



Disaster Preparedness & Response

July 16, 2019



Ridgecrest Earthquake



All Hazard Preparedness

On the Pacific Rim

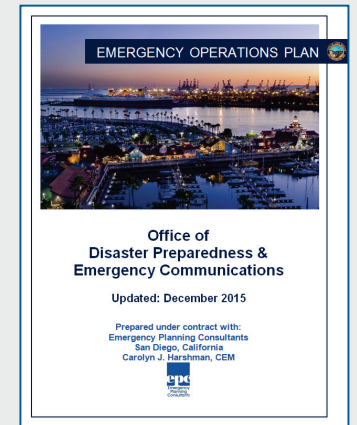
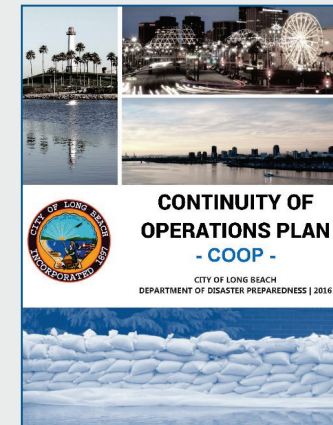
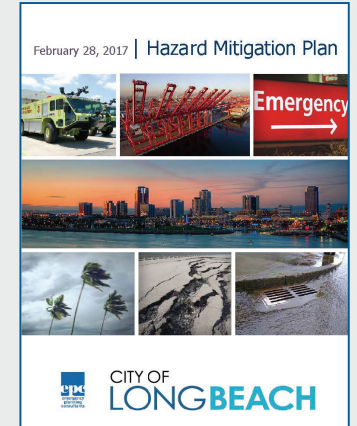
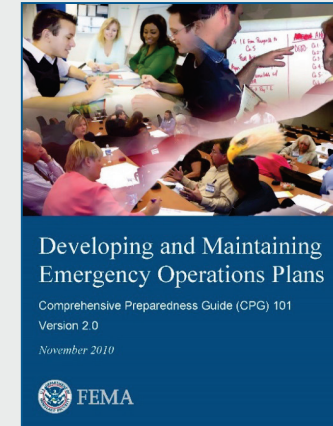


Fault Lines in Long Beach



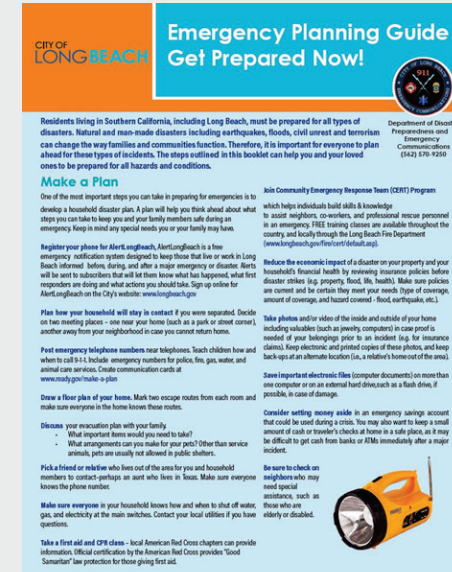
National, Regional & City Emergency Plans

- FEMA provides national emergency management guidelines
- Natural Hazard Mitigation Plan identifies existing threats and risks for:
 - Drought
 - Earthquakes
 - Floods
 - Technology
 - Public Health
 - Tsunamis
 - Windstorms
 - Man-Made Disasters
- The Emergency Operations Plan defines roles and responsibilities for City Departments
- Continuity of Operations Plan (COOP) assist in maintaining or resuming operations after a disaster



Community Outreach & Preparedness

- Whole Community Approach to include, DAFN and language barriers
- Encourage 5 days of self sufficiency
- Train with community partners including CERT, American Red Cross, local hospitals, and school districts
- Provide information at community meetings and host annual events such as the Great Shake Out, Ready Long Beach, and Tsunami Walk



Ready Long Beach

- Annual disaster preparedness and resiliency expo
 - First Aid Demonstrations
 - Emergency Vehicle Displays
 - Emergency Supplies and Equipment
 - Preparedness Information
 - Vendor Booths
- City of Long Beach, CSULB, Red Cross, LA County, National Guard, and other agencies
- Nearly 3,000 people attended last year
- This year's event is on September 28th at CSULB



