The Planner's Role

in Disaster Response and Recovery

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Bay Area Planning Director's Association Meeting

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"I conducted my own damage assessment by 7 am that morning on my way into work. Our first priorities were to address the immediate needs of residents… But, I also started thinking then about the kinds of procedures that would be needed to implement my vision of the rebuilt city."

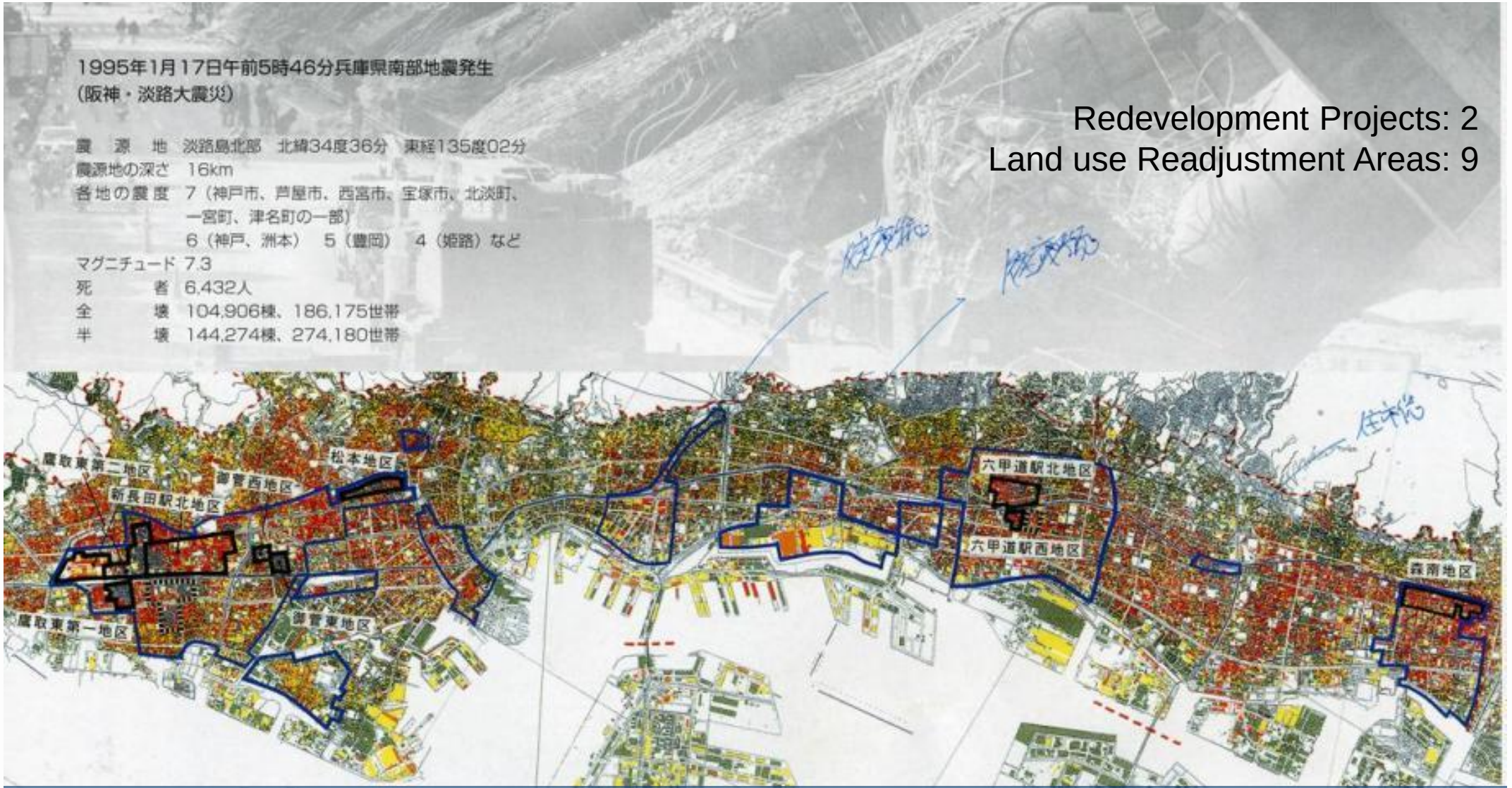
(K. Sasayama, Former Mayor, City of Kobe, Japan)

Mw6.9 earthquake, January 17, 1995, 5:46 am

- 6,400 deaths, >200,000 people displaced
- 400,000 buildings damaged
- 250 acres of urban conflagrations

Kobe's 2-step planning process:

- Two weeks after the January 17 earthquake, issued a 2-month moratorium on new construction
- 1st step (March17, 1995): Issued decisions on "restoration promotion districts"
- 2 step: Detailed planning with stakeholders in the districts



Kobe Restoration Promotion Districts

Selected based upon damage and city's master plan

Defined district locations and basic design principles, i.e. wider roads, parks

HayWired Scenario

M7 Mainshock and Aftershock damages

- $72B regionwide.; $33B in Alameda County
- Extensive/Complete damage is 8% of 9 county buildings; 27% of Alameda County

