



**City of Los Angeles
Hazard Mitigation Plan Revision
Meeting Summary**

Steering Committee Meeting #4
March 23, 2017 1:00pm – 3:00pm
500 E. Temple Street, Los Angeles, CA 90012



Meeting Summary was composed on April 3, 2017 by Denise Davis, Senior Emergency Management Specialist, Tetra Tech.

Meeting Participants

1. Aho, Marissa	City of Los Angeles Mayor's Office
2. Boldt, Eric (via phone)	National Oceanic Atmospheric Agency/NWS
3. Cousin, Faye	Los Angeles Emergency Management Department
4. Douglas, Jason	DCP
5. Gregoryona, Armond	LADBS
6. Han, Ahee	City of Los Angeles Mayor's Office
7. Hayes, Lisa	Department of Water and Power
8. Helder, Emily	EMD, Public Health
9. Hudnut, Ken	United States Geological Survey
10. Ignatczyk, John (via phone)	Los Angeles Fire Department
11. Ipson, Chris	City of Los Angeles Public Information Officer
12. Kitching, Diana	Department of City Planning
13. LaDochy, Steve	Geosciences and Environment, CSU, Los Angeles
14. Malin, David	Harbor Department
15. Martinez, E.J.	Housing and Community Investment
16. Napier, Jeff	LADBS Chief Inspector
17. Parks, Carol (via phone)	Emergency Management Department
18. Sadrpour, Nick	USC Sea Grant
19. Shively, Paul	Community Emergency Response Team
20. Simmons, Clint	West Adams NC
21. Spencer, Amrita	Emergency Management Department
22. Wu, Lin (via phone)	Dept. of Geography, CSU Pomona Polytechnic
23. Rob Flaner	Tetra Tech
24. Denise Davis	Tetra Tech

Welcome and Introductions

Rob Flaner (Project Manager, Tetra Tech)

- Rob Flaner welcomed participants to the meeting and self-introductions were conducted. Mr. Flaner conducted a review of the agenda for the meeting.

Planning Process

Mr. Flaner asked the SC if they had reviewed the meeting summary from the previous SC meeting, and if there were any questions or recommended changes. A correction was needed to change the last name for Juliette Hart (from Park). With the recommended change noted, and no further questions or recommendations, a motion to approve the meeting summary was made and seconded.



Risk Assessment Update

A handout was provided of the preliminary earthquake results using Hazus. Rob stated all five scenarios have been run and commented on the huge amount of data. A summary of the data includes an inventory of estimated population, total building value in structure and contents (dollars), structure debris x 1,000 tons, number of displaced households, # people requiring short-term shelter, value structure in \$ damaged, value contents in \$ damaged, total value (structure and contents in \$) damaged, and % of total value. Ultimately the risk assessment provides the estimated economic impact from each of the earthquake scenarios. The Puente Hills earthquake scenario had the highest estimated damage at \$78,700,711,027 and percent of total value at 10.25%. The risk assessment is a very robust assessment, which makes for a comprehensive plan. The focus is on buildable lands and the increase in risk due to zoning. The assessment points to future land use for zoning using true spatial analysis. Tetra Tech modeled over 39,000 structures and the structure contents. The assessment model looks at critical infrastructure first and casualties are secondary, with the assumption of casualties based on the percent of damage. Dr. Hudnut stated that the probability of an earthquake occurring on the Puente Hills thrust fault is every 2000 – 3000 years. To a scientist, this is the timeframe of a fault with frequently occurring earthquakes, but knowing the timeframe puts the threat into perspective. The risk assessment used demographics from the 2010 Census data due to it having statistics down to the block level. This is the best data available for population. Critical facilities are being updated currently but will not be shared with the public. Only general stock building data is provided to the public. Debris management will be a huge issue for Los Angeles as it was for the recent Napa earthquake. The City of Los Angeles has a debris management plan.

The dam inundation assessment is completed. There was no change for dam inundation from the floodplain management plan from last year. The landslide data set was provided by the Department of Building and Safety. No loss estimations are provided for landslides, only exposure analysis. The flooding assessment is almost done. The model was updated due to a change by FEMA to adjust the depth grids for two LOMRs (letter of map revision). Tetra Tech will have to coordinate with the Fire Department on wildland and urban interface fire data. The Fire Resources Assessment provides only exposure analysis. The sea level rise exposure loss estimate with a 100 year flood should be completed by the next SC meeting. Mr. Flaner stated that the spreadsheet provided does not show all of the data – just what will be shared with the public.

Hazus uses soil classifications to show how solid the ground is in relation to shaking, but cannot model the length of time of the shaking. Dr. Hudnut stated for the Shake out scenario the shaking would last for several minutes (7.8 M). It would be far worse for high rise buildings than for smaller structures. For the Puente Hills scenario the movement would last for 15-20 seconds, but the reverberation would last for up to one minute. He said the risk assessment was “a significant new way of looking at the damage that will occur in Los Angeles.” Rob said he would like to get a list of all of the reinforced URM (unreinforced masonry) buildings in Los Angeles to see if improvements were made from the reinforcement. There were 8,000 buildings reinforced in order to slow down falling debris for people to get out of the buildings. Dr. Hudnut reminded the SC that progress for earthquake safety in buildings has been made since the 1906 San Francisco earthquake. The State passed the Field Act in 1933 after the Newport Inglewood earthquake caused damage to schools in Long Beach. Although the Field Act required stronger building standards for schools, it wasn’t really a building code. In 1954 the State mandated the building code for seismic hazards. At that time seismic zones were delineated according to the soil types. Dr. Hudnut stated each scenario chosen for the risk assessment was a low probability with high



consequence earthquake and newer buildings will perform better than older ones because of the building code. Rob added that now the Uniform Building Code is the International Building Code which is collectively better than any before. Dr. Hudnut stated he has confidence in the assessment – that it has very valid information and is a very sophisticated analysis – and he will look through the spreadsheets.