Earthquake Preparedness

- **Before:** Create a family plan, build a go kit, practice drills, learn first aid, secure breakables and large objects, sign up for AlertLB
- **During:** Drop, Cover, Hold On. Do not run!
- **After:** Prepare for aftershocks, check for injuries, check on neighbors, inspect building, implement communications plan, listen to updated emergency information



Ready Your Neighborhood

- Prepare your neighborhood for a disaster
- Identify risks in your neighborhood
 - Elderly
 - Mobility-Impaired: access and functional needs
- Identify resources in your neighborhood
 - Electricians and plumbers
 - Nurses and teachers
 - Neighbors with tools
- Create a plan that outlines what your neighbors will do



**READY YOUR LB
NEIGHBORHOOD**

Emergency Alert System

- Sign up to receive emergency alert notifications via voice, text and/or email
- Provides information on what has happened, and what actions residents should take
- Text AlertLB to 99411 for quick sign-up
- City-wide Emergency Alert Notification (7/6/19)
 - 197,344 Calls Made
 - 43% Answer Rate
 - 6,000 New Contacts (Phone, Text, Email)

EMERGENCY ALERT SYSTEM



SIGN UP AT WWW.ALERTLB.COM TODAY!



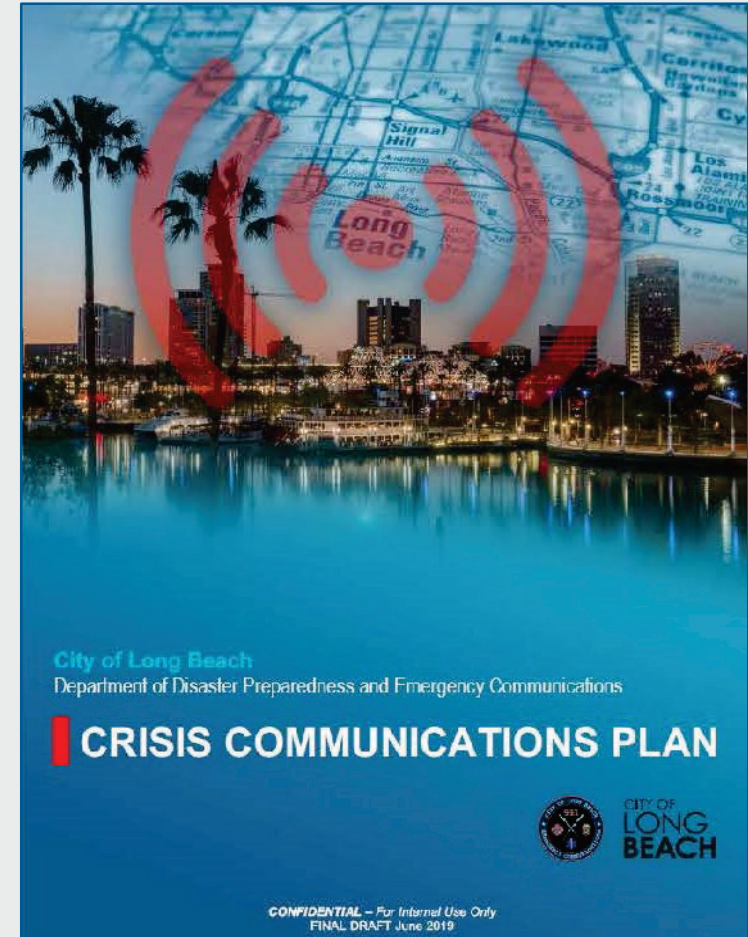
Earthquake Warning System

- Long Beach beta tested for 4 years
- Provides warning of pending earthquake in LA County
- Exploring options to lower alert threshold
- App is available in English and Spanish



