistical analysis of accidents from an airport facility suggests this need; and
    - All procedures for proposed development around heliports in the County.
  - c. All projects within Safety Areas 1, 2, and 3 will be referred to the affected airport facility.
  - d. Federal Aviation Regulations (FAR) Part 77 will be applied, including height restrictions.
  - e. Smoke, glare, and electronic interference will be restricted.
  - f. Storage of fuel and other explosive and/or flammable materials in a manner that may be hazardous to aviation operations will not be above ground in Safety Areas 1, 2, and 3.
  - g. Standards for development of all conditionally approved projects may be derived from any or all of the following:
    - Applicable, adopted Airport Comprehensive Land Use Plans and Interim Airport Land Use Plans;
    - California State Airport Land Use Planning Handbook; and
    - The San Bernardino County Development Code.
    - Regulations and development standards of local jurisdictions.
3. Apply the standards of the Land Use Compatibility Chart in Airport Safety Areas (Table S-5), as well as those contained in the applicable adopted Airport Comprehensive Land Use Plans, to promote consistent review of proposals in the land use planning process.

4. Any requirements resulting from the airport safety review will be incorporated into the project design and/or conditions of approval.
5. All discretionary projects within Safety Areas 1, 2 and 4 will be reviewed by the appropriate military facility (There is no Safety Area 3 designated around military airport facilities).

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| <b>GOAL S 9.</b> | <b>The County's emergency evacuation routes will quickly and efficiently evacuate all residents in the event of wildland fires and other natural disasters, and will ensure adequate access of emergency vehicles to all communities.</b> |
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## POLICIES

- S 9.1** Maintain projected emergency access needs in the periodic review of the County's Hazard Mitigation Plan.

### Programs

1. The Office of Emergency Services (OES), County Fire Department shall be responsible for the continued update of emergency evacuation plans for wildland fire incidents as an extension of the agency's responsibility for Hazard Mitigation Planning in San Bernardino County. OES shall update evacuation procedures in coordination with MAST and provide specific evacuation plans for the Mountain Region where route planning, early warning and agency coordination is most critical in ensuring proper execution of successful evacuations. OES will monitor population growth and evaluate road capacities and hazard conditions along evacuation corridors to prepare contingency plans to correspond to the location, direction and rate of spread of wildland fires.

- S 9.2** Ensure that future developments have no less than two points of access for emergency evacuation and for emergency vehicles, in the event of wildland fires and other natural disasters.

### Programs

1. Require compliance with the provisions of the access standards of the Fire Safety Overlay, the Subdivision Design and Improvement Standards of the County Development Code and, where applicable, Planned Unit and Planned Residential Development standards.

2. Access for development projects will be considered in conjunction with the location of active faults through the development review process. Access across faults will be discouraged where point(s) of access can feasibly be located outside of fault areas.
3. Through the provisions of the Fire Safety Overlay and the development review process, require projects to provide immediate vehicular access to the perimeter of structural development within projects adjacent and exposed to wildlands.
4. In areas with predominant natural slopes greater than 30 percent and in canyon mouths and ridge saddles. Access roads will be the shortest length feasible. Grading for roads will be the minimum necessary to provide adequate access.

### C. VALLEY REGION GOALS AND POLICIES OF THE SAFETY ELEMENT

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| <b>GOAL V/S 1. The County's emergency evacuation routes will quickly and efficiently evacuate all residents in the event of wildland fires and other natural disasters, and will ensure adequate access of emergency vehicles to all communities.</b> |
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#### POLICIES

V/S 1.1 Designate the following roads and highways as evacuation routes in the Valley Region: Interstates 10, 15, 210 and 215; State Highways 30, 60, 66, 71 and 83; and numerous major and secondary highways.

V/S 1.2 In addition to the above evacuation routes, Caltrans has identified a number of "Potential Evacuation Routes" in the Valley Region. The roads should also be relied on by the County to direct emergency evacuations. These roads have the least number of bridges and may be among the safest roads to travel in the event of a major earthquake:

#### WEST VALLEY AREA:

- a. San Bernardino Avenue/4th Street from Vineyard Avenue to Cherry Avenue.



- b. Valley Boulevard from Etiwanda Avenue to Mount Vernon Avenue.
- c. Etiwanda Avenue from San Bernardino Avenue to its northern extremity.
- d. Sierra Avenue from Foothill Boulevard to Riverside Avenue.
- e. Slover Avenue from Milliken to Pepper Street.

**EAST VALLEY AREA**

- a. Cajon Boulevard from Glen Helen Parkway/Devore Road to Highland Avenue.
- b. Mount Vernon Avenue from Highland Avenue to La Cadena Drive.
- c. La Cadena Drive from Mount Vernon Avenue to the Riverside County line.
- d. Barton Road from La Cadena Drive to Waterman Avenue.
- e. Waterman Avenue from Barton Road to Mill Street.
- f. Mill Street from Waterman Avenue to E Street.
- g. E Street from Mill Street to Kendall Drive.
- h. Kendall Drive from E Street to Palm Avenue
- i. Hospitality Lane from Waterman Avenue to Tippecanoe Avenue.
- j. Coulston Street from Tippecanoe Avenue to Mountain View Avenue.
- k. Lugonia Avenue from Mountain View Avenue to Orange Street.
- l. Redlands Boulevard from Waterman Avenue to Orange Street.

## D. MOUNTAIN REGION GOALS AND POLICIES OF THE SAFETY ELEMENT

**GOAL M/S 1. The County's emergency evacuation routes will quickly and efficiently evacuate all residents in the event of wildland fires and other natural disasters, and will ensure adequate access of emergency vehicles to all communities.**

### POLICIES

**M/S 1.1** Designate the following roads and highways as evacuation routes in the in the Mountain Region: State Highways 2, 18, 38, 138, 189 and 330, and Mount Baldy Road.

### Programs

1. The Office of Emergency Service (OES)s, County Fire Department shall be responsible for the continued update of emergency evacuation plans for wildland fire incidents as an extension of the agency's responsibility for Hazard Mitigation Planning in San Bernardino County. OES shall update evacuation procedures in coordination with MAST and provide specific evacuation plans for the Mountain Region where route planning, early warning and agency coordination is most critical in ensuring proper execution of successful evacuations. OES will monitor population growth and evaluate road capacities and hazard conditions along evacuation corridors to prepare contingency plans to correspond to the location, direction and rate of spread of wildland fires.

**GOAL M/S 2. Provide a fire-safe environment throughout the Mountain Region.**

### POLICIES

**M/S 1.2** Encourage expansion or development of fuel breaks adjacent to residential populated areas within the Mountain Region in a manner consistent with the intent of the General Plan.



**E. DESERT REGION GOALS AND POLICIES OF THE SAFETY ELEMENT**

**GOAL D/S 1. The County’s emergency evacuation routes will quickly and efficiently evacuate all residents in the event of wildland fires and other natural disasters, and will ensure adequate access of emergency vehicles to all communities.**

**POLICIES**

**D/S 1.1** Designate the following roads and highways as evacuation routes in the in the Desert Region: Interstates 15 and 40, U.S. 95 and 395 and State Highways 18, 58, 62, 127, 138, 178 and 247.

