

### 1.6.3.1 Geographic Information System Coverage of Liquefaction Hazards in Riverside County (Plate 1-5)

**Coverage Description:** Liquefaction Hazards in Riverside County

**Coverage distribution file name:** liquef.e00

**Coverage Area:** Riverside County

**Source:** Earth Consultants International

**Scale:** 1:250,000

Hazard mitigation policies for proposed projects in Riverside County based on the detailed liquefaction mapping shown on Plate 1-5 should be implemented as follows:

**General Construction:** special site-specific liquefaction hazard studies should be required in all areas mapped as "Shallow Ground Water, Susceptible Sediments" with the exception of the Blythe region.

**Critical Facilities/Lifelines:** special site-specific liquefaction hazard studies should be required in all areas of susceptible sediments, including the Blythe region.

### 1.6.4 Seismically-Induced Settlement

In some situations, strong ground shaking can cause the densification of soils, resulting in local or regional settlement of the ground surface. Local differential settlements damage structures. Regional settlements can damage pipelines by, for example, changing the gravity gradient on water and sewer lines and canals.

Whether seismically induced settlement will occur depends on the intensity and duration of ground shaking, and the relative density (the ratio between the in-place density and the maximum density) of the subsurface soils. Sediments in the County's alluvial valleys were deposited fairly rapidly, which may lead to conditions of low density sediments that can settle in an earthquake. Therefore, many of the valley regions that contain relatively recent sediments may be susceptible to some degree of seismic settlement. The areal extent of relatively young sediments with moderate to locally high potential for settlement may be correlated with areas of valley fill represented on subsidence susceptibility mapping described in Chapter 2-Soil and Slope Instability.