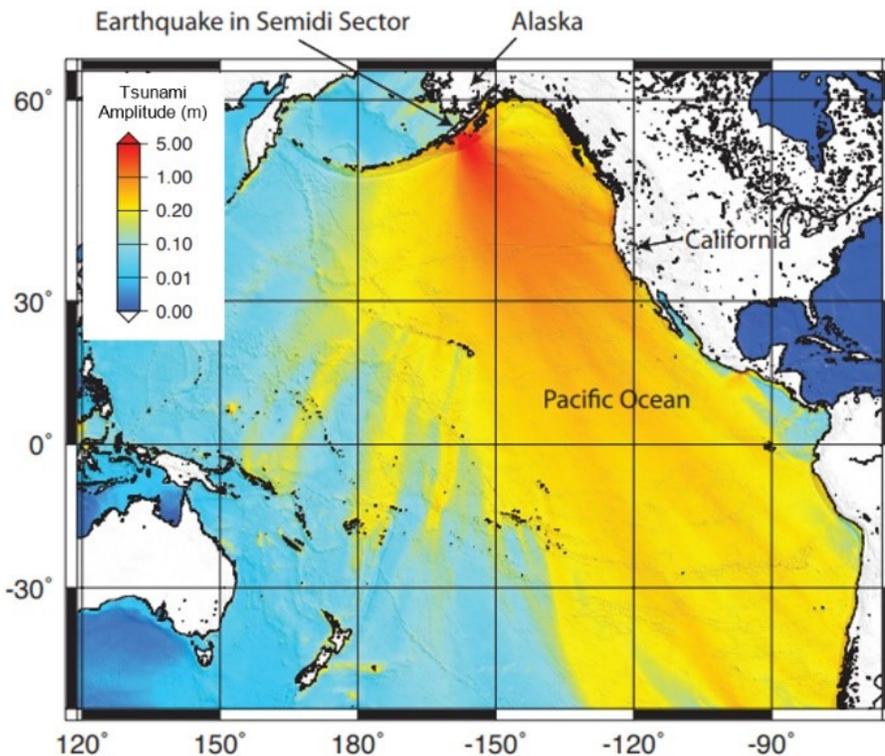


Science Application for Risk Reduction (SAFRR): Tsunami Scenario



Location:
California, Statewide

Contracting Party:
U.S. Geological Survey (USGS)

Project Dates:
Sep 2012 – Apr 2014

Services Provided:
 Project Leadership
 Ecological Assessment
 Natural Resources Assessment
 Economic Analysis
 Critical Resources Identification
 Natural Hazard and Disaster Risk Management
 Multi-Disciplinary and Sector Analysis
 Scenario-Based Approaches
 Action Plan Development
 Briefings and Reports

Key Outcome:

A comprehensive scenario-based tsunami risk assessment and planning exercise to address the potential impacts and mitigation strategies based on a probable major earthquake and tsunami affecting the state of California. We were part of the leadership team and with responsibility for natural resources, ecosystems, fisheries and the Port of Los Angeles and Long Beach California.

Project Summary:

This project focused on assessing and planning for extreme events, in this case, an Alaska earthquake generating a tsunami affecting the California coast. (The 9.0MP 1965 earthquake was chosen The effort involved developing likely scenarios based on past events and future conditions (the scientific basis for the scenario), evaluating likely inundation areas, current velocities in key ports and harbors, physical damage and repair costs, economic consequences, environmental and ecological impacts, social vulnerability, cascading disasters, emergency management and evacuation challenges, and policy implications associated with this scenario. We also addressed ongoing mitigation efforts and new communication products.

The intended users are those who need to make mitigation decisions prior to future hazards, and those who will need to make rapid decisions during extreme events. The results are designed to help managers and communities understand the context and consequences of their decisions and how they may improve preparedness and response. The scenario represents a collaboration between the U.S. Geological Survey (USGS), the California Geological Survey, the California Governor's Office of Emergency Services (Cal OES), the National Oceanic and Atmospheric Administration (NOAA), other Federal, State, County, and local agencies, private companies, stakeholders, and academic and other institutions. We were part of the leadership team. Our specific activities evaluated environment, ecology, natural resources and natural resource communities (e.g. fishermen and fishing towns). We used inundation models and GIS mapping and targeted environmental, economic and socio-cultural effects. Our results were integrated into the overall scenario effort to form a cohesive product.