**Table S-1. Land Use Compatibility Chart for 100-Year Flood Plains**

| LAND USES  | COMPATIBILITY IN 100-YEAR FLOODPLAINS |
|--|---------------------------------------|
| <b>Critical –</b><br>Nuclear related systems; explosives or hazardous materials/ manufacturing; handling or storage; hospitals and other emergency medical facilities.   | <b>Restricted</b>                     |
| <b>Essential –</b><br>Police, fire and communication systems; Emergency Operations Centers (EOC’s); electric power inter-tie systems; power plants; utility substations; sewage treatment plants; water-works; local gas and electric distribution lines; aqueducts; major pipelines; major highways; bridges and tunnels; ambulance services; public assembly sites with 300 or more capacity; schools. | <b>Restricted</b>                     |
| <b>High Occupancy -</b><br>Multi-family residential of 20 or more units; major commercial including large shopping centers; office buildings; large hotels; health care clinics and convalescent homes; heavy industry; gas stations.  | <b>Generally Incompatible</b>         |
| <b>Normal-Lo Risk –</b><br>Single-family and two-family residential; multi-family of less than 20 units; small scale commercial; small hotels, motels; light industry; warehousing.  | <b>Generally Incompatible</b>         |
| <b>Restricted –</b><br>Restricted unless alternative sites are not available or feasible and it is demonstrated that, although mitigation may be difficult, hazards will be adequately mitigated.  |                                       |
| <b>Generally Incompatible –</b><br>Restricted unless site investigation demonstrates that site is suitable or that hazards will be adequately mitigated.   | +                                     |

Source: San Bernardino County General Plan, 1989, Section II – Planning Issues, Natural Hazards, Flood, pg. II-A2-2.



**Table S-2 Land Use Compatibility Chart in Fault Hazard Zones**

| LAND USES   | COMPATIBILITY IN FAULT HAZARD ZONES |
|---|-------------------------------------|
| <b>Critical -</b><br>Nuclear related systems; major dams; explosives or hazardous materials/manufacturing, handling, or storage; hospitals and other emergency medical facilities; specified hazardous waste facility.  | <b>Restricted</b>                   |
| <b>Essential -</b><br>Police, fire and communications systems; Emergency Operations Centers (EOC's); electric power inter-tie systems; power plants; small dams; utility substations; sewage treatment plants; water-works; local gas and electric distribution lines; aqueducts; major pipelines; major highways, bridges and tunnels; ambulance services; public assembly sites with 300 or more capacity; schools. | <b>Restricted</b>                   |
| <b>High Occupancy -</b><br>Multi-family residential of 20 or more units; major commercial including large shopping centers; office buildings; large hotels; health care clinics and convalescent homes; heavy industry; gas stations.   | <b>Generally Unsuitable</b>         |
| <b>Normal-Low Risk -</b><br>Single-family and two-family residential; multi-family of less than 20 units; small scale commercial; small hotels, motels; light industry; warehousing; parks.   | <b>Provisionally Suitable</b>       |
| <b>Restricted -</b><br>Restricted unless alternative sites are not available or feasible and it is demonstrated through a site investigation that, although mitigation may be difficult, hazards will be adequately mitigated.  |                                     |
| <b>Generally Unsuitable -</b><br>Restricted unless site investigation demonstrates that site is suitable or that hazards will be adequately mitigated.  |                                     |
| <b>Provisionally Suitable -</b><br>Requires site investigation to confirm suitability; may require some modification of facility design or siting.  |                                     |



**Table S-3. Land Use Compatibility Chart in Liquefaction Potential Zones**

| LAND USES  | DEGREE OF COMPATIBILITY IN LIQUEFACTION POTENTIAL ZONES |                             |                               |
|--|---|-----------------------------|-------------------------------|
|  | High Zone   | Medium-High Zone            | Medium Zone                   |
| <b>Critical -</b><br>Nuclear related systems; major dams; explosives or hazardous materials/manufacturing, handling or storage; hospitals and other emergency medical facilities; hazardous waste residual repository.   | <b>Restricted</b>                                       | <b>Restricted</b>           | <b>Generally Unsuitable</b>   |
| <b>Essential -</b><br>Police, fire and communications systems; Emergency Operations Centers (EOC's); electric power inter-tie systems; power plants; small dams; utility substations; sewage treatment plants; water-works; local gas and electric distribution lines; aqueducts; major pipelines; major highways, bridges and tunnels; ambulance services; public assembly sites with 300 or more capacity; schools | <b>Restricted</b>                                       | <b>Restricted</b>           | <b>Generally Unsuitable</b>   |
| <b>High Occupancy -</b><br>Multi-family residential of 20 or more units; major commercial including large shopping centers; office buildings; large hotels; health care clinics and convalescent homes; heavy industry; gas stations   | <b>Restricted</b>                                       | <b>Generally Unsuitable</b> | <b>Provisionally Suitable</b> |
| <b>Normal-Low Risk -</b><br>Single-family and two-family residential; multi-family of less than 20 units; small scale commercial; small hotels, motels; light industry; warehousing  | <b>Restricted</b>                                       | <b>Generally Unsuitable</b> | <b>Provisionally Suitable</b> |
| <b>Restricted -</b><br>Restricted unless alternative sites are not available or feasible and it is demonstrated through a site investigation that, although mitigation may be difficult, hazards will be adequately mitigated.   |   |                             |                               |
| <b>Generally Unsuitable -</b><br>Restricted unless site investigation demonstrates that site is suitable or that hazards will be adequately mitigated.   |   |                             |                               |
| <b>Provisionally Suitable -</b><br>Requires site investigation to confirm suitability; may require some modification of facility design or siting.   |   |                             |                               |



**Table S-4. Land Use Compatibility Chart in Landslide Susceptibility Zones**

| LAND USES  | DEGREE OF COMPATIBILITY IN<br>LANDSLIDE SUSCEPTIBILITY ZONES |                                   |                                  |                             |
|--|--|-----------------------------------|----------------------------------|-----------------------------|
|  | Least<br>Susceptible<br>Zone                                 | Marginally<br>Susceptible<br>Zone | Generally<br>Susceptible<br>Zone | Most<br>Susceptible<br>Zone |
| Critical -<br>Nuclear related systems; major dams;<br>explosives or hazardous materials/<br>manufacturing, handling or storage; hospitals<br>and other emergency medical facilities.   | Most<br>Compatible   | Marginally<br>Compatible          | Least<br>Compatible              | Least<br>Compatible         |
| Essential -<br>Police, fire and communications systems;<br>Emergency Operations Centers (EOC's);<br>electric power inter-tie systems; power plants;<br>small dams; utility substations; sewage<br>treatment plants; water-works; local gas and<br>electric distribution lines; aqueducts; major<br>pipelines; major highways, bridges and<br>tunnels; ambulance services; public assembly<br>sites with 300 or more capacity; schools. | Most<br>Compatible   | Marginally<br>Compatible          | Least<br>Compatible              | Least<br>Compatible         |
| High Occupancy -<br>Multi-family residential of 20 or more units;<br>major commercial including large shopping<br>centers; office buildings; large hotels; health<br>care clinics and convalescent homes; heavy<br>industry; gas stations.   | Most<br>Compatible   | Generally<br>Compatible           | Marginally<br>Compatible         | Least<br>Compatible         |
| Normal-Low Risk -<br>Single-family and two-family residential; multi-<br>family of less than 20 units; small scale<br>commercial; small hotels, motels; light<br>industry; warehousing.  | Most<br>Compatible   | Most<br>Compatible                | Generally<br>Compatible          | Marginally<br>Compatible    |
| Most Compatible -<br>Acceptable; however, if specific concerns are identified, a slope stability analysis may be required.   | +  |                                   |                                  |                             |
| Generally Compatible -<br>Requires a slope stability analysis to confirm suitability; may require some modification of facility design or siting.  | +  |                                   |                                  |                             |
| Marginally Compatible -<br>Restricted unless site investigation demonstrates that site is suitable or that hazard will be adequately mitigated.  | +  |                                   |                                  |                             |
| Least Compatible -<br>Restricted unless alternative sites are not available or feasible and it is demonstrated through a slope stability analysis that, although mitigation may be difficult, hazards will be adequately mitigated.  |  |                                   |                                  |                             |
| Note - A slope analysis shall include either:<br>a. A slope stability report by a private consultant, or<br>b. Staff review of slope instability areas shown on Seismic/Geologic Maps or other in-house data, or staff field check. If proposed structures appear to be threatened by moderate or high slope instability, then the project would be conditioned.   |  |                                   |                                  |                             |