Population effects

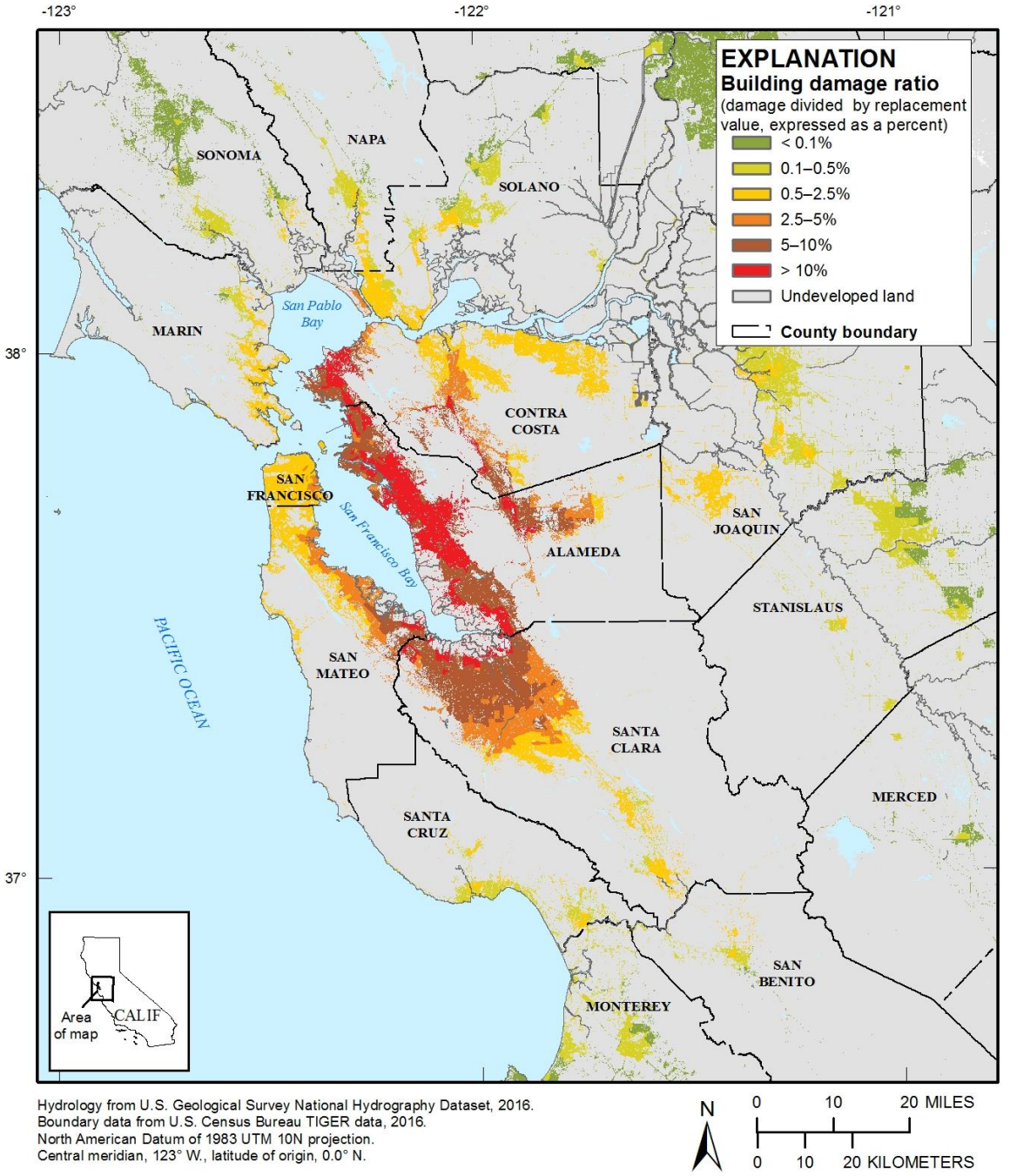
- 800 Deaths; 1800 injuries
- 152,000 displaced households

Earthquake insurance payouts

- 9% of residential, 20% of commercial damages
- 60% insured losses in Alameda, 17% in Santa Clara, 11% Contra Costa, <5% elsewhere

