



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 the news, public awareness and sound public policy combine to require serious attention to these conditions.

Portions of the Reche Canyon/Badlands area may be subjected to hazards such as flooding, dam inundation, seismic occurrences, and wildland fire. These hazards are depicted on the hazards maps, Figure 9 to Figure 13. These hazards are located throughout the Reche Canyon/Badlands area 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. The Riverside County General Plan Safety Element provides general policy direction dealing with natural hazards throughout the County. The following policies provide additional direction for relevant issues specific to the Reche Canyon/Badlands area.

 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.

LOCAL HAZARD POLICIES

Flooding


The Reche Canyon/Badlands area contains three 100-year flood zones, as identified in Figure 9, Flood Hazards. These zones include Reche Canyon Creek, San Timoteo Creek, and the San Jacinto River.

Policies:



RCBAP 15.1 Adhere to the flood proofing, flood protection requirements, and Flood Management Review requirements of the Riverside County Ordinance Regulating Flood Hazard Areas.

RCBAP 15.2 Protect proposed development projects that are subject to flood hazards, surface ponding, high erosion potential or sheet flow by requiring submission to the Riverside County Flood Control and Water Conservation District for review.

 **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.

Wildland Fire Hazard

Due to the rugged and vegetated nature of the Badlands and Box Springs Mountains regions, much of the Reche Canyon/Badlands area is subject to a high risk of fire hazards. 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, low fuel landscaping, and 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. Reference Figure 10, Wildfire Susceptibility.



Policies:

RCBAP 16.1 Protect life and property from wildfire hazards through adherence to policies in the Fire Hazards section of the General Plan Safety Element.



Seismic/Liquefaction

The Reche Canyon/Badlands area is traversed by several active and potentially active fault zones, and has experienced several earthquakes of moderate magnitude since records have been kept. The primary seismic hazards which result are ground-shaking and the potential for ground rupture along the surface trace of the fault. Secondary seismic hazards result from the interaction of ground-shaking with existing soil and bedrock conditions, and include liquefaction, settlement, and landslides.

Policies:


RCBAP 17.1 Protect life and property from seismic related incidents through adherence to policies in the Seismic Hazards section of the General Plan Safety Element.

Slope

The large extent of mountainous terrain making up the Reche Canyon/Badlands area raises a number of land use and safety concerns regarding slope, including drainage, erosion, fire, and vehicular access. Though the presence of large areas of significant slope severely limits the amount of developable land in the area, urbanization of hillsides can lead to increased risk and damage from erosion and slope failures. The probability of landslides and mud slides can be affected by hillside development and associated site designs, grading and landscaping techniques, particularly in areas inherently prone to such slope failures. Development of hillside areas can also impact the extraordinary scenic values of the Badlands and Box Springs Mountains areas.

Policies:

RCBAP 18.1 Protect life and property through adherence to the Hillside Development & Slope policies of the Land Use Element, and the Slope & Soil Instability Hazards policies of the General Plan Safety Element.

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.