**Table S-5 Land Use Compatibility in Aviation Safety Areas**

| LAND USE  | SAFETY AREA            |                       |                      |                         |
|---|------------------------|-----------------------|----------------------|-------------------------|
|   | 1                      | 2                     | 3                    | 4                       |
| Residential single-family, duplex, multi family, manufactured homes   | Clearly Unacceptable   | Clearly Unacceptable  | Normally Acceptable* | Normally Acceptable*    |
| Hotels, motels, transient lodging   | Clearly Unacceptable   | Clearly Unacceptable  | Normally Acceptable  | Normally Unacceptable** |
| Schools, nursing homes, libraries, churches, hospitals  | Clearly Unacceptable   | Clearly Unacceptable  | Normally Acceptable  | Normally Unacceptable** |
| Auditoriums, concert halls, amphitheaters   | Clearly Unacceptable   | Clearly Unacceptable  | Normally Acceptable  | Normally Unacceptable** |
| Sports arenas, outdoor spectator sports   | Clearly Unacceptable   | Clearly Unacceptable* | Normally Acceptable* | Normally Unacceptable** |
| Playgrounds, neighborhood parks   | Clearly Unacceptable   | Normally Unacceptable | Normally Acceptable  | Normally Acceptable     |
| Golf courses, riding stables, water recreation, cemeteries  | Normally Unacceptable  | Normally Acceptable   | Normally Acceptable  | Clearly Acceptable      |
| Office buildings (personal, professional)   | Clearly Unacceptable*  | Clearly Unacceptable* | Normally Acceptable* | Normally Unacceptable** |
| Commercial-retail, movie theaters, restaurants  | Clearly Unacceptable*  | Clearly Unacceptable  | Normally Acceptable  | Normally Unacceptable** |
| Commercial-wholesale, some retail, industry, manufacturing, utilities   | Clearly Acceptable     | Normally Acceptable   | Normally Acceptable  | Normally Acceptable     |
| Livestock, farming, animal breeding   | Normally Unacceptable* | Normally Acceptable*  | Clearly Acceptable*  | Clearly Acceptable      |
| Agriculture (except livestock), mining and fishing  | Normally Acceptable    | Clearly Acceptable    | Clearly Acceptable   | Clearly Acceptable      |
| Extensive natural recreation  | Normally Acceptable    | Clearly Acceptable    | Clearly Acceptable   | Clearly Acceptable      |
| Maximum gross density recommended (persons per acre)  | .5                     | 25                    | No Limit             | 10**                    |
| Maximum assembly recommended (persons)  | 10                     | 100                   | No Limit             | 100**                   |
| <p><b>Safety Area 1</b> - Area at either end of a runway inside and outside of the airport boundaries, and labeled clear zone as defined by FAA or Military AICUZ studies.</p> <p><b>Safety Area 2</b> - Area outside the airport boundaries but within the 65 Ldn noise contour.</p> <p><b>Safety Area 3</b> - Varies with the airport by generally: a) For airports with a 65 Ldn noise contour, area outside the 65 Ldn contour; b) For airports without the 65 Ldn noise contour, area within one mile of the outer boundaries of the airport ownership.</p> <p><b>Safety Area 4</b> - Varies with the facility: China Lake and George - one mile outside the 65 Ldn contour. Norton - within a 5 mile radius of the base. Low Altitude Corridors - entire area beneath the corridors.</p> <p><b>Clearly Acceptable</b> - No Restrictions.</p> <p><b>Normally Acceptable</b> - Restricted development undertaken only after detailed analysis and satisfactory mitigation measures are initiated.</p> <p><b>Normally Unacceptable</b> - No new development.</p> <p><b>Clearly Unacceptable</b> - New construction or development should generally not be undertaken. Existing uses should be relocated.</p> |                        |                       |                      |                         |
| * Some specific uses in this group may meet density criteria and be more acceptable.  |                        |                       |                      |                         |
| ** Depending on exact location, use or higher density may be acceptable based upon referral received from the military.   |                        |                       |                      |                         |



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## CHAPTER 82.13 FIRE SAFETY (FS) OVERLAY

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### Sections:

- 82.13.010 Purpose
- 82.13.020 Location Requirements
- 82.13.030 Fire Safety Areas
- 82.13.040 Application Requirements
- 82.13.050 General Development Standards
- 82.13.060 FS1, FS2, and FS3 Development Standards
- 82.13.070 FS1 Additional Development Standards
- 82.13.080 Soil Erosion and Sediment Control Plans/Permits
- 82.13.090 Alternate Hazard Protection Measures

### **82.13.010 Purpose**

The Fire Safety (FS) Overlay established by Sections 82.01.020 (Land Use Plan and Land Use Zoning Districts) and 82.01.030 (Overlays) is created to provide greater public safety in areas prone to wildland brush fires, by establishing additional development standards for these areas.

Adopted 4011 (2007)

### **82.13.020 Location Requirements**

The FS Overlay shall be designated in high fire hazard areas as mapped on the General Plan Hazards Maps with the locations derived from the California Department of Forestry, U.S. Forest Service, and the County Fire Department.

Adopted 4011 (2007)

### **82.13.030 Fire Safety Areas**

The FS Overlay is divided into three fire safety areas to correspond to distinct geographic areas and the associated wildland fire hazard. The requirements applicable to each fire safety area are found in Section 82.13.050 (General Development Standards), Section 82.13.060 (FS1, FS2, and FS3 Development Standards), and 82.13.070 (FS1 Additional Development Standards).

- (a) **Fire Safety Area 1 (FS1).** Fire Safety Area 1 (FS1) includes areas within the mountains and valley foothills. It includes all the land generally within the San Bernardino National Forest boundary and is characterized by areas with moderate and steep terrain and moderate to heavy fuel loading contributing to high fire hazard conditions.
- (b) **Fire Safety Area 2 (FS2).** Fire Safety Area 2 (FS2) includes those lands just to the north and east of the mountain FS1 area in the mountain-desert interface. These areas have gentle to moderate sloping terrain and contain light to moderate fuel loading. These areas

are periodically subject to high wind conditions that have the potential of dramatically spreading wildland fires.

- (c) **Fire Safety Area 3 (FS3).** Fire Safety Area 3 (FS3) includes lands just to the south of the mountain FS1 area. These lands are primarily within the wildland-urban interface of the Valley Region and consist of varying terrain from relatively flat to steeply sloping hillside areas. Present and future development within FS3 is exposed to the impacts of wildland fires and other natural hazards primarily due to its proximity to FS1. These areas are subject to Santa Ana wind conditions that have the potential of dramatically spreading wildland fires during extreme fire behavior conditions.

