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.

Liquefaction & Seismic

Compared to many other portions of southern California, localized seismic hazard potential here is relatively slight. There are no known seismic faults within the Eastvale planning area. However, more remote faults, such as the San Andreas and San Jacinto Faults, pose significant seismic threat to life and property here. Threats from seismic events include ground shaking, fault rupture, liquefaction, and landslides. Eastvale, with its close proximity to the Santa Ana River, has a high liquefaction potential, primarily due to shallow groundwater and relatively fine soil compositions. The use of specialized building techniques, enforcement of setbacks from local faults, and sound grading practices will help to mitigate potentially dangerous circumstances. Refer to Figure 10, Seismic Hazards, for the location of seismic hazard and liquefaction areas within the Eastvale planning area.

Policies:

EAP 14.1 Protect life and property from seismic-related incidents through adherence to the policies in the Seismic Hazards section of the General Plan Safety Element.

Arundo Donax is a tall, perennial, cane-like grass that resembles bamboo. The main stems can reach a height of 30 feet and can take over large areas due to its aggressive growth and ability to survive in a variety of environmental conditions. Due to the density and height of its growth, Arundo Donax poses a fire hazard along the Santa Ana River.

Wildland Fires

Due to the lush nature of the vegetation within the Santa Ana River corridor, this area is subject to a risk of fire hazards. The highest danger of wildfires can be found in the watercourse and its immediate environs where, fortunately, development intensity is relatively low. Methods to address this hazard include such techniques such 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. The County currently operates a management plan to eradicate the invasive Arundo Donax species within the Santa Ana River corridor. Refer to Figure 9, Wildfire Susceptibility, to see the locations of the wildfire zones within Eastvale.

Policies:

EAP 15.1 Protect life and property from wildfire hazards through adherence to policies in the Fire Hazards section of the General Plan Safety Element.

EAP 15.2 Continue abatement and mitigation programs for the removal of Arundo Donax within the Santa Ana River corridor.

Slope

Eastvale has very few scattered areas where slope exceeds 15%. These areas require special development standards and care to prevent erosion and landslides and minimize scarring that results from excessive grading. The following policies are intended to ensure life and property while protecting the character within these areas. Figure 11, Steep Slope, reveals the slope conditions within