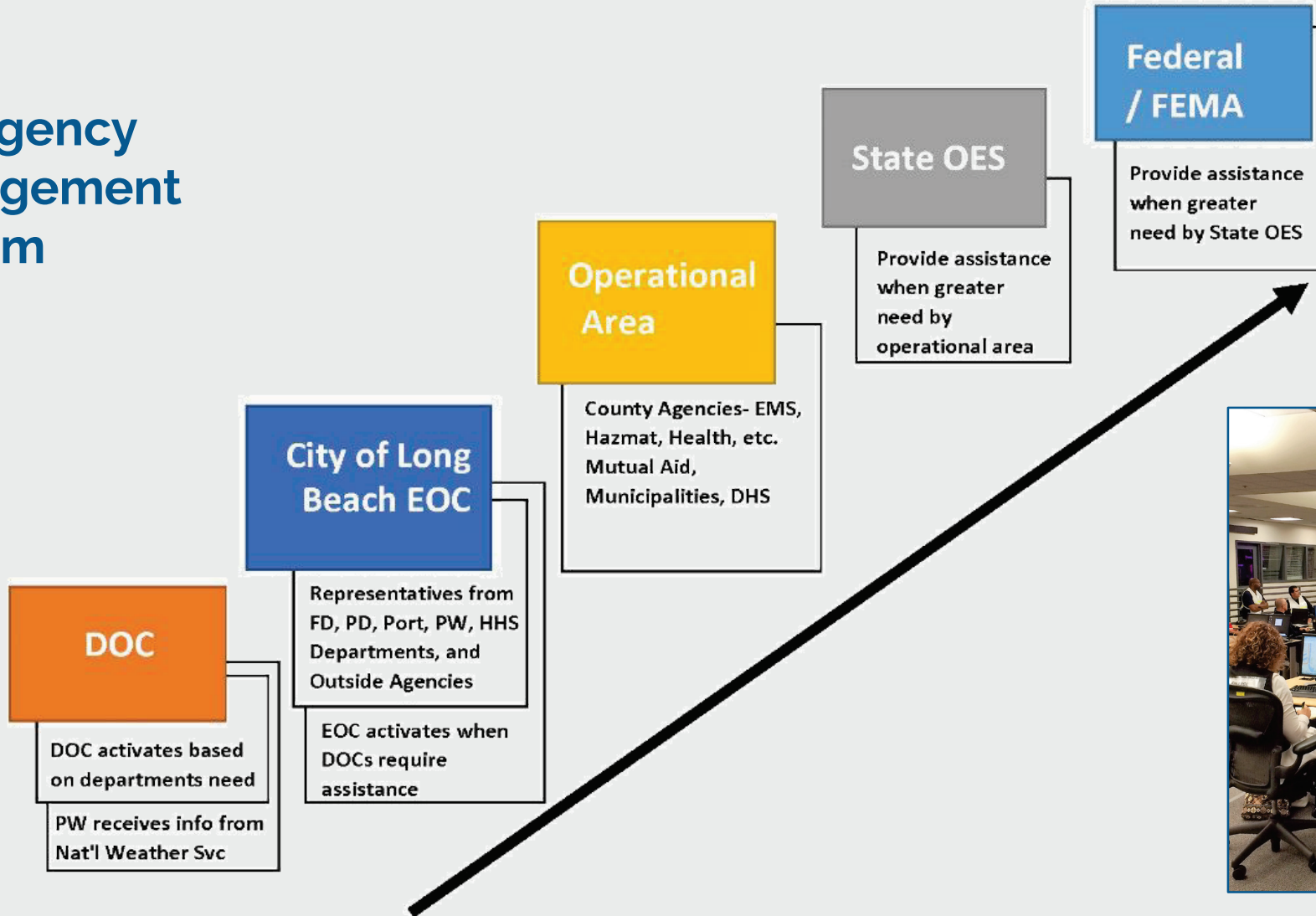
Crisis Communication Plan

- Provides guidance for coordination of communications during a crisis
- Ensures accurate and timely release of information, including social media, press, releases, and press events
- Plan is inclusive of DAFN and non-English speakers
- Adheres to standards for message development



Incident Response Flow

Emergency Management System



Fire Response

- The Fire Department takes increasing actions based on the Modified Mercalli intensity scale (MMI) or the level of shaking felt locally
- Events with little or no local damage similar to the recent Ridgecrest earthquakes involve moving apparatus out of the stations and performing a quick windshield survey of critical facilities
- Moderate shaking with some damaged structures would involve rapidly triaging high priority needs, beginning rescue and recovery operations, and coordinating with local mutual aid assets to begin multiple operational periods
- Severe shaking would involve establishing separate commands in each of our Fire Districts and relying only on internal city assets for the first 72-96 hours until mutual aid assets from far out of the area began to arrive