Adopted 4011 (2007)

#### 82.13.040 Application Requirements

- (a) **Notice of application or permit.** A notice of each land use application and/or development permit that would lead to the construction of one or more structures or the subdivision of land within the FS Overlay shall be filed with the responsible Fire Authority by the Department.
- (b) **Review authorities.** Each proposed land use application that would lead to the construction or expansion of a structure or the subdivision of land shall be submitted to the responsible fire authority and the appropriate Natural Resource Conservation Service Office for review and recommendation. Any recommendations received shall be indicated in any staff report and/or presentation for the proposed development and shall be incorporated into project conditions of approval where possible.
- (c) **Pre-application conference.** Every development project application submitted to the Department shall be reviewed by Department staff through a pre-application conference with the project proponent before the acceptance of the application for filing.
- (d) **Density bonus.** A residential density bonus, if any, shall only be allowed through the approval of a Planned Development Permit in compliance with Chapter 85.10 (Planned Development Permits).
- (e) **Subdivisions.** When 25 percent or more of a subdivision project site involving five or more lots is located on natural slopes greater than 30 percent, the subdivision application shall be submitted concurrently with a Planned Development application to evaluate appropriate project design in consideration of topographic limitations of the site. This provision shall not apply if all of the areas on the site with natural ungraded slopes over 30 percent are permanently restricted from structural development.
- (f) **Application requirements.** Each land use and other project application shall include the following information and materials, in addition to what is required by Section 85.03.060 (Application Forms and Information Packets).

- (1) **Slope analysis.** Each project application shall include a slope analysis. The slope analysis shall include the following information:
  - (A) A topographic map of the proposed project area and all adjoining properties within 150 feet at a scale of not less than one-inch to 200 feet. The contour interval shall not be more than two feet except that the contour interval may be five feet if the general natural ungraded slope is more than 10 percent. Contour lines shall be obtained by aerial or field survey, done under the supervision of a licensed Land Surveyor or Registered Engineer.
  - (B) The natural, ungraded, slope categories to be computed are zero percent to less than 15 percent, 15 percent to less than 30 percent, and 30 percent or greater. The minimum area (polygon) used for slope calculation shall be 5,000 square feet.
  - (C) The area, in acres, shall be tabulated for each category.
- (2) **Preliminary grading plan.** Each project application shall include a preliminary grading plan, except that preliminary grading plan requirements may be waived by the Director if it is determined through the required preapplication conference that this requirement is unnecessary due to site specific soils, topographic or other physical conditions, or due to the specific design of the project. The preliminary grading plan shall include the following information.
  - (A) A topographic map of the proposed project area and all adjoining properties within 150 feet at a scale of not less than one inch to 200 feet. The contour interval shall not be more than two feet except that the contour interval may be five feet if the natural ungraded slope is more than 10 percent. Contour lines shall be obtained by aerial or field survey, done under the supervision of a licensed Land Surveyor or Registered Engineer.
  - (B) Contours of the finished graded slope shown at intervals similar to that on the topographic base map.
  - (C) Street grades, slope ratios, flow lines, pad elevations, maximum elevation of top and minimum elevation of toe of finished slopes over five feet in vertical height, the maximum heights of those slopes and approximate total cubic yards of cut and fill shown on the preliminary grading plan.
  - (D) Compliance with the current edition of the California Building Code, as adopted by the County, is required.
  - (E) In the event no grading is proposed, a statement to that effect shall be placed on the required topographic map described in Subsection (f)1.a, above, and the map shall delineate the boundary of an adequately sized building pad, driveway and septic system (if proposed) for each proposed parcel.

- (3) **Fuel modification plan.** Each project application shall include a fuel modification plan describing the fuel modification area required in Subsection 82.15.060.(b) 6, below. The plan may be submitted as a preliminary and final plan. A preliminary and/or final plan shall be submitted concurrently with the development application to the Department for review in conjunction with the project design review. Final plans shall be reviewed and approved by the responsible Fire Authority in conjunction with the County Fire Marshall. The fuel modification plan shall address the standards in Subsection 82.15.060.(b) 6, below, and the following factors:
- (A) The natural ungraded slope of the land within the project and in the areas adjacent to the project;
  - (B) Fuel loading;
  - (C) Access to the project and access directly to the fuel modified area;
  - (D) The on-site availability of water that can be used for fire fighting purposes;
  - (E) The continual maintenance of the fuel modified areas;
  - (F) The soil erosion and sediment control measures to alleviate permanent scarring and accelerated erosion; and
  - (G) A list of recommended landscape plant materials that are fire resistant.

Adopted 4011 (2007)

**82.13.050 General Development Standards**

Each proposed development shall comply with all applicable requirements of this Chapter, as follows.

- (a) **All phases.** The requirements of this Chapter shall apply to all phases of a development project.
- (b) **Fire Authority standards.** All proposed development shall comply with all other applicable standards required by the responsible Fire Authority.
- (c) **Applicability of land use zoning district standards and overlay standards.** The development standards established by a land use zoning district and any applicable overlay shall apply, except as modified by this Chapter.

- (d) **Additions, alterations, enlargements, or reconstructions.** Any addition, alteration, enlargement or reconstruction of a structure shall comply with the provisions of this Chapter. When an addition, alteration, enlargement or reconstruction of a structure equals or exceeds 50 percent of the existing structure, or 25 percent of the roof for roofing requirements only, the provisions of Section 82.13.060(c) (FS1, FS2, and FS3 Development Standards - Building separation standards), Section 82.13.060(d) (FS1, FS2, and FS3 Development Standards - Building construction requirements), and Section 82.13.070 (FS1 Additional Development Standards) regarding construction requirements shall apply to the entire structure and/or the whole roof as applicable. The structures and/or roofs shall be entirely retrofitted to comply with the requirements of this Chapter.

Adopted 4011 (2007)

**82.13.060 FS1, FS2, and FS3 Development Standards**

Development proposed in the FS1, FS2, or FS3 Overlays shall comply with all applicable requirements of this Section. Development proposed in the FS1 Overlay shall also comply with the requirements of Section 82.13.070 (FS1 Additional Development Standards).

- (a) **Residential density.** In order to reduce fire hazards, prevent erosion, and to preserve the existing vegetation and visual quality, the density of development for any Tentative Parcel Map or Tentative Tract Map in sloping hillside areas shall be in compliance with the following criteria:

- (1) One to four dwelling units per gross acre on slopes of zero to less than fifteen percent (0-<15%);
- (2) Two dwelling units per gross acre on slopes of 15 to less than 30 percent (15-<30%);
- (3) One dwelling unit per three gross acres on slopes of greater than 30 percent gradient;
- (4) In the Rancho Cucamonga Sphere of Influence, zero density is allowed for any portion of a proposed Tentative Parcel Map or Tentative Tract Map on slopes of greater than 30 percent gradient.

- (b) **Site development requirements.**

- (1) **Site and emergency access.** Each development project and each development project phase, except for a development project located exclusively on a cul-de-sac, shall have a minimum of two points of vehicular ingress and egress, designed to County road standards, with a minimum width of 26 feet of all-weather surface as defined in the Uniform Fire Code, from existing and surrounding streets. The Department may authorize one point of vehicular access to be an emergency access route with an all-weather surface if the Department first makes each of the following findings:

