Long-Term Recovery: Past Lessons Informing Future Action

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Source: EERI
What is Recovery?

- Restoring “normalcy”
  - People’s lives
  - Incomes
  - Facilities
  - Activities

- Opportunities for betterment - “building back better”
Recovery Overview

- Overlapping Phases
  - Short-term recovery
  - Long-term recovery

- Short-term recovery focused on
  - Life-saving and medical support
  - Emergency food and shelter
  - Debris clearance
  - Short-term repairs to infrastructure

- Long-term recovery focused on rebuilding - can take decades
Elements Informing Recovery

- Laws - federal and state
- Plans - pre-event and post-event
- Experience - U.S. and overseas
- Management-organization knowledge
- Evolving practice
Evolving Federal Law - Pre-9/11

- 1988 - Robert T. Stafford Disaster Relief and Emergency Assistance Act - first comprehensive law
- 1989 - Loma Prieta - Stafford Act’s big test
- 1992 - Hurricane Andrew - second big test
- 1994 - Northridge Earthquake - third big test
- 2000 - Disaster Mitigation Act (DMA 2000) - emphasized state and local mitigation planning, pre-disaster mitigation grants
Federal Laws - Post 9/11

- 2001 - post-9/11 WTC disaster - pendulum swings to counter-terrorism
- 2005 - Hurricane Katrina - pendulum swings back somewhat
- 2006 - Congress fixed post-9/11 mistakes in Post-Katrina Emergency Reform Act
- 2008 - 17,000 local multi-hazard mitigation plans approved by FEMA under DMA 2000
Pre-Event Planning: An Elusive Process

- 1987 - *Pre-Event Planning for Post-Earthquake Recovery and Reconstruction (PEPPER)*, W. Spangle et al

- 1990 - first draft of City of Los Angeles *Recovery and Reconstruction Plan*, informed by Loma Prieta

  - Multi-hazard emphasis
  - Includes Model Recovery Ordinance
  - Distributed widely after Katrina
Disaster Management Progress Since Loma Prieta

- Significant advances in mitigation, preparedness, and response planning
- Tens of billions of dollars invested in strengthening freeways and San Joaquin Delta area levees
- Little progress made toward disaster recovery coordinated systems

Jones Tract Levee Break, 2004
Source: EBMUD
California on the Edge

- California vulnerable to major disasters within lifetimes of residents
- No community immune
- Wildfires and floods most common
- Large earthquakes have greatest potential for large-scale destruction

State of California
Multi-Hazard Mitigation Plan
2007

Arnold Schwarzenegger
Governor

Henry R. Renteria
Director, Governor’s Office of Emergency Services
20 Years Later: Recovery Still Poorly Understood

- Urgency of victim needs
- Short-term v. long-term - two different world views and skill sets
- Management dilemmas: time is the enemy - stop and plan v. “now or never”

Source: USGS
Learning from Others: Kobe Earthquake: January 17, 1995

- 6,400 deaths; >15,000 injuries
- 400,000 homeless; >240,000 in public shelters
- >200,000 damaged buildings
- ~$150 billion total losses
  - >$100 billion in property damages
  - <$10 billion in insured losses (majority to commercial uses)
Kobe Recovery Planning Tools

- 14 restoration promotion districts
- Redevelopment
- Land readjustment project area, Kobe:
  - Re-subdivided damaged areas
  - Provided wider roads
  - Added new parks
  - Adjusted land parcel boundaries
  - Added new water systems
Stakeholder Engagement Needed

Stakeholder engagement was crucial element in successful Kobe reconstruction
Why Plan for Long-term Recovery Before A Disaster?

- Anticipate, prevent, or minimize loss of life and property
- Reduce scope and intensity of recovery and reconstruction
- Increase community resilience, i.e., enhance capability to withstand future disasters
California Earthquake Threat

- 99.7% chance that a Magnitude 6.7 or greater earthquake will strike California in the next 30 years, per USGS and others

- So What? - If centered under a major metropolitan area, would cause major life, property and infrastructure losses would - $50 billion
California: The Stakes are High

- Most populous state in U.S.
  - 37 million people

- World’s 7th largest economy, if separate country

- Nation’s largest industrial-technical concentration

- Nation’s largest agricultural producer

Source: USGS
Need for California Disaster Recovery Initiative

- If we wait to address recovery until after a disaster we invite serious extra losses from delay

- A major disaster would pose significant challenges
  - Restoring people’s lives,
  - Restarting economic engines,
  - Repairing infrastructure, and
  - Creating sustainable redevelopment
Proposed California Disaster Recovery Initiative

Three-pronged approach:

1. Disaster Recovery Organization

2. Disaster Recovery Strategy

3. Encouragement of pre-event planning
Disaster Recovery Organization

- Team of Cabinet-level agencies, perhaps led by the California Emergency Management Agency

- Purpose: plan and coordinate recovery across organizational boundaries

- DRO to be formed in advance of major disaster to act with fewer delays after
Disaster Recovery Strategy

- DRO to prepare Disaster Recovery Strategy

- Strategy would include
  - Strategic vision
  - Objectives
  - Implementing actions

- Benefits
  - Prioritize pre-event hazard mitigation projects
  - Encourage post-event mitigation to “build back better”
  - Coordinate public and private sector recovery
Encourage Business and Community Recovery Planning

- DRO would encourage pre-event recovery planning by the private sector and by at-risk communities.

- California law requires cities and counties to adopt a safety element as part of local general plans.

- A safety element addresses mitigation of risks posed by natural hazards such as floods, wildfires, and earthquakes.

- General plan law should be amended to require recovery planning as part of safety elements updates.
Conclusions

- A California Disaster Recovery Act should be passed in 2010
- California must take responsibility now to plan for recovery before a major disaster happens
- Let’s get it right ahead of time