Police Response

- Immediate Response and Evaluation
 - Participate in life saving efforts
 - Safety & damage assessments
 - Provide situational awareness to the officer in charge
- Ongoing Mitigation if City is Impacted
 - Evacuations and traffic/access control in impacted areas
 - Provide security to temporary emergency and critical facilities
 - Conduct high visibility patrols to maintain order and calm (prevent looting and respond to calls for service)
- Coordinated Efforts
 - Participate in command and control disaster management (IMT, ECOC)
 - Assist with public messaging
 - Potential mutual aid response (if we are not affected, we become a resource)

Public Works Response

Street Maintenance Division

- Clear roads of fallen trees and other debris
- Provide traffic control (e.g. barricades and cones) for road closures and detours to assist Police and Fire
- Transport and set up the Mobile Emergency Response Center (MERC)

Traffic Operations Division

- Provide emergency repairs to traffic signals and respond to problems involving downed or damaged traffic signs
- Provide temporary stop signs for power outages expected to persist for an extended period of time

Public Works Response

Facilities Management Division

- Make temporary repairs to key public facilities
- Secure access to portions of buildings that are damaged

Refuse and Street Sweeping Divisions

- Coordinate debris disposal efforts
- Determine operational and economic feasibility to recover and recycle materials
- Provide disposal equipment (e.g., trucks and dumpsters)

Health & Human Services Response

- Following a moderate to severe earthquake, the Health and Human Services Department initiates a public health response across the city
- Public Health Emergency Management coordinates mass care and sheltering operations throughout the city, including the activation of points of distribution (PODs)
- Public Health activates alternate care sites (mobile hospital) to support local healthcare facilities
- Public health nurses conduct health assessments and provide support to individuals with disabilities, access, and functional needs, including older adults. The disaster mental health surge team is deployed
- City Health Officer issues boil water orders if potable water is compromised. In a power outage, messaging regarding food safety is disseminated



Seismic Retrofit Programs

Long Beach Earthquake History

- 1933 Long Beach Earthquake resulted in 115-120 deaths and caused an estimated \$40 million worth of damage. Many of the fatalities occurred as people ran out of buildings and were hit by falling debris
- Long Beach Earthquake resulted to two key pieces of state legislations in California:
 - [Field Act](#) – Created the Office of the State Architect (now Division of the State Architect)
 - [Riley Act](#) - required all cities/counties to regulate building construction



Unreinforced Masonry (URM) Building Retrofit Program

- In 1971, the City inventoried URM buildings and developed a voluntary program to retrofit URM buildings
- Program amended in 1976 requiring mandatory retrofits
- 936 buildings either repaired (565) or demolished (371)
- Last major URM building in this program, the Masonic Temple (835 Locust Ave), was retrofitted in 2007



Voluntary Seismic Strengthening Program

- After the Northridge Earthquake the City implemented a voluntary retrofit program
- Building types included in program:
 - SF Residential buildings not anchored to the foundation
 - Soft-story buildings
 - Flexible diaphragm (tilt-up buildings)
 - Concrete frame buildings with masonry infill (buildings with lack of rebar or improper rebar detailing in supporting elements)



Mandatory Building Seismic Strengthening Program

- In late 1990, the City established an assessment district covering some 564 residential structures, all consisting of pre-1934 buildings. Shortly after the initial formation, another 65 structures were added to the District
- The Assessments eventually became a lien against the properties involved. Because the repairs were extensive and expensive, the City was eventually forced to file numerous foreclosure complaints in the Superior Court to try and collect the balances owing for the repair work performed. A number of cases required a full foreclosure against a property
- The City's collection effort went well into the mid-2000's and required considerable Staff effort from the City Attorney's Office and Financial Management
- There were a lot of property owners who did not want to do the necessary repairs in the first place and were not happy to have been sued for foreclosure by the City