- (A) Two points of nonemergency access are physically infeasible;
  - (B) Provisions have been made to reasonably ensure that the emergency access will be maintained; and
  - (C) Based on the review and consideration of the Fire Authority's recommendation, the emergency access route will provide adequate vehicular ingress and egress during emergencies.
- (2) **Private driveways or access roadways.** Private driveways or access roadways for residential units shall not exceed 150 feet in length, unless approved by the Fire Authority in compliance with Section 10.207 of the Uniform Fire Code.
- (3) **Fences.**
- (A) Where wood or vinyl fencing is used, there shall be a minimum five-foot separation between the wood or vinyl fencing and the wall of the nearest structure except on those properties where previous construction occurred in compliance with a previous code. Fencing within the five-foot separation area shall be of noncombustible material or modified one-hour fire-resistance-rated construction.
  - (B) Fences or walls required adjacent to fuel modification areas or wildland areas as conditions of approval for a development project shall be constructed of noncombustible materials as defined in the California Building Code. All other fences, including those on the interior of a development project, are not subject to this requirement, except as required in subparagraph a, above.
- (4) **Water supply.** Each development project shall provide six-inch or larger circulating (loop) water mains as required by the Uniform Fire Code, proper hydrant location and spacing, and have sufficient water storage capacity to provide the minimum fire flow duration requirements [gallons per minute (GPM) for a minimum number of hours or portions thereof] as specified by the minimum system standards established by the Fire Authority. Circulating (loop) mains are not required for cul-de-sacs and are not required for subdivisions that exclusively take all access from cul-de-sacs. In areas not served by water purveyors, on-site fire flow and water storage requirements shall be as specified by the Uniform Fire Code.
- (5) **Access to water supplies.** There shall be vehicular access, at least 12 feet in width, to within at least 10 feet of each static water source, including ponds, lakes, swimming pools, reservoirs and water storage tanks. Access shall be either to a plumbed outlet with two-and-one-half-inch National Hose Thread Fitting, or directly to the source. This requirement shall be waived if the Fire Authority determines that the water source is sufficiently below the elevation of existing or proposed roads or driveways to make drafting of water from the source through a plumbed outlet

infeasible, and that direct vehicular access to the water source would require an impractical extension of a road or driveway.

**(6) Fuel modification areas.**

(A) A permanent fuel modification area shall be required around a development project or portions thereof that are adjacent or exposed to hazardous fire areas for the purpose of fire protection. In no case shall this area be less than 100 feet in width as measured from the development perimeter. Where feasible, the area shall be designated as common open space rather than private open space. The recommended width of the fuel modification area shall be determined based on a fuel modification plan filed in compliance with Subsection 82.13.040.(f)3 (Application Requirements Fuel modification plans), above.

(B) When a development project is phased, individual phases may be required to provide temporary fuel modification areas, where the development perimeter of a phase is contiguous to a subsequent phase of a project, which in its undeveloped state is a hazardous fire area. The need for a temporary fuel modification area shall be determined by the responsible Fire Authority in conjunction with the County Fire Marshall and shall be based upon the same considerations described in Subparagraph a, above, for permanent fuel modification areas and the factors addressed in the required fuel modification plan.

**(7) Setback requirements.** Each proposed structure shall comply with the following setback requirements as applicable, in addition to the setbacks required by the applicable primary land use zoning district, and the building separation requirements in Subsection C. (Building separation), below.

(A) **Firewood or flammable materials storage.** Each area used for the storage of firewood, or other flammable materials, shall either be located at least 30 feet away from all structures, or wholly enclosed within a structure.

(B) **Fuel tanks.** Fuel tanks (e.g., liquefied petroleum tanks) shall be located at least 10 feet away from any structure and shall be in compliance with the standards in the Uniform Fire Code, Section 83.02.080 (Allowed Projections into Setbacks), and Section 83.01.060 (Fire Hazards). The tanks shall be secured to the ground.

(C) **National Forest boundary.** Each structure on a lot that was created after April 12, 2007 and abuts a boundary of the San Bernardino National Forest shall be set back at least 100 feet from the boundary.

(D) **Sloping site setbacks or fuel modification.** Each structure proposed in an area with slopes exceeding 30 percent and 30 feet in height shall comply with the following requirements:

- (I) Where a structure is proposed or within 200 feet of a slope that is greater than 30 percent before grading and where the slope is at least 30 feet in height, the vegetation on the slopes shall be treated in a manner so that it becomes a fuel modified area. The fuel-modified area shall be maintained for either the entire slope, or 100 feet, or to the property line, whichever distance is less for existing parcels or the distance prescribed by a fuel modification plan for new development.
  - (II) Where grading is utilized that does not conform to the natural slope and the graded area is adjacent to natural ungraded slopes that are greater than 30 percent in gradient and greater than 30 feet in height, each structure shall be set back at least 30 feet from the edges of the graded area adjacent to the natural ungraded slopes.
- (8) **Street name signs.** All public or private streets within or bordering a development project shall have noncombustible and reflective street name signs designed to County standards and visible at all street intersections.
- (9) **Fire hydrant identification.** Each fire hydrant shall be identified by a method specified by the Fire Authority.
- (10) **Erosion and sediment control.** Each development project, building permit, grading and any other significant land disturbing activity shall include the installation of erosion control measures in compliance with this Development Code.
- (c) **Building separation standards.** The intent of the following exterior wall separation standards is to reduce the exposure and risk from adjacent structural fires and to reduce the potential spread of fire from structure to structure.
- (1) Building separation standards in FS1 and FS2 areas. In FS1 and FS2 areas, the following shall apply:
    - (A) Each building on a parcel shall have exterior wall separations of at least 30 feet.
    - (B) Residential structures shall have interior side yard setbacks of 20 percent of the lot width, provided that these interior side yards shall not be less than five feet and need not exceed 15 feet. In no case shall exterior wall separations be less than 10 feet for all buildings, including those on adjoining parcels. Eaves shall be permitted to project into the required setback no more than two feet. No other projections shall be allowed in the required setbacks unless a variance is obtained.
    - (C) When the exterior walls of residential and accessory buildings or portions thereof are within 15 feet of interior side or rear lot lines, or the exterior wall separation is less than 30 feet, the outside of each exterior wall or portion

thereof shall be constructed with the modified one-hour construction. Modified one-hour construction shall be defined by the Building Official. Where building separations are less than 10 feet, additional mitigation measures may be required by the responsible Fire Authority;

(D) In compliance with Section 82.13.090 (Alternate Hazard Protection Measures), and dependent upon site specific conditions, the following measures or combinations of measures may be substituted for the exterior wall separation requirements for all structures in FS1 and FS2 areas:

(I) The expansion of fuel modified areas around the perimeter of the development project beyond that required by this Section or other requirement of the County Code.

(II) A substantial transfer of density from steeper slopes, including areas with slopes less than 30 percent if they exist on-site, to less steep areas within the development project.

(III) Clustering of structures away from the development perimeter and away from fire hazard areas.

(IV) Other alternate measures (e.g., sprinklers, etc.) if approved by the Department in compliance with Section 82.13.090 (Alternate Hazard Protection Measures).

(2) **Building separation standards in FS3 areas.** In FS3 areas, exterior walls shall be constructed of noncombustible materials or shall provide the equivalent one-hour fire-resistance-rated construction on the exterior side. Interior side yards shall not be less than five feet in width. Within the Mountain Region, building separation and side yard setbacks shall be as described in Paragraph 1, above.

**(d) Building construction requirements.**

**(1) Eaves.**

(A) In FS 1 and FS2 areas, eaves shall be boxed in perpendicular to the adjoining wall and shall be one-hour protected.

(B) In FS3 areas, eaves shall be enclosed with a minimum seven-eighth inch stucco or equivalent protection.

(2) **Exterior doors.** All exterior doors made of wood or wood portions shall be solid core wood. For exterior doors with inset windows, refer to Subparagraph 3.(A), below.