Fire following Earthquake

- Another $30 B in property losses
- Increases deaths, injuries, displacement

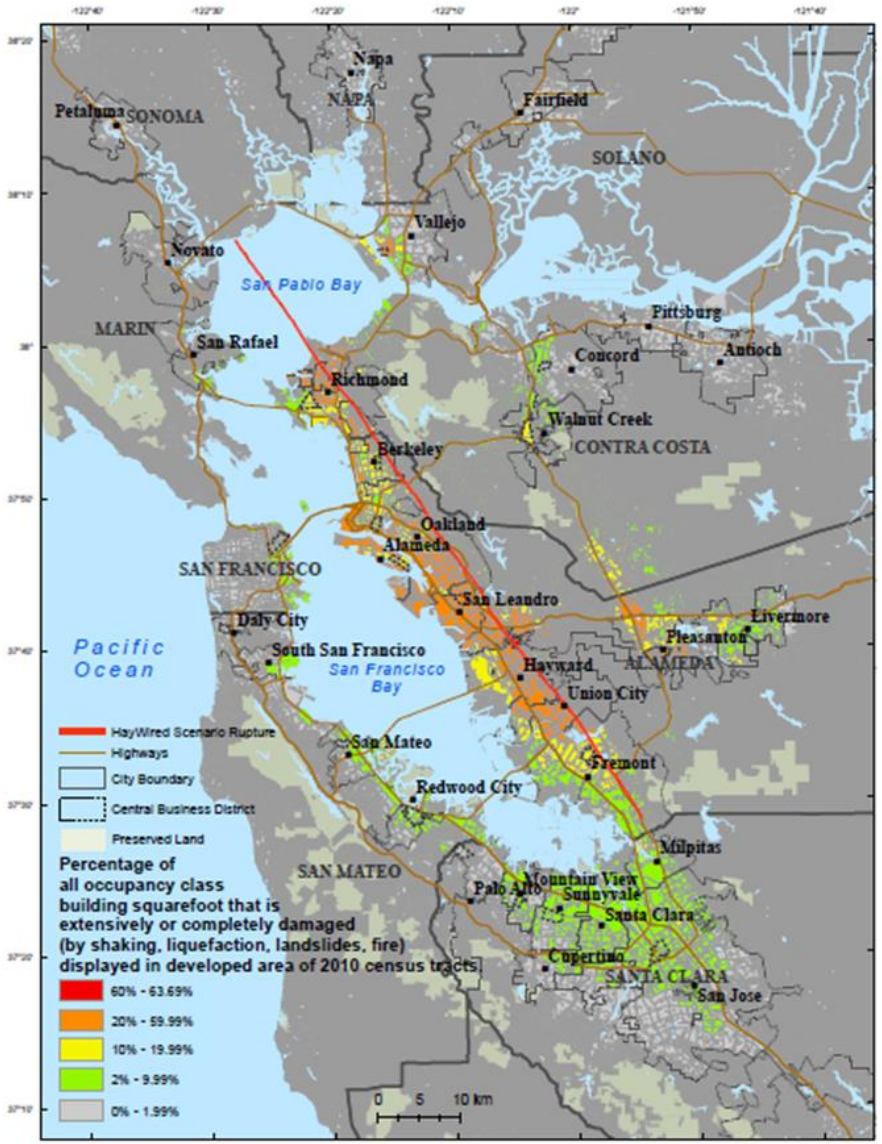


Combined Damage “Footprint”

Combined effects of earthquake ground shaking, landslides, liquefaction and fires

- Nearly 1 million residential buildings (1.4 million housing units) and nearly 40,000 non-residential buildings sustain damage. Almost 1/3 of Bay Area housing stock would be damaged
- 100,000 residential buildings sustain extensive or complete damage

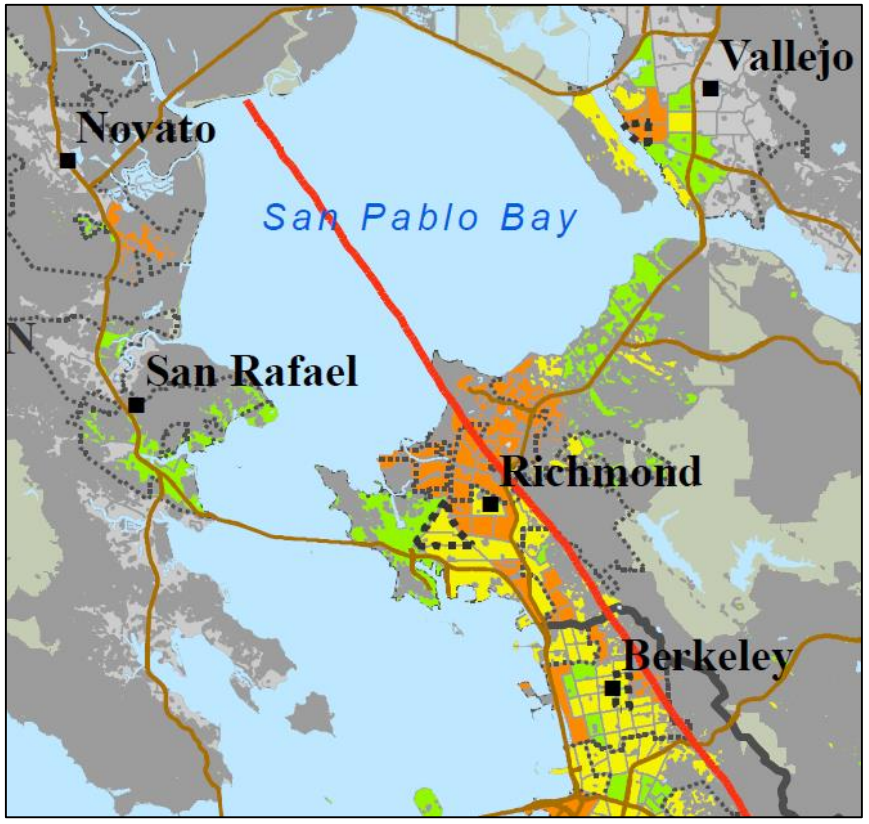
High-impact areas cover only 8% of all census tracts in the 9-county region, but contain nearly 50% of all housing that is likely to be uninhabitable or completely destroyed and 600,000 employees



Percentage of all building square footage in a census tract in an extensive or complete damage state

