

Panel Discussion on Making Your City Resilient to Earthquakes

The Resilient City Initiative germinated from the insight that modern building codes are designed to insure life-safety, not habitability. Strong shaking can damage structures built to code, forcing residents into shelters and causing a long-term loss of population. The resilience of a city is determined by the habitability of homes and the continuity of services and business after an earthquake. After the recent earthquake in Christchurch, New Zealand, neighborhoods where people could shelter-in-place were able to retain more of their population and local businesses, and were able to rebuild and recover more rapidly.

In 2009 - 2010, SPUR published a series of policy papers as part of its Resilient City Initiative. Four of these papers explore what needs to be done "Before the Disaster," two papers discuss "Emergency Response" in the immediate aftermath of the earthquake, and the final paper considers the problem of transportation "After the Disaster." These papers can be downloaded from <http://www.spur.org/policy/the-resilient-city>. This work was generously supported by Degenkolb Engineers.

The work done this year by a SPUR task force, funded by a USGS External Grant, explored the issue of housing in the context of resilience - by specifically looking at the set of steps that would need to be taken to ensure that housing could meet "shelter-in-place" standards after a M7.2 San Andreas earthquake on the peninsula segment of the San Andreas Fault. This work utilized the 2010 Community Action Plan for Seismic Safety (CAPSS) Report to estimate the impact of the expected earthquake on San Francisco's neighborhoods. In addition, the task force considered statistics from a series of other disasters to evaluate a shelter-in-place goal of 95% for San Francisco. The report outlined engineering standards for gauging habitability in existing buildings. These standards will be needed to implement habitability-based policies and mitigation programs. Finally, the report proposed guidelines for municipal inspections and strongly advocated planning to establish neighborhood service centers in the post-earthquake environment.

The Panel Discussion will start with brief presentations summarizing the prior and recent work on the Resilient City Initiative. The discussion will explore what further work is needed to complete the initiative, what can be done to implement the initiative in San Francisco, and what can be done to export this initiative to cities throughout California and the United States. We invite questions and comments from the audience on the problems of implementing and exporting this initiative.

AGENDA:

- 9:30a - 9:40a: Panel Introduction, *Sarah Karlinsky, Deputy Director, SPUR :: San Francisco Planning + Urban Research*
- 9:40a - 9:55a: Overview: Resilient City Initiative and Introduction to Safe Enough to Stay Report, *Chris Poland, Chairman and Senior Principal, Degenkolb*
- 9:55a - 10:10a: Section 1: How much of San Francisco's housing stock needs to meet shelter-in-place standards in order to be resilient? *Laura Samant, Geohazards International and Mary Comerio, UC Berkeley*
- 10:10 - 10:25a: Section II: What engineering criteria should be used to determine whether a home has adequate shelter-in-place capacity? *David Bonowitz, Structural Engineer*
- 10:25a - 10:40a: Section III: What needs to be done to enable residents to shelter in place for days and months after a large earthquake? *Laurence Kornfield, Chief Building Officer, City of San Francisco Department of Building Inspection*
- 10:40a - 11:10a: Moderated Panel Discussion, *Sarah Karlinsky, Deputy Director, SPUR :: San Francisco Planning + Urban Research*
- 11:10a - 11:27a: Q&As
- 11:27a - 11:30a: Conclusion