Seattle Fault
Earthquake Scenario

Conference

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Community Impacts, Response and Recovery

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Scenario Earthquake Losses

- Property damage and economic loss – About $33 billion.
- Deaths – More than 1,600.
- Injuries – More than 24,000.
- Buildings destroyed – About 9,700.
- Buildings severely damaged and unsafe to occupy – More than 29,000.
- Buildings moderately damaged whose use is restricted – About 154,500.
- Fires – About 130, damaging nearly a half-billion dollars in property.
Property, Business Losses

Total loss: $33 Billion.

- Building loss - $22.3 Billion.
  - Estimated costs to repair or replace damage to buildings, contents, inventories.

- Income loss - $3.8 Billion.
  - Losses associated with inability to operate a business.

- Transportation loss - $5.5 Billion.
  - Estimated repair costs, excluding specialty structures, i.e., AW Viaduct, floating bridges.

- Utility System loss - $1.4 Billion.
  - Estimated repair costs for communication, gas, liquid fuel, potable and waste water systems.
Key Response Issues

- First responders will be overwhelmed in initial hours.
- Damage to transport systems makes movement of people, freight difficult for months.
- Demand for emergency shelter, food, water will strain community resources.
- Disruptions to transport, lifeline systems complicates community recovery.

  - Key to recovery: Speed at which repairs are made to region’s transportation systems.
Local First Response Issues

- Movement around region difficult.
- Communication systems jammed.
- Response will be prioritized.
- Emergency medical standard of care adjusted.
- Urban search and rescue.
- Lack of water inhibits firefighting.
- Hazardous materials, wastewater spills.
Transportation impacts

• Port to Port study:
  – Segments closed months to years.
  – Commerce movement difficult.

• Transport damage & Business disruption
  – Northridge EQ, Great Midwest Flood – Transport disruption as costly as facility damage.
  – Kobe – Transport, port damage slowed economic recovery of region.
Demand for shelter, food, water

- Shelter space difficult to come by.
  - Many schools, community facilities unavailable due to damage.

- Displaced householders.
  - More than 10,000 need emergency shelter.

- Stranded commuters.
  - 250,000 cross county lines daily.

- Vulnerable populations.
  - School children, disabled, senior citizens.

- Non-English speaking people.
  - Fault ruptures through International District.
State Response

• Response targeted to help impacted local jurisdictions:
  – Inspect state highways, make repairs, establish detours.
  – Clean up hazardous materials spills.
  – Provide food, water, beds for shelters.
  – Assist with law enforcement, transportation.
  – Governor’s Proclamation of Emergency.
  – Seek federal assistance, administer federal recovery programs.
  – Seek help from other states.

• Recovery & Restoration Task Force coordinates recovery, mitigation efforts.
Individual Impacts

- Thousands displaced from homes.
- Post Disaster Stress:
  - Property losses.
  - Personal, financial losses.
  - Life disruptions.
  - Social disruptions.
- Economic assistance:
  - About 10 percent have EQ insurance.
  - Government disaster assistance limited.
- Those with fewer social, economic resources will have most difficulty.
  - Many may relocate outside the area.
Community Challenges

- 85% of buildings at least moderately damaged are residential.
- Debris disposal - 9 million tons.
- Economic revitalization:
  - Rebuilding, redeveloping.
  - Maintaining business viability.
- Restoring damaged transportation systems.
- Restoring historic resources.
- Land-use – critical areas designations.
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