




Hazards

Hazards are natural and man made conditions that must be respected if life and property are to be protected as growth and development occur. As the ravages of wildland fires, floods, dam failures, earthquakes and other disasters become clearer through news, public awareness and sound public policy combine to require serious attention to these conditions.

Portions of this planning area may be subjected to hazards such as flooding, dam inundation, seismic occurrences, and wildland fire. This is not at all surprising, given the extremes of topography and extent of potential water movement in this portion of the County. These hazards are depicted on the hazards maps, Figures 10 to 14. These hazards are located throughout the Pass at varying degrees of risk and danger. Some hazards must be avoided entirely, while the potential impacts of others can be mitigated by special building techniques or other methods. The following policies provide additional direction for specific hazardous conditions.

LOCAL HAZARD POLICIES

Flooding

 Since 1965, eleven Gubernatorial and Presidential flood disaster declarations have been declared for Riverside County. State law generally makes local government agencies responsible for flood control in California.

As shown on Figure 10, Flood Hazards, some portions of the Pass are flood-prone. When flooding does occur, it originates in the steep mountainous areas to the north and south and often produces spectacular flash floods. These floods can reach unusually high velocities when they reach the valley floor where most of the development is located. Their speed and volume also allows them to carry a significant amount of debris. When this occurs, debris can block flood control channels, particularly where they cross under roadways or rail lines, forcing water to spill over into adjacent areas. The drainages particularly subject to flooding are the Noble and Little San Gorgonio Creeks located north of Cherry Valley, and Smith and Pershing Creeks located in Highland Springs. Flash flooding is the most life-threatening hazard because only minimum notice can be given, and the combined flow of flood water and debris can be extremely damaging.

Many techniques may be used to address the danger of flooding, such as avoiding development in vulnerable floodplains, altering the water channels, using certain building techniques, elevating structures that are in floodplains, and enforcing setbacks. This set of policies addresses the hazards associated with flooding and dam inundation.

Policies:



PASS 16.1 Protect life and property from the hazards of flood events through adherence to the Flood and Inundation Hazards section of the General Plan Safety Element.



PASS16.2 Adhere to the flood proofing, flood protection requirements, and flood management review requirements of Riverside County.



PASS 16.3 Require proposed development projects, which are subject to flood hazards, surface ponding, high erosion potential or sheet flow, to be submitted and approved by the Riverside County Flood Control and Water Conservation District.

Wildland Fire

Due to the vast amounts of undeveloped, sloping terrain and the presence of certain types of vegetation such as the oak woodlands and chaparral habitat, much of the Pass is subjected to a high risk of fire hazards. The highest danger of wildfires can be found in the National Forest, rural areas, and along the urban edges. Methods to address this hazard include techniques such as avoidance of high-risk areas, creating setbacks that buffer development from hazard areas, maintaining brush clearance to reduce potential fuel, use of low fuel landscaping, and careful application of fire retardant building techniques. In still other cases, safety oriented organizations such as Fire Safe can provide assistance in educating the public and promoting practices that contribute to improved public safety. Refer to Figure 11, Wildfire Susceptibility, to see the locations of the wildfire zones.

Fire Fact: Santa Ana winds create a special hazard. Named by the early settlers at Santa Ana, these hot, dry winds enhance the fire danger throughout southern California.

Policies:



PASS 17.1 Protect life and property from wildfire hazards through adherence to the Fire Hazards section of the General Plan Safety Element.

Seismic

The Pass is one of the most densely faulted areas in Riverside County, as can be seen on Figure 12, Seismic Hazards. Most of the faults are located in the steep slopes of the surrounding mountain ranges. The San Andreas and the San Jacinto fault zones are two of the most active fault systems in southern California. The San Bernardino Mountain segment of the San Andreas fault, while not within the boundaries of this area plan, does have enormous influence on the seismic activity of the region. The Banning fault has a central segment that extends from Calimesa to Whitewater Canyon. Other smaller faults associated with the San Andreas fault system also have the potential for generating earthquakes that would result in strong ground shaking, and perhaps surface rupture in the western portion of the Pass.

Liquefaction occurs primarily in saturated, loose, fine to medium-grained soils in areas where the groundwater table is within about 50 feet of the surface. Shaking causes the soils to lose strength and behave as liquid. Excess water pressure is vented upward through fissures and soil cracks and a water-soil slurry bubbles onto the ground surface. The resulting features are known as "sand boils", "sand blows" or "sand volcanoes." Liquefaction-related effects include loss of bearing strength, ground oscillations, lateral spreading, and flow failures or slumping.

The San Gorgonio fault zone consists of a series of faults dissipating from the mountain westward into the Cherry Valley vicinity. The San Jacinto fault zone, west of the Pass, is part of the San Andreas fault system. The two systems separate near the San Gabriel mountains where the San Jacinto fault extends southeastward toward the San Jacinto Mountains and the San Timoteo Badlands. Additional faults in the area include the Beaumont Plain fault zone, Pinto Mountain fault, and the Crafton Hills fault zone.

A further complication associated with fault activity is liquefaction, which can occur with groundshaking, and in areas where certain soil conditions and shallow groundwater level exist. The valley between the San Bernardino and the San Jacinto Mountain ranges is prone to moderate liquefaction around Calimesa and