- >60%
- 20% - 60%
- 10% - 20%
- 2% - 10%
- <2%

High Impact Areas: Central Alameda and Western Contra Costa counties



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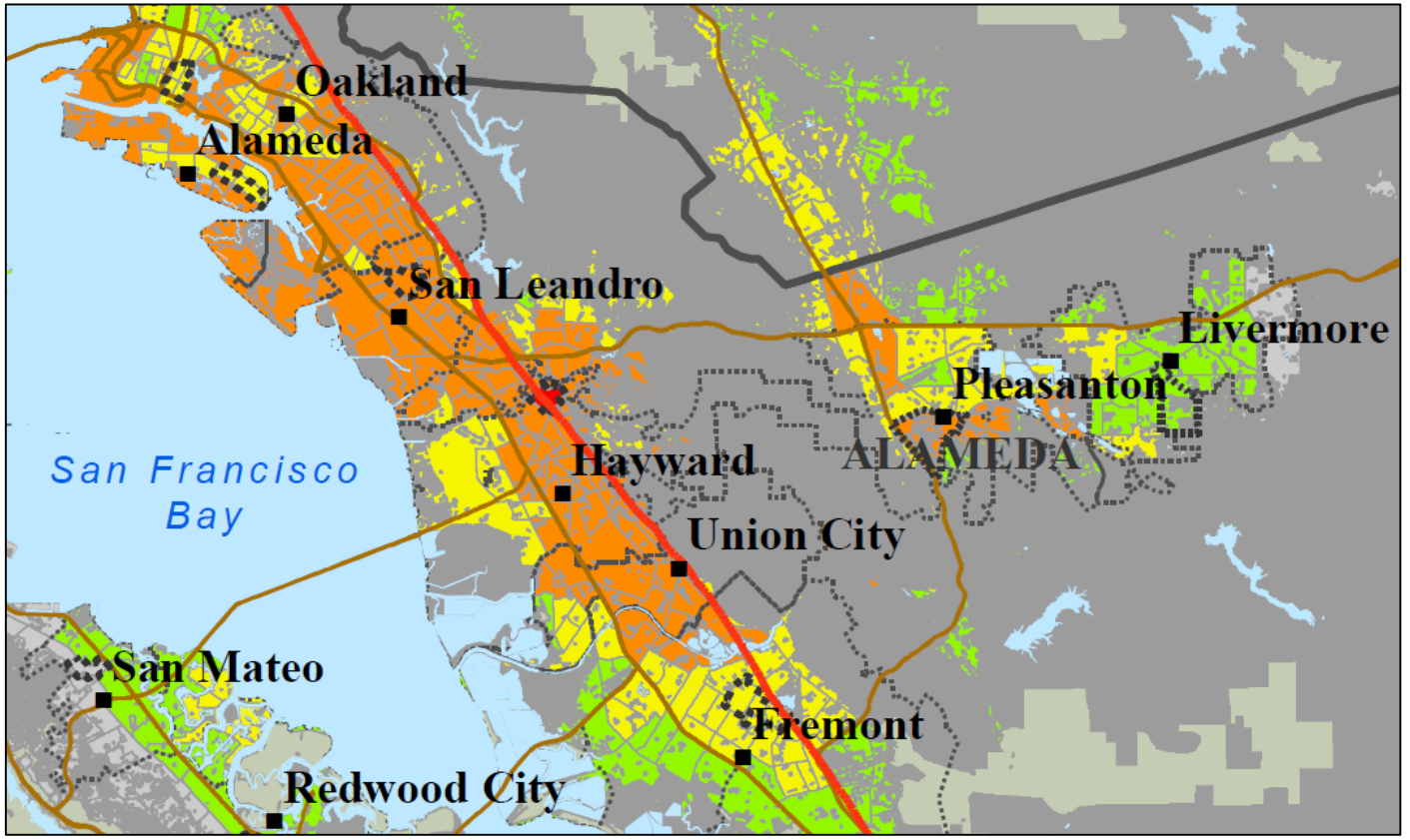