(3) **Exterior glazing.** Exterior glazing shall comply with the provisions of the California Building Code and with the following additional requirements:

- (A) Exterior windows, window walls and glazed doors, and windows within exterior doors, shall be multi-layered glass panels (dual- or triple-paned), tempered glass, or other assemblies approved by the Building Official.
- (B) Vinyl window frame assemblies shall be prohibited, except when they have all of the following characteristics:
  - (I) Frame and sash are comprised of vinyl material with welded corners;
  - (II) Metal reinforcement in the interlock area;
  - (III) Glazed with insulated glass or tempered;
  - (IV) Frame and sash profiles are certified in American Architectural Manufacturing Association (AAMA) Lineal Certification Program (verified with either an AAMA product label or Certified Products Directory); and
  - (V) Certified and labeled in compliance with American National Standards Institute (ANSI)/AAMA/National Wood Window and Door Association (NWWDA) structural requirements.
- (4) **Insulation.** Paper-faced insulation shall be allowed in attics or ventilated spaces only if the paper is not exposed to the attic open space. Cellulose insulation is required to be fire retardant.
- (5) **Roof coverings.** Roof coverings shall be either noncombustible or shall be fire retardant material not composed of organic fiber with a minimum Class A rating, as defined in the California Building Code. The tile shall be tight-fitting and the open ends of high-profile tile shall be capped with non-ignitable material to prevent birds' nests or other combustible material from accumulating. Gutters and downspouts shall be constructed of noncombustible material.
- (6) **Spark arresters.** Each chimney used in conjunction with a fireplace, or other heating appliance in which solid or liquid fuel is used, shall be maintained with a spark arrester. An approved spark arrester shall mean a device constructed of stainless steel, copper or brass, woven galvanized wire mesh, 12 gauge minimum of three-eighths inch minimum to one-half inch maximum openings, mounted in or over all outside flue openings in a vertical and near vertical position, adequately supported to prevent movement and visible from the ground.
- (7) **Street address numbers.** Each non-accessory building shall have internally illuminated non-combustible building address numbers legible from the street in compliance with the Uniform Fire Code.

- (8) **Vents and openings.** Louvers, ventilators, or openings in walls, roofs, attics, and underfloor areas having headroom less than four feet in height that are not fitted with sash or doors, shall be covered with wire screen. The screen covering the openings shall be corrosion-resistant metal or other approved material that offers equivalent protection and shall have a maximum mesh of one-eighth inch. Eave-type attic ventilators and roof-mounted turbine vents are prohibited.
- (9) **Water faucets.** A minimum of two, three-quarter-inch faucets with hose connections each served by a three-quarter-inch waterline and installed before any pressure-reducing device shall be available per habitable structure separated by at least one-third of the perimeter of the structure. The faucets shall be on the sides of a structure facing fire hazardous areas whenever possible.
- (e) **Perimeter access to fuel modified and fire hazard areas.** Fire fighting vehicles shall have adequate access into areas between fire hazardous areas or fuel modified areas and the development perimeter, so that a wildland fire can be contained at the development perimeter and prevented from spreading to structures. Each development project shall provide adequate vehicular access for fire fighting vehicles to the development perimeter of the project along the portion of the development perimeter that is adjacent to either an existing or proposed fuel modified area, or a fire hazard area. Provisions shall be made and shall be required, where necessary, through conditions of approval for the development project for the continual maintenance of the areas intended to provide the access. Perimeter access shall be provided, through either of the following measures or through alternate measures in compliance with Section 82.13.090 (Alternate Hazard Protection Measures).
- (1) The provision of an existing or proposed road along the development perimeter, or portion thereof that is exposed to a fire hazard or fuel modified area, and which is accessible to fire fighting equipment. The road shall be capable of supporting fire-fighting equipment, shall be at least 20 feet in width, and shall not exceed a grade of 14 percent. The conditions of approval for the development project shall require provisions to ensure that the roadway will be maintained, if it is not within the publicly maintained road system.
- (2) Development projects shall provide access ways, at least 12 feet in width, with a grade not to exceed 14 percent, and capable of supporting fire fighting vehicles, between the development perimeter and proposed or existing streets. Access ways shall be spaced at intervals of no more than an average of 350 feet along each street. The conditions of approval for the development project shall require specific provisions to ensure that access ways will remain unobstructed and will be maintained. Where feasible, access ways may not be paved and shall be designed so as not to detract from the visual quality of the project.
- (f) **Length of cul-de-sacs.** Cul-de-sacs shall not exceed 350 feet in length, except that they may be extended as allowed by this Subsection.

- (1) **Exception for parcels of less than five acres.** A cul-de-sac may exceed 350 feet in length but shall not exceed 600 feet in length, if parcels that take access from the cul-de-sac are less than five acres, and:
  - (A) Alternate measures are utilized in compliance with Section 82.13.090 (Alternate Hazard Protection Measures); or
  - (B) Based upon consideration of the recommendation of the Fire Authority, the Department determines that the cul-de-sac is situated and designed so that each parcel taking access from it is not contiguous to or exposed to either undeveloped fuel modified areas along the development perimeter of the project or to fire hazard areas, and that the extension of the cul-de-sac will not increase the exposure of buildings to wildland fires.
  
- (2) **Exception for parcels larger than five acres.** A cul-de-sac may exceed 600 feet in length if all parcels that take access from the cul-de-sac are five acres or greater in area and:
  - (A) The proposed cul-de-sac is not within or adjacent to areas that are zoned for or subdivided to parcels of five acres or less.
  - (B) Alternate measures are utilized in compliance with Section 82.13.090 (Alternate Hazard Protection Measures).
  
- (3) **Alternate measures.** In compliance with Section 82.13.090 (Alternate Hazard Protection Measures) and dependent upon site specific conditions, one of the following measures or combination of measures may be used to mitigate the effect of creating cul-de-sacs up to 600 feet in length with parcels less than five acres in area:
  - (A) Limitation of the total number of dwelling units with access to the cul-de-sac to no more than 15, and restriction of further subdivision of parcels and construction of additional independent residential units which have access to the cul-de-sac. These restrictions shall be imposed through conditions of approval of the development project.
  - (B) A continuous perimeter access road at least 20 feet in width is provided along the portion of the cul-de-sac exposed to fire hazard or fuel modified areas such that it is drivable under normal conditions by fire fighting vehicles, provides adequate maneuvering space for the vehicles, and is designed so that at least one point of access to the perimeter access road is taken from roads other than the subject cul-de-sac.

- (C) The cul-de-sac road will have a paved width of at least 40 feet with posted no parking for its entire length, and there is at least one area approximately at the midpoint of the cul-de-sac that serves the same function of a cul-de-sac bulb in allowing fire fighting vehicles adequate room to turn around. This measure may only be utilized if the expansion of the road width will not contribute to slope stability hazards either on-site or off-site.
- (D) Other alternate measures approved by the Department in compliance with Section 82.13.090 (Alternate Hazard Protection Measures).
- (g) **Additional requirements.** Dependent upon specific site conditions (e.g., building separation, fire flow, road conditions, slope, vegetation, etc.) or a combination of conditions, the responsible Fire Authority may require structures to meet more stringent construction standards (e.g., full perimeter exterior walls to be constructed to the modified or full one-hour construction standards, sprinklers, soffitted eaves, etc.) as additional mitigation to the fire threat.

Adopted 4011 (2007)

#### 82.13.070 FS1 Additional Development Standards

The requirements of this Section apply only to the FS1 Overlay and are in addition to the requirements in Section 82.13.060 (FS1, FS2, and FS3 Development Standards).

