ABSTRACT

GEOLOGIC AND SEISMIC HAZARD ASSESSMENT OF
ANZA-BORREGO DESERT STATE PARK

by

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Anza-Borrego Desert State Park is located in southern California just
north of the U.S.-Mexico border. It is home to some of the most spectacular
geology in the region. This study identifies many park resources with geologic
significance. The unique geology of the park and increased usage has elevated
the level of concern for both park resources and the safety of its visitors. In the
summer of 1998 a preliminary field and office investigation was conducted to
assess and evaluate the geologic resources and hazards of the park.

This study includes an evaluation of the regions structural history and
its relation to park resources and hazards. The assessment process led to the
compilation of a digitally produced geology and structure map of the park and a
slope based potential hazard map.
To evaluate the hazards associated with Anza-Borrego Desert State Park, this study focused on the interrelations of climate, topography and local relief, the geologic properties of the rock units, and the complex seismic activity of the region. Anza-Borrego Desert State Park lies within the most active fault system in California. This fault system has regionally produced more large earthquakes than anywhere in the State of California. By identifying both imminent and potential hazards, this study has laid preliminary groundwork for further investigations concerning geologic and seismic hazard assessment.