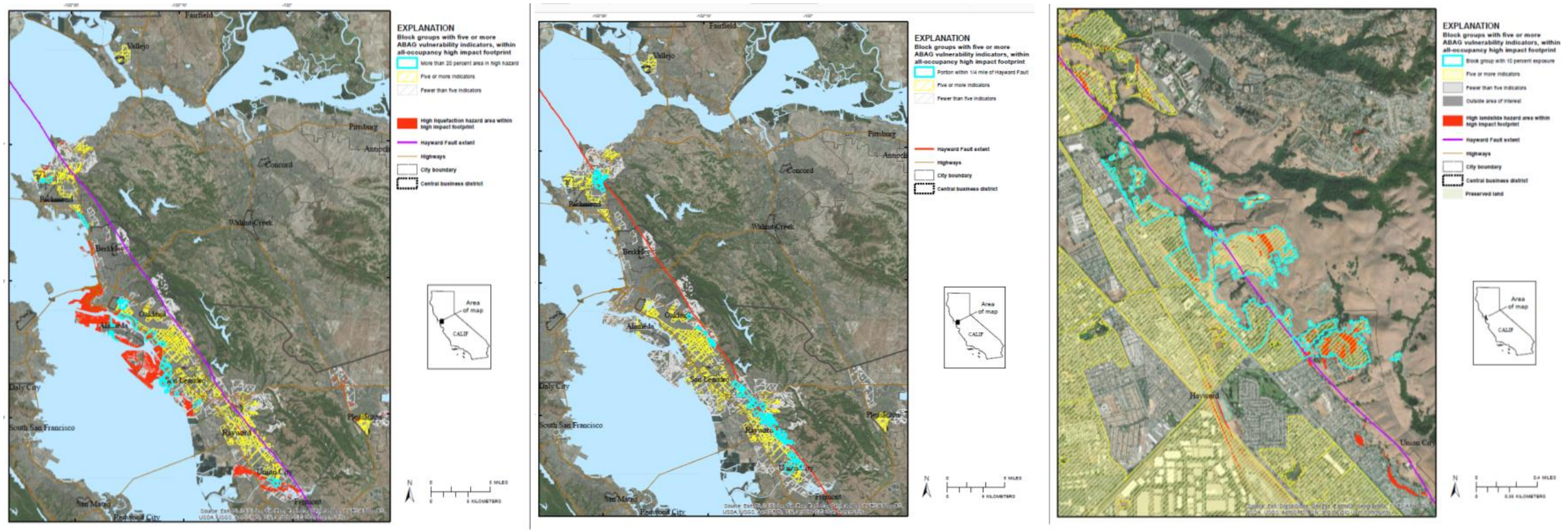
Long-Term Recovery Challenges

Population displacement and return

Availability and access to recovery dollars and resources

Repairing and rebuilding damaged housing

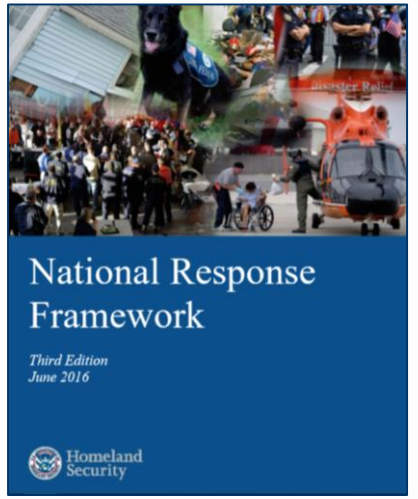
Addressing areas requiring substantial re-planning and governmental intervention in order to recover

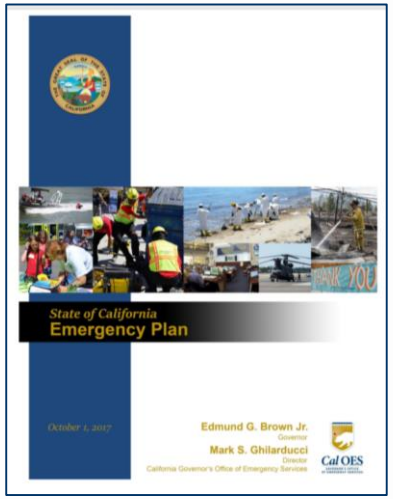


Blue outlined areas have both high social vulnerability and high hazards (liquefaction, surface faulting or landslides

Planner's Role in Response

- National Incident Management System (NIMS)/ Standardized Emergency Management System (SEMS) based on the Incident Command System (ICS) Model
- National Disaster Response Framework and California Emergency Plan





Command

- Develops a "common operational picture"
- Sets goals, objectives and priorities
- Manages internal and external communications

Operations

- Implements the priority actions

Planning

- Facilitates creation of "common operational picture" and action planning to set priorities, objectives, strategies, and tactics
- Defines the recovery needs, short-, intermediate- and long-term, both organizationally and for the community

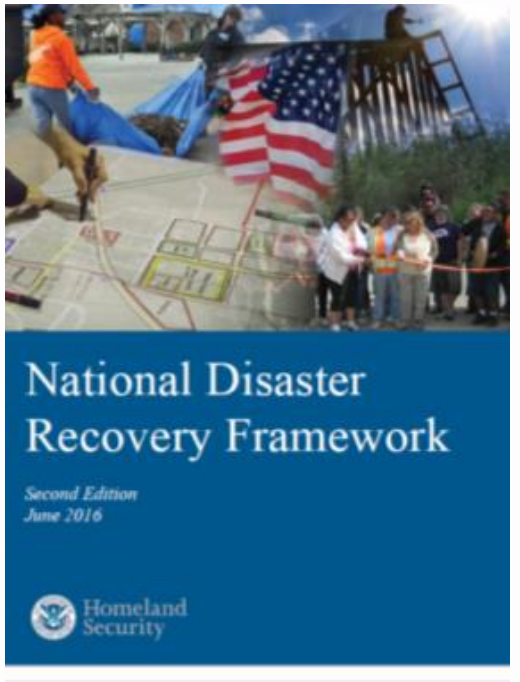
Logistics

- Provides resources (personnel, facilities, supplies) (including mutual aid) to fulfill operations

