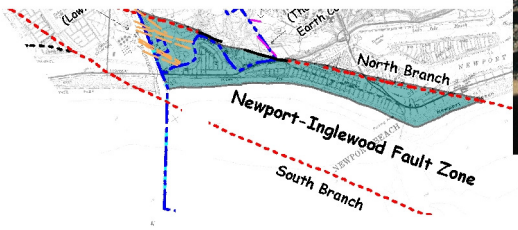
Hazards Assessment Analysis as a Basis for the Safety Element of the General Plan for the City of Newport Beach, California

PROJECT DESCRIPTION

Newport Beach in southern California enjoys about 9.25 miles of shoreline along the Pacific Ocean, and approximately 50 miles of waterfront when including the shoreline, Newport Bay, and islands within City limits. This setting is the result of relatively recent active forces of nature and even more recent man-made modifications. When nature is left to run its course, some processes take hundreds of thousands of years to shape the landscape, whereas others occur suddenly, with little or no warning. These catastrophic events tend to occur so infrequently that it is only recently that scientists have started to fully appreciate the magnitude of the low probability but high risk events that can have severe impacts on populated regions. Many of these processes have the potential to destroy property and compromise the safety of people that live in areas susceptible to natural hazards, especially in coastal areas, where large populations are exposed. Newport Beach is susceptible to coastal hazards, including tsunamis, storm surges, and rising sea level; seismic hazards such as fault rupture, strong ground shaking, and liquefaction; naturally occurring methane; slope instability, and wildfires. Man-made hazards that can impact the area include accidental or unauthorized releases of hazardous materials, structural fires in densely populated areas with limited access, such as Balboa Island, and airline accidents over or within City limits.



SOLUTION

Earth Consultants International conducted a Hazards Assessment Study for the City of Newport Beach that addressed the coastal, seismic, geologic, flooding, hazardous materials management, and fire hazards in the City. This study became the foundation to the City's Safety Element of the General Plan (prepared by others), and their Disaster Mitigation Plan (prepared by us). As part of our study we evaluated the hazard posed by the then newly mapped San Joaquin Hills thrust fault, including conducting a HAZUS™ earthquake loss estimation for earthquake scenarios on this and other regional faults. We also retained Emergency & Disaster Management, Inc. to conduct an aviation hazards study with emphasis on commercial airliner traffic in and out of John Wayne Airport and the potential for an airplane crash to occur in Newport Beach. After summarizing the City's susceptibility to these hazards, we provided mitigation strategies that can be used for hazard reduction, emergency planning, and disaster recovery in those areas of the City most likely to be impacted by the issues addressed.

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