Seismic Resiliency Programs in Other Cities

- Most cities do not go beyond State standards. Some have adopted local ordinances:
 - Los Angeles: Mandatory retrofit ordinance since Oct. 2015, covering soft-story buildings and non-ductile concrete buildings (over 15,000 buildings)
 - Santa Monica: Mandatory retrofit program since Feb. 2017, covering soft-story buildings, concrete buildings, concrete tilt-ups, unreinforced masonry (URM), and pre-Northridge steel-frame structures (approx. 2,040 buildings).
 - Beverly Hills: Mandatory retrofit ordinance since Dec. 2018, covering wood-frame soft-story buildings
 - Burbank: Three mandatory retrofit programs covering commercial facilities (URM, Concrete & masonry, & steel moment frame buildings). Their light wood-framed residential retrofit program is voluntary
 - West Hollywood: Mandatory soft-story ordinance since Feb. 2018, and mandatory ordinance for non-ductile concrete structures and pre-Northridge steel moment frames since Aug. 2018
 - San Francisco: Mandatory retrofit ordinance since Sept. 2013, covering wood-frame soft-story buildings. 100% financing of retrofits available through partnership with Counterpointe Sustainable Real Estate

Long Beach Resiliency Program (Proposed)

- Inventory additional building types:
 - Soft, weak or open-front walls, wood frame buildings (soft story buildings)
 - Reinforced concrete or masonry buildings with flexible diaphragm (tilt-up buildings)
 - Non-ductile concrete frame buildings with masonry infill (buildings with lack of rebar or improper rebar detailing in supporting elements)
 - Non-ductile concrete buildings (brittle concrete buildings)
 - Steel Moment Frame (SMF) Buildings pre-Northridge Earthquake
- Benefits:
 - Identify vulnerable buildings and assess impacts
 - Develop appropriate mitigation measures
- Estimated Cost: \$1.1 Million
- Estimated Implementation Time: 2 years

Legislative Outreach

- AB 2681 (Nazarian) intended to create a local and state reporting and inventory program for buildings that are identified as vulnerable to seismic activity. Governor Brown vetoed the bill and directed the development of a partnership with the State and local governments and building owners
- The City is tracking numerous proposals related to building seismic safety:
 - AB 429 (Nazarian) Inventory of Seismically Vulnerable Buildings
 - Compile an inventory of seismically vulnerable buildings in 29 specific counties, including LA County, by July 2022. Bill failed to move forward in 2019, but is likely to be reintroduced
 - SB 99 (Nielsen) General Plans: Safety Element: Emergency Evacuation Routes
 - Safety elements note residential developments in areas lacking 2+ emergency routes
 - AB 548 (Rodriguez) Earthquake Brace and Bolt Program
 - Promote earthquake education to low-income homeowners



Local Seismic Retrofits

City Infrastructure

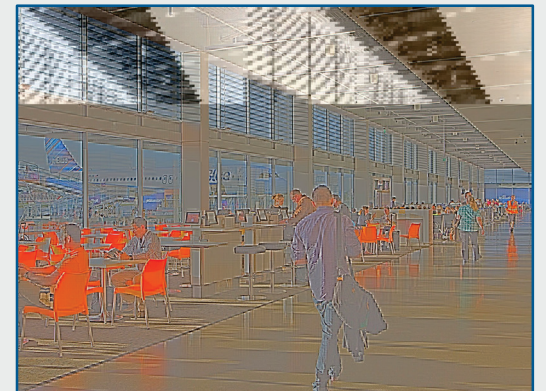
More than 200 critical facilities located across Long Beach:

- Fire stations and headquarters, police stations, community centers, Airport, Energy Resources, Water, and others
- Government buildings, Long Beach Transit, light rail, post offices, oil islands, hospitals, and schools
- Within Long Beach, there are 131 city-owned and 106 state-owned bridges



Leading by Example

- Many of City facilities have been upgraded or recently constructed to meet seismic requirements:
 - ECOC
 - Public Safety Building
 - Airport Passenger Concourse
 - Fire Station 12
 - Michelle Obama Library
 - Houghton Park Community Center
 - Gerald Desmond Bridge
 - City Hall & Main Library





Summary

Summary

- Quakes cracked California Cool!
 - Not too late to get prepared!
- City department response plans are continuing to evolve
- Work as part of a regional response network
- Emphasize individual, family, neighborhood, and City resiliency



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