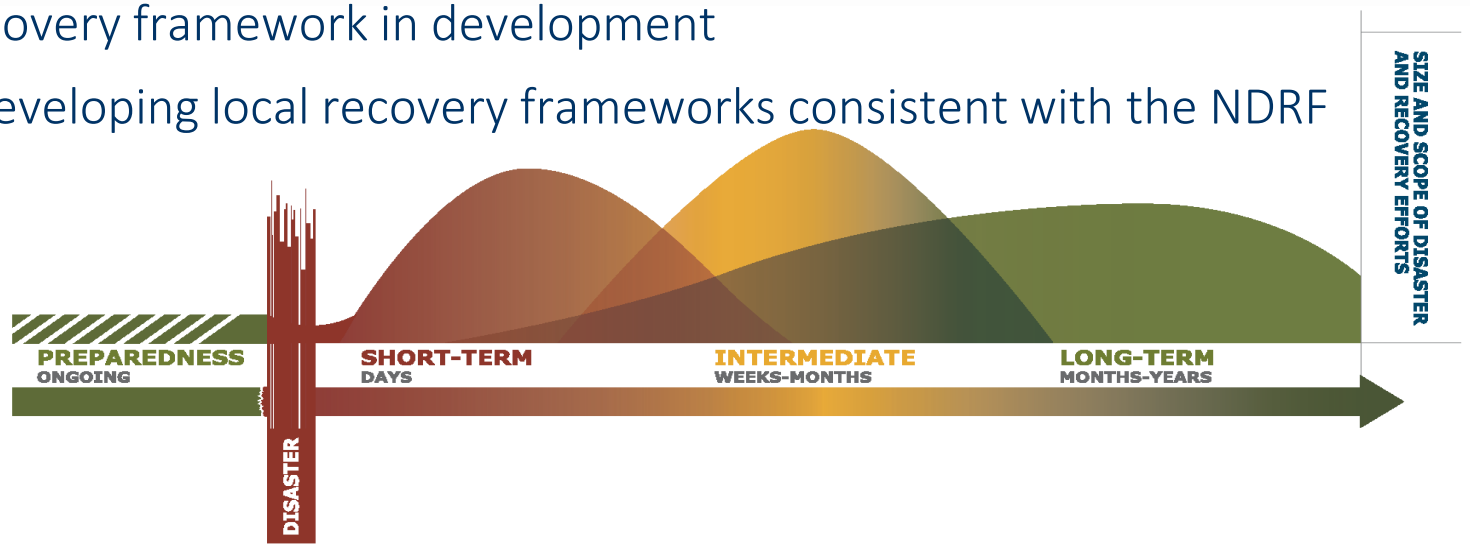
Finance/ Administration

- Tracks costs and manages reimbursements for operations

Planner's Role in Recovery



- National Disaster Recovery Framework (2011, 2nd edition 2016)
  - Establishes a common platform for how the whole community builds, sustains, and coordinates delivery of recovery capabilities
    - Particularly, a guide for federal involvement in disaster recovery to support disaster-impacted States, Tribes, Territories, and local jurisdictions
    - Provides a flexible structure enabling disaster recovery managers to act in a unified and collaborative manner
- State disaster recovery framework in development
- Many localities developing local recovery frameworks consistent with the NDRF



NDRF Roles and Responsibilities

- Federal Disaster Recovery Coordinator (FDRC)
- Tribal, Territorial, and State Disaster Recovery Coordinators (TDRC and SDRC)
- Local Disaster Recovery Manager (LDRM), core principle acknowledges local primacy for disaster recovery
- 8 Core Recovery Capabilities
  - — Planning
  - — Public Information and Warning
  - — Operational Coordination
  - — Economic Recovery
  - — Health and Social Services
  - — Housing
  - — Infrastructure Systems
  - — Natural and Cultural Resources

Common to all federal disaster management mission areas: prevention, protection, mitigation, response, and recovery

Pre- vs. Post-disaster Recovery Planning
Process/Organizational Plans vs. Physical/Spatial Plans

Pre-disaster disaster recovery framework

- Recovery Vision – for the community and governance
- Core Values or Principles– reflect NDRF and key local plans and policies
- Recovery Organizational Structure – pre- and post-disaster, relationship to emergency management organization and government structure, key roles and responsibilities (Local Disaster Recovery Manager, PIO)
- Recovery Core Capabilities – scope and purpose, potential considerations, desired outcomes, leadership (primary and supporting agencies)

