

BAY AREA HOUSING AND COMMUNITY MULTIPLE HAZARDS RISK ASSESSMENT

Dana Brechwald

Association of Bay Area Governments

ABSTRACT

In the Bay Area, retaining housing, and the populations that live in housing, is crucial to expediting and ensuring an effective disaster recovery after an earthquake or flooding. Understanding where the most vulnerable housing types and community members are located within the region is a crucial step to understanding multi-faceted risk within the region and to better understand where mitigation needs to be prioritized. For the region as a whole to become more resistant to disasters, jurisdictions also need comprehensive, actionable strategies to reduce vulnerabilities and build more resilient communities. The Bay Area Housing and Community Multiple Hazards Risk Assessment, is a multi-agency project led by the Association of Bay Area Governments (ABAG) and the Bay Conservation and Development Commission (BCDC) designed to assess structural and social components of vulnerability, and develop strategies to address these specific vulnerability characteristics.

Previous research by ABAG found that a crucial factor of recovery from a seismic or flood event was keeping people in their homes. Multiple studies have shown that population loss after a disaster significantly slows recovery time. Fundamental to retaining residents is keeping housing intact. In the Bay Area, much of the older, more affordable housing stock is vulnerable to disasters, and rebuilding can take years. Past disasters have also demonstrated that low-income or rental housing often gets demolished and rebuilt as market rate housing, permanently changing community and regional demographics.

Additionally, in many communities, residents such as the elderly, low income residents, people without automobiles, or renters may lack access to information and services, financial means, or the physical capacity to prepare for, respond to, and recover from hazard events. The problem is significantly exacerbated when these residents live in fragile housing. Policies for housing and community resilience are especially needed where locally designated areas of focused growth, known as Priority Development Areas (PDAs), are at risk from earthquakes and flooding,

This project uses a scalable, multi-jurisdictional, cross-discipline approach to assess and address the issues of planning for housing and community vulnerability to multiple hazards. The US Geological Survey (USGS), US Environmental Protection Agency (EPA), and Federal Emergency Management Agency (FEMA) as well as the California Strategic Growth Council (SGC) support the project through funding, consultant support, and participation in stakeholder meetings. The approach to this project is three-fold:

- 1) Assess - Characterize the vulnerability of existing housing and community members to ground shaking, liquefaction, and existing flooding or future flooding due to sea level rise. Develop indicators for housing types fragile to the identified hazards and for community vulnerability, producing regional maps to identify where housing and community vulnerability overlap.
- 2) Strategies - Develop policy and planning strategies as well as implementation options that can help local jurisdictions address the identified vulnerabilities. The outcomes of the assess step inform the development of policy, planning, coordination, education, and programmatic strategies. Strategies improve existing housing and community vulnerability as well as guide safe and smart new growth in hazard areas.
- 3) Disseminate & Implement - Share findings with local jurisdictions and work with specific jurisdictions that are ready to implement strategies through the development of adoption-ready model ordinances, guidance, and case studies.