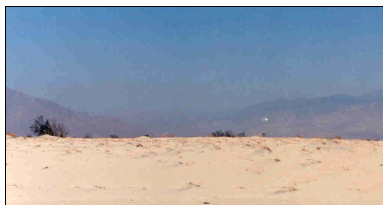




Wind Erosion & Blowsand

Wind erosion most commonly occurs when barren sand or sandy loam soils are exposed to high wind in the absence of moisture. Alluvial fans in the Western Coachella Valley are especially prone to wind erosion, although wind erosion is not limited to these areas. Human activity can increase wind erosion by disrupting soil formations, and activity can increase wind erosion by disrupting soil formations and compaction, disturbing the stabilizing and wind-breaking effect of dunes, and most significantly, removing surface vegetation and its stabilizing effects.

Blowsand, the most severe form of wind erosion, occurs largely due to natural conditions. Blown sand can cause significant damage to property, and also results in the nuisance and expense of removing sand from roadways and other property, where it interferes with normal activity. Additionally, blowsand introduces a high level of suspended particulates into the air, and can create respiratory problems due to poor air quality.



Blowsand Source Area

Despite its ability to cause property damage, alter normal activity, and create health problems, blowsand is also an essential element to maintaining habitat areas within the Valley. Many species in the Coachella Valley, as discussed in the Habitat Conservation section of this area plan, are adapted to live on wind blown sand. Creating a safe environment for the residents of Western Coachella Valley and, at the same time, protecting a valuable habitat resource requires, therefore, a delicate balance.

Policies:



WCVAP 19.1 Minimize damage from and exposure to wind erosion and blowsand through adherence to the Slope & Soil Instability Hazards section of the General Plan Safety Element.

WCVAP 19.2 Require protection of soil in areas subject to wind erosion or blowsand. Mitigation measures that may be required include but are not limited to windbreaks, walls, fences, vegetative groundcover, rock, other stabilizing materials, and installation of an irrigation system or provision of other means of irrigation.



WCVAP 19.3 Control dust through the policies of the Particulate Matter section of the General Plan Air Quality Element.

Wildland Fire Hazard

Due to the mountainous nature and flora of portions of the Western Coachella Valley and prevailing winds in the San Geronio Pass region, some of the areas in the Western Coachella Valley are subject to a risk of fire hazards. The highest danger of wildfires can be found in the most rugged terrain where, fortunately, development intensity is relatively low. Methods to address this hazard include such techniques as not building in high-risk areas, creating setbacks that buffer development from hazard areas, maintaining brush clearance to reduce potential fuel, establishing low fuel landscaping, and applying special 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 12, Wildfire Susceptibility, to see the locations of the wildfire zones within the Western Coachella Valley area.

Policies:



- WCVAP 20.1 Protect life and property from wildfire hazards through adherence to the Fire Hazards section 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.

Seismic/Liquefaction

Western Coachella Valley is traversed by several active and potentially active fault zones, including the San Andreas Fault, 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:

- WCVAP 21.1 Protect life and property from seismic related incidents through adherence to the Seismic Hazards section of the General Plan Safety Element.

Slope

The large amounts of mountainous terrain throughout the Western Coachella Valley area raises a number of land use and safety concerns regarding slope, including drainage, erosion, fire, and vehicular access. Continued urbanization of hillside areas can lead to increased risk and damage from erosion and slope failures. The probability of landslides and mudslides 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 Coachella Valley.

Policies:



- WCVAP 22.1 Protect life and property through adherence to the Slope & Soil Instability Hazards section of the General Plan Safety Element, the Environmentally Sensitive Lands section of the General Plan Multipurpose Open Space Element, the Hillside Development and Slope section of the General Plan Land Use Element, and the policies of the Mountainous and Open Space Land Use Designations.

- WCVAP 22.2 Prohibit development on slopes exceeding 25 percent.