Post-disaster recovery plans

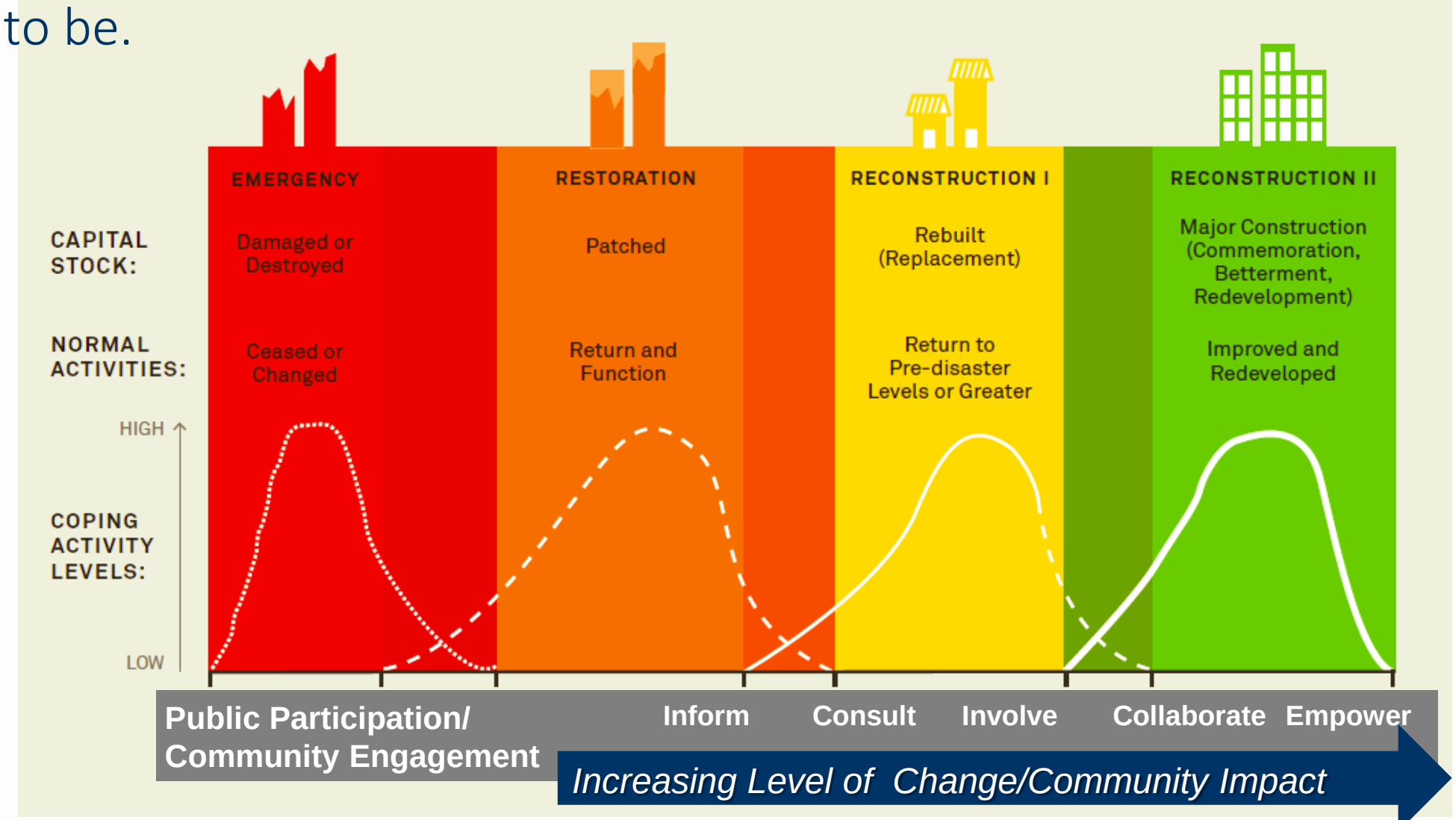
- Recovery operational framework tailored to the specific disaster
- Community recovery strategy, setting out specific vision, goals, and strategies
- Specific plans for core systems (i.e. housing, infrastructure) or areas (i.e. neighborhoods, business districts)
- Integration with local planning (i.e. general plan, capital improvement plan, hazard mitigation plan)

When disaster strikes, there is already a plan for reconstruction indelibly stamped in the mind of every affected resident—the plan of the pre-disaster city. This is the 'first' recovery plan, and all previous plans or new plans made following the disaster will undoubtedly compete, for many residents, with the first plan, oftentimes intensely.

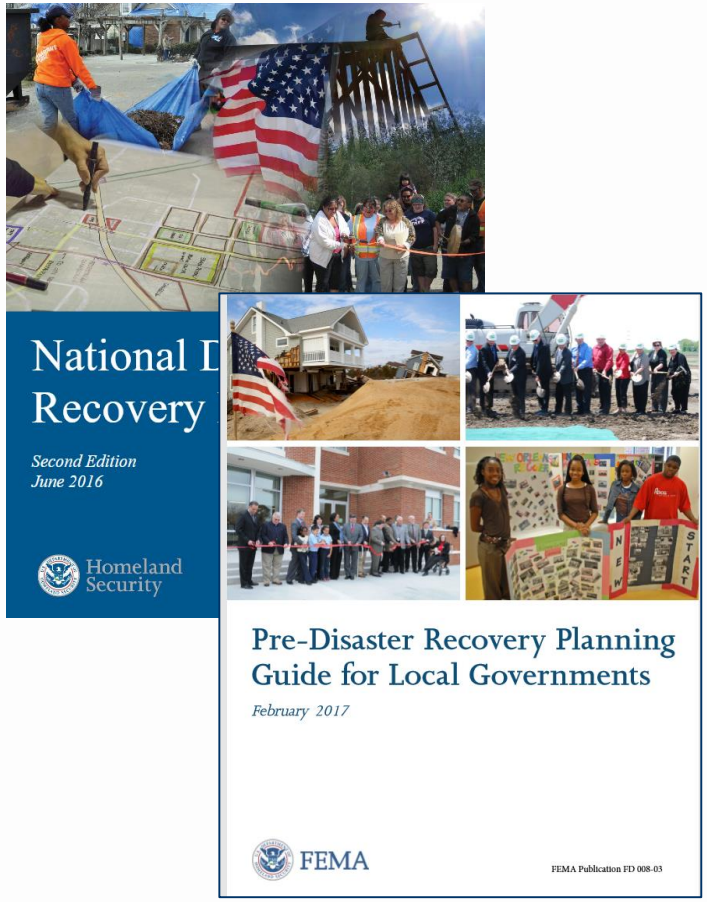
(Haas, Kates, and Bowden , *Reconstruction Following Disaster,* 1977)

Post-disaster Planning Advice:

The more change/impact, the more specific and community-engaged planning needs to be.