- (a) **Concealed spaces.** Unenclosed or projecting assemblies (e.g., cantilevered floors, bay windows, etc.) that contain concealed space shall be protected on the exposed surface with materials approved for the modified one-hour construction.
- (b) **Decks.** Cantilevered or standard type decks shall be:
  - (1) Constructed with a minimum of at least one-and-one-half-inch wood decking; and/or
  - (2) Protected on the underside with materials approved for one hour fire resistive construction; and/or
  - (3) Composed of noncombustible materials, as defined in the California Building Code.
- (c) **Exposed piping.** Exposed piping, except for plumbing vents above the roof, shall be noncombustible as defined in the California Building Code.
- (d) **Patio covers.** Patio covers attached or within 10 feet of a residential structure with plastic, bamboo, straw or fiberglass or wood lathe lattice made of materials that are one-half-inch or less in width shall be prohibited.

Adopted 4011 (2007)

**82.13.080 Soil Erosion and Sediment Control Plans/Permits**

This Section provides regulations and procedures for project planning, preparation of Soil Erosion and Sediment Control Plans, runoff control, land clearing, and winter operations in order to control existing and potential conditions of human induced accelerated erosion.

(a) **Applicability.** The regulations in this Section apply to all areas within Fire Safety (FS) Overlays, except for ministerial projects within the FS2 and FS3 Areas that are located on parcels that are less than one acre and have a slope of less than 10 percent.

(b) **Soil Erosion and Sediment Control Plans/Permits.**

(1) **Compliance of land clearing or grading activities with approved Plan.** Land clearing or grading activities in Fire Safety (FS) Overlays shall comply with the provisions of an approved Soil Erosion and Sediment Control Plan, unless exempt as follows:

(A) Exempt in compliance with Section 88.02.030 (Exempt Activities); or

(B) Exempt as determined by the Building Official.

(2) **Approval of Plan before issuance of permits.** A Soil Erosion and Sediment Control Plan shall be submitted and approved before the issuance of the following:

(A) Building Permits.

(B) Grading Permits.

(C) Soil Erosion and Sediment Control Permits.

(D) Other permits where, in the opinion of the Building Official, erosion can reasonably be expected to occur.

(3) **Plan contents.** A Soil Erosion and Sediment Control Plan shall:

(A) Include the applicable measures required by this Chapter and other measures or modifications of proposed measures required by the Building Official.

(B) Identify building and access construction envelopes and identify areas that will not be disturbed by construction activity in order to minimize disturbance of erodible areas of a proposed development site.

(C) Preserve existing streams and drainage courses in their natural condition in order to retain their ability to accommodate runoff and water drainage with a minimum of erosion.

(4) **Permit application requirements.** The Building Official shall specify the following application requirements for Soil Erosion and Sediment Control Permits:

- (A) Requirements for the submittal of plans and supporting data to accompany applications for Soil Erosion and Sediment Control Plans and Soil Erosion and Sediment Control Permits.
  - (B) Licensing and/or certification requirements for those preparing Soil Erosion and Sediment Control Plan and Permit submittals.
  - (C) The incorporation and coordination of Soil Erosion Control Plans and Permits with other plan requirements.
  - (D) Other data/materials identified by the Building Official.
- (5) **Additional permit requirements.** For additional permit requirements, see Subsection 88.02.050(f)(2) (Winter operation measures Additional permit requirements).
- (c) **General erosion control requirements.**
- (1) **Conditions causing accelerated erosion prohibited.** No person shall cause, or allow the continued existence of, a condition on a site that is causing or is likely to cause accelerated erosion as determined by the Building Official.
  - (2) **Notification to control erosion.** Upon notification by the Building Official, the responsible person shall take appropriate measures to control erosion on the site within a reasonable period of time as determined by the Building Official.
  - (3) **Plan/Permit approval.** The Building Official may require that a property owner, whose property has been cited in compliance with Subsection (2) (Notification to control erosion), above, file and obtain approval of a Soil Erosion and Sediment Control Plan and Soil Erosion and Sediment Control Permit in compliance with Subsection (b) (Soil Erosion and Sediment Control Plans/Permits), above.
  - (4) **Cessation of activities due to inclement weather.** The Building Official may direct that a particular operation, process, or construction be stopped during periods of inclement weather if the Building Official determines that erosion problems are not adequately being controlled.
  - (5) **Applicable laws and regulations.** Land clearing and grading activities that comply with this Section shall also comply with all other applicable local, state, and Federal laws and regulations. Where there is a conflict with other preexisting County regulations, the conflict shall be resolved by using the least restrictive standard and shall be accomplished before the project is allowed to proceed.
  - (6) **Appeals.** A property owner, an aggrieved person, or a person whose interests are adversely affected by an action or determination of the Building Official may appeal the action or determination in compliance with Chapter 86.08 (Appeals).

(7) **Variances.** The Director may approve, conditionally approve, or deny a variance from the provisions of this Section, the permit conditions, or the plan specifications in compliance with Chapter 85.17 (Minor Variances). The Director may refer a variance request to the Commission in compliance with Section 85.17 (Variances).

(d) **Runoff control measures.** Activities subject to a development permit (e.g. Conditional Use Permit, Grading Permit, Planned Development Permit, Site Plan Permit, Temporary Use Permit, etc.) shall implement measures to control runoff in order to prevent erosion. Measures shall be adequate to control runoff from a 10-year storm.

(1) **Prevention of sediment discharge.** Erosion control and surface flow containment facilities shall be constructed and maintained to prevent discharge of sediment to surface waters or storm drainage systems.

(2) **Permeability rate.**

(A) **More than two inches per hour.** Where soils have a permeability rate of more than two inches per hour, runoff in excess of predevelopment levels shall be retained on the site by methods and in quantities approved by the Building Official. This may be accomplished through the use of infiltration basins, percolation pits or trenches, or other suitable means. This requirement may be waived where the Building Official determines that high groundwater, slope stability problems, etc., would inhibit or be aggravated by onsite retention, or where retention will provide no benefits for groundwater recharge or erosion control.

(B) **Two inches per hour or less.** Where soils have a permeability rate of two inches per hour or less and onsite percolation is not feasible, runoff shall be detained or dispersed over nonerodible vegetated surfaces so that the runoff rate does not exceed the predevelopment level. When the runoff rate must exceed the predevelopment level, the runoff water shall be discharged over nonerodible surfaces or at a velocity that will not erode. The Building Official shall require onsite detention unless the applicant shows that the runoff will not contribute to downstream erosion, flooding, or sedimentation.

(3) **Onsite percolation devices.** Concentrated runoff that cannot be effectively dispersed over nonerodible channels or conduits to the nearest drainage course shall be contained within onsite percolation devices.

(4) **Energy dissipaters at point of discharge.** Where water will be discharged to natural ground or channels, appropriate energy dissipaters shall be installed to prevent erosion at the point of discharge.

(5) **Detention or filtration mechanisms.** Runoff from disturbed areas shall be detained or filtered by berms, vegetated filter strips, catch basins, or other means necessary to prevent the escape of sediment from the disturbed area.