Plan Review

Ms. Davis discussed the work being done on determining the status of prior mitigation actions from the 2011 LHMP. It is a requirement to account for each action developed in the previous LHMP to reaffirm the action, show completion of, or change the action based on current conditions and priorities. All actions (407 total) from the 2011 LHMP have been listed in an Excel spreadsheet and compared to a printed copy of actions from the EMD mitigation database. Most actions were resolved but there are several that are not. The Excel spreadsheet was passed around the meeting attendees to review the status of their department actions; whether they have been reconciled or are outstanding. Several SC members reported they had updated their department actions on the EMD mitigation database, but the new data is not reflected on the spreadsheet. Ms. Davis will be working with EMD to align the action status spreadsheet with the database, and then notify departments of any remaining actions that need to be resolved. Mr. Flaner added that a workshop will be held for the SC to update the action plan in the updated LHMP. The workshop will include a discussion on the types of actions that may qualify for future federal grant funding.

Plan Maintenance Strategy

Mr. Flaner explained that the Los Angeles LHMP project scope of work included the development of a process for sustainment and progress reporting for the LHMP. 44 CFR §201.6(c)(4)(i) essentially states that local jurisdictions must have a plan maintenance process that describes the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle. Regular progress reporting did not take place during the last five years for the 2011 LHMP. The City of Los Angeles Floodplain Management Plan (FMP) planning team developed a plan maintenance strategy where an annual progress report is developed by October 1st of every year. The FMP oversight committee reviews and approves the progress report. The FMP is part of the Community Rating System (CRS) program and the City gets extra points from the CRS program for completing the annual review. Rob stated Tetra Tech's recommendation is that the maintenance strategy for the FMP be carried over as the strategy for the LHMP. A handout of the FMP Maintenance Strategy was passed out to the SC for review. The FMP Maintenance Strategy would be customized to reflect the LHMP requirements and could be synchronized with the FMP. Rob asked if the SC approved of this recommendation and the consensus of the SC was yes.

Rob conducted a demonstration of the Tetra Tech progress reporting tool called the Baseline Assessment Tool (BATool). The BATool could be used to conduct annual progress reporting for the LHMP. Each department would be issued a username and login. Each Department would be responsible to review and update their own action items. The BATool can be set up so that departments can view other department's actions and updates. An auto-reminder can be scheduled to remind departments to complete the annual report.

Public Involvement Strategy

At the last SC meeting the LHMP public survey (on Survey Monkey) was discussed. A handout of the survey had been distributed previous to that meeting for review by the SC. Mr. Flaner stated that EMD reviewed the public survey and made revisions to the survey on behalf of the City. The survey was updated with the changes and is now ready for release to the public. A survey link will be created that will be posted on the EMD LHMP website and Nextdoor, and emailed to all SC members to post on the departmental websites and social media sites.



Additional advertisement will be done through attendance at live public emergency preparedness venues in the City. A QR code will also be created and placed on the websites and written advertisements for the public survey.

Upcoming public venues include the Abilities Expo at the Los Angeles Convention Center on March 24-26th; the Seismic Retrofit Resources Fair at the Los Angeles Convention Center on April 17th; and the QuakeSmart Preparedness Workshop for Businesses and Organizations at the Cathedral of Our Lady of the Angels on May 16-18th. It was agreed that these venues would be attended by Tetra Tech staff for at least one day each to conduct public outreach for the LHMP update. The Hazus work stations will be present on April 17th and May 17th at these venues to provide loss estimations for personal property. One additional public outreach will be conducted after the plan is developed to give the public an opportunity to review the plan. The EMD LHMP website will be the primary means of public outreach for the LHMP review.

Rob explained the upcoming Strengths, Weaknesses, Obstacles, and Opportunities (SWOO) session for the SC. FEMA states that the LHMP show a comprehensive range of alternatives of what actions the City considered for the LHMP update. The purpose of the SWOO session is to review information garnered from the risk assessment and the public involvement strategy to identify strengths, weaknesses, opportunities and obstacles for hazard mitigation through a facilitated brainstorming session on risks, vulnerabilities, and capabilities. The SWOO results in a catalog of actions/opportunities and best management practices for the City that can be put in the plan update. May 24th and 25th were recommended as dates for the upcoming LHMP action planning workshops.

Action Items and Next Steps

- Receive Comments on Plan Maintenance Strategy
- Receive Comments on Public Outreach Plan
- Risk Assessment Update
- Update SC on Public Outreach Events
- Public Survey Update
- Action Planning Workshop
- SWOO Session

Next Meeting

Thursday, April 27, 2017 1:00pm – 3:00pm
Los Angeles EOC 500 E. Temple Street, Los Angeles, CA 90012