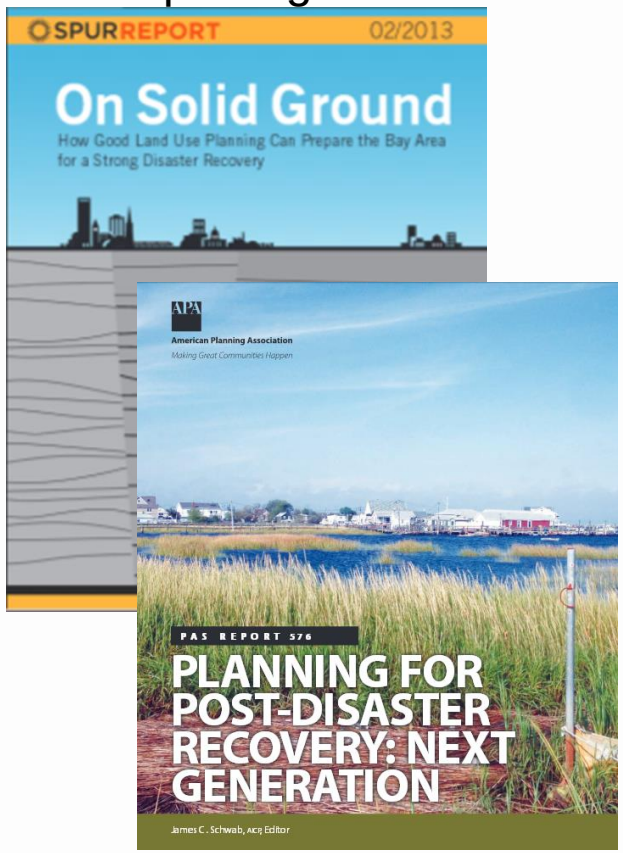


Sources: Adapted from Haas, Kates, and Bowden, 1977)

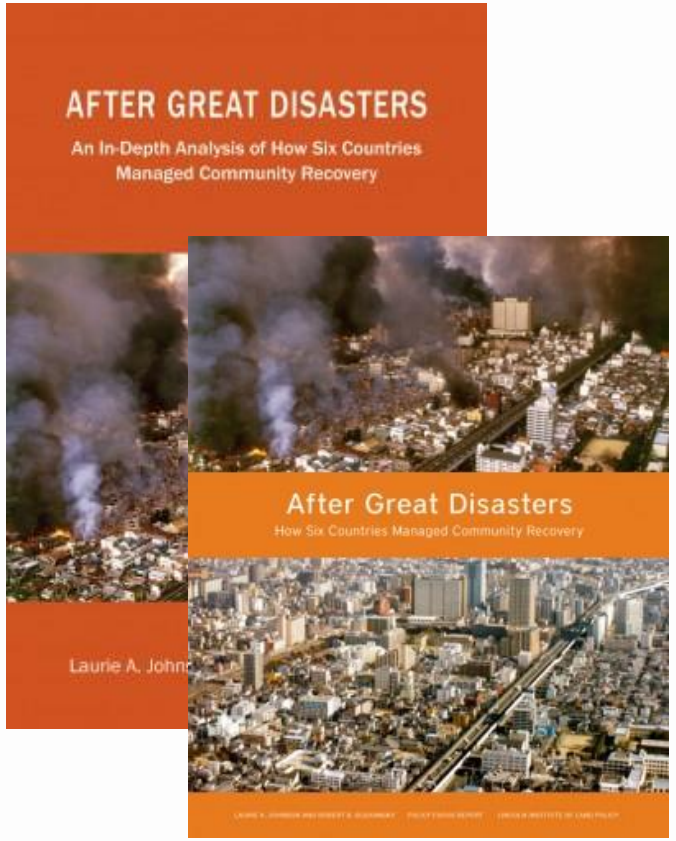


www.fema.gov

www.spur.org



www.planning.org or
www.fema.gov



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Thank you!

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Opportunities to Improve Community Resilience (HayWired Communities-at-Risk chapter)

1. Accelerate systematic retrofit or replacement of the region's extensive stock of seismically-vulnerable housing.
2. Set region-wide lifeline infrastructure seismic performance objectives and undertake a regionally-shared approach to prioritizing and financing upgrades to the region's seismically-vulnerable lifeline infrastructure, especially water distribution systems.
3. Building more housing in safe locations and to modern or higher construction standards.
4. Acknowledge and address the risks that seismically-vulnerable housing and lifelines pose to communities and the region in local and regional policies.
5. Place greater emphasis on the risk of disaster-induced population displacement, especially vulnerable populations, in government, individual and business response planning, exercises, preparedness campaigns and training.
6. Plan for long-term recovery at all levels of government.
7. Understand and plan for post-earthquake recovery financing at all scales—individuals, businesses, communities, regionally, and even at the state level.