- (6) **Deposition of earth or materials prohibited.** No earth, organic, or construction material shall be deposited in or placed where it may be directly carried into a stream, lake, marsh, slough, lagoon, or body of water.
  - (7) **Buffer zone along land/water margin.** Where land disturbing activities are in proximity to lakes or natural watercourses, a buffer zone shall be required along the land/water margin of sufficient width to confine visible siltation within 25 percent of the buffer zone nearest the land disturbing activities.
- (e) **Land clearing measures.** Activities subject to a development permit (e.g. Conditional Use Permit, Grading Permit, Planned Development Permit, Site Plan Permit, Temporary Use Permit, etc.) shall provide the following land clearing measures:
- (1) **Approval of Plan/Permit required before commencement of activities.** No land clearing activities, except as otherwise allowed by this Section, shall take place before approval of the Soil Erosion and Sediment Control Plan and/or Permit.
  - (2) **Limitations on land clearing and vegetation removal.** Land clearing shall be kept to a minimum. Vegetation removal shall be limited to that amount necessary for building, access, fire protection and construction as shown on the approved Soil Erosion and Sediment Control Plan or as allowed by the Building Official through a Soil Erosion and Sediment Control Permit.
  - (3) **Establishment of vegetation.** Disturbed surfaces shall be prepared and maintained to control erosion and to establish vegetative growth compatible with the area. This control shall consist of any one or a combination of the following:
    1. Effective temporary planting (e.g., rye grass, fast germinating native seed, etc.) and/or mulching with straw, pine needles, chippings, or other slope stabilization material.
    2. Permanent planting of compatible drought resistant species of ground cover, shrubs, trees, or other vegetation.
    3. Mulching, fertilizing, watering, or other methods necessary to establish new vegetation.
  - (4) **Installation and maintenance of protection.** The protection required by this Section shall be installed before calling for final approval of the project and at all times between October 15 and April 15. The protection shall be maintained for at least one year or until permanent protection is established.
  - (5) **Vegetation removal between October 15 and April 15.** Vegetation removal between October 15 and April 15 shall not precede subsequent grading or construction activities by more than 15 days. During this period, erosion and sediment control measures shall be in place.

(f) **Winter operation measures.**

(1) **Winter operation erosion control measures.** Land clearing and grading activities during the winter months (i.e., activities between October 15 and April 15) that are subject to a development permit (e.g. Conditional Use Permit, Grading Permit, Planned Development Permit, Site Plan Permit, Temporary Use Permit, etc.) shall implement the following winter operation measures to prevent accelerated erosion. The Building Official may require additional measures when determined to be necessary by field inspection.

(A) The Building Official shall authorize the following activities between October 15 and April 15 only if the Building Official determines that the activities comply with the provisions of, and are consistent with the purposes of, this Section:

(I) Contiguous land clearing operations involving greater than one acre in a one-year period of time.

(II) Major grading operations (greater than 100 cubic yards).

(B) Between October 15 and April 15, disturbed surfaces not involved in the immediate operation shall be protected by mulching or other effective means of soil protection.

(C) Roads and driveways shall have drainage facilities sufficient to prevent erosion on or adjacent to the roadway or on downhill properties. Erosion-resistant surfacing may include, but is not limited to, slag, crushed rock or natural soil when compacted to 90 percent of maximum density.

(D) Runoff from a site shall be detained or filtered by berms, vegetated filter strips, or catch basins to prevent the escape of sediment from the site. These drainage controls shall be maintained by the permittee or property owner as necessary to achieve their purpose throughout the life of the project.

(E) Erosion control measures shall be in place at the end of each day's work.

(2) **Additional permit requirements.** In addition to the requirements in Section 82.13.080, the following shall also apply:

(A) When construction will be delayed due to the limitation on winter operations, the date for expiration of the permit shall be extended by that amount of time that work is delayed by the requirements of this Section.

(B) The Building Official shall stamp or attach the following statement to all development permits and plans issued for projects subject to the provisions of this Section.

NOTICE: IF THE CONSTRUCTION ACTIVITY WILL EXTEND INTO THE WINTER OPERATIONS PERIOD (OCTOBER 15 THROUGH APRIL 15), ADDITIONAL SOIL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED.

ANY DEVELOPMENT PROJECT WHICH IS REQUIRED TO IMPLEMENT AN APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN SHALL HAVE THE APPROVED PLAN AMENDED IF IT DOES NOT COMPLY WITH SUBSECTION 82.13.080 (f) (Winter Operation Measures) OF THE SAN BERNARDINO COUNTY DEVELOPMENT CODE. ALL REQUIRED WINTER OPERATION EROSION CONTROL DEVICES SHALL BE INSTALLED BEFORE OCTOBER 15 FOR ONGOING CONSTRUCTION PROJECTS AND BEFORE ANY CONSTRUCTION ACTIVITY FOR THOSE DEVELOPMENT PROJECTS COMMENCING BETWEEN OCTOBER 15 AND APRIL 15.

**(g) Inspections.**

**(1) Types of inspections.** The Building Official may perform the following inspections to ensure compliance with this Section:

**(A) Pre-construction inspection.** A pre-construction inspection to determine the potential for erosion resulting from the proposed project.

**(B). Progress inspections.** Periodic progress inspections to determine ongoing compliance with the Soil Erosion and Sediment Control Plan.

**(C) Final inspection.** A final inspection to determine compliance with the Soil Erosion and Sediment Control Plan and with other approved plans and specifications.

**(2) Notification.** The permittee shall provide the Building Official at least:

**(A) Commencement of work.** Twenty-four hours' advance notice before the commencement of authorized work.

**(B) Inspection request.** Nine business hours' advance notice of an inspection request.

**(3) Right of entry.** Filing an application for a development permit (e.g. Conditional Use Permit, Grading Permit, Planned Development Permit, Site Plan Permit, Temporary Use Permit, etc.) constitutes a grant of permission for the County to enter the permit area for the purpose of administering this Section from the date of the application filing to the termination of the erosion control maintenance period.

**(h) Continued responsibility.** The property owner and the permittee shall be responsible for ensuring that accelerated erosion does not occur from an activity during and after project construction. Additional measures, beyond those specified in an approved Soil Erosion and Sediment Control Plan, may be required by the Building Official as deemed necessary to control erosion after project completion.

- (i) **Post-approval procedures.** The procedures and requirements in Division 6 (Development Code Administration), related to permit implementation, time limits, extensions, appeals, and revocations, shall apply following the decisions on Soil Erosion and Sediment Control Plans and Soil Erosion and Sediment Control Permits.

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**82.13.090 Alternate Hazard Protection Measures**

- (a) **Purpose.** This Section allows greater design flexibility than would otherwise be permitted to more efficiently and effectively achieve the purposes of the FS Overlay. Design flexibility is provided by allowing the substitution of alternate measures for otherwise applicable requirements if it is found that they provide the same or a greater level of protection from wildland fires and other natural hazards, and that they will fulfill the same purpose as the established standard or requirement.

- (b) **Applicability.**

- (1) The provisions of this Section following shall apply only to the standards and requirements of:

- (A) Subsection 82.13.060(c)2. (Building separation standards in FS1 and FS1 areas);

- (B) Subsection 82.13.060(e) (Perimeter access to fuel modified and fire hazard areas); and

- (C) Subsection 82.13.060(f) (Length of cul-de-sacs).

- (2) Since these alternative measures apply to the standards and requirements that pertain to these three specific design elements, they are intended to be applied to development projects only and not to individual parcel conditions. Therefore, they do not apply to the determination of setbacks for residential construction on individual lots.

- (c) **Substitution of alternative measures for standards and requirements.**

- (1) If alternative measures are proposed, the Fire Authority shall determine, with specific consideration of the effect of the proposed alternative measures, whether the proposed development project has adequate provisions for fuel modification and management, including the ongoing maintenance of fuel modified areas.

- (2) If the Fire Authority makes a positive determination in compliance with Paragraph 1, above, alternate measures may be substituted for the established standards and requirements if the Department, with consideration of the recommendation of the Fire Authority, finds and justifies all of the following:

- (A) The approved alternative measures meet the intent of, and serve the same purpose as, the established standard or requirement.
- (B) The approved alternative measures provide the same or a greater level of protection or are as effective as the established standard or requirement.
- (C) There are clear and substantial reasons for utilizing the alternative measures because they provide for a more efficient and economic use of the site, or provide for a superior physical design, and are consistent with the intent of the FS Overlay.

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