



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

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



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

Meeting Participants

Boldt, Eric	National Oceanic Atmospheric Agency/NWS
Cardenas, J.	Los Angeles Police Department EOD
Cousin, Faye	Los Angeles Emergency Management Department
Forbes, Roy	Citizen, CD 4
Hart, Juliette	United States Geological Survey
Hayes, Lisa	Department of Water and Power
Hudnut, Ken	United States Geological Survey
Ignatczyk, John	Los Angeles Fire Department (via phone)
Hutton, Kate	City of Los Angeles Public Information Office
Jones, Kelly	Mayor's Office
LaDochy, Steve	Geosciences and Environment, CSU, Los Angeles
Lee, Tim	Information Technology
Levy, Michelle	Department of City Planning
Lozon, Jonathan	Los Angeles Police Department
Martinez, E J	Housing and Community Investment
Napier, Jeff	Chief Inspector, LADBS
Newton Mann, Alyssa	USC Sea Grant (via phone)
Parks, Carol	Emergency Management Department
Richman, Sally	Housing and Community Investment
Riebeling, Michelle	EMD, Los Angeles World Airports
Sadrpour, Nick	USC Sea Grant
Sanchez, Connie	Department of Water and Power
Shu, Susan	Department of P/W – Engineering Bureau
Simmons, Clint	West Adams NC
Spencer, Amrita	Emergency Management Department
Welch, Brandy	Los Angeles World Airports
Wu, Lin	Dept. of Geography, CSU Pomona Polytechnic
Rob Flaner	Tetra Tech
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. There were no questions or recommendations for changes by the SC. A motion to approve the meeting summary was made and approved.

Earthquake Scenario Discussion

- Dr. Ken Hudnut, U.S.G.S., briefed the SC on the fault systems and earthquake scenarios that may impact the Los Angeles area in order to determine reasonable scenarios for the risk assessment of the HMP. Dr. Hudnut stated the 2015 Uniform California Earthquake Rupture Forecast, Version 3, (UCERF3), is the latest official earthquake rupture forecast for the state of California. These meeting minutes will present only a brief overview of Dr. Hudnut's presentation as he provided a PowerPoint of his presentation for distribution to the SC. In brief, the following scenarios were presented by Dr. Hudnut along with key discussion points by the SC:
 1. San Andreas Fault: 7.8 magnitude, rupture from the Salton Sea to Highway 14, a 1 in 6 chance in 30 years, slip rate 35mm/yr. – 1 to 50 times faster than other faults, particular kind of stress on Los Angeles with disruption to lifelines.
 2. Puente Hills Thrust Fault: 7.0 magnitude, rupture south of USC campus – worst case for Los Angeles, a 1 in every 2,000 – 3,000 years probability, very high consequence for downtown area with a lot of collapsed buildings.
 3. Palos Verdes Fault: 7.3 magnitude, direct hit on ports of Los Angeles and Long Beach, cut across N/E side of Palos Verdes Peninsula.
 4. Newport Inglewood Fault: 7.2 magnitude surface rupture, least probable, parallel to Palos Verdes through the Alameda corridor and LAX, very similar damage to Palos Verdes Fault.
 5. Hollywood Fault: 6.7 magnitude, fault rupture Hollywood and Vine at break in slope, by Capital Records, Wilshire corridor – more west than downtown, building collapses for buildings not built to withstand earthquakes.
 6. Santa Monica Fault: 6.8 magnitude affecting the Wilshire corridor and Santa Monica, damage to soft story buildings.
 7. Sierra Madre Fault: 7.2 magnitude rupture along range-front of the mountains, very large ground motion on old County dams in mountain area.
 8. Chino Hills Fault: 6.7 magnitude, fault off to the east.

Discussion about the scenarios included if a tsunami could occur if there were an earthquake on the Palos Verdes Fault or Newport Inglewood Fault. Dr. Hudnut stated yes, a local source tsunami could occur. There is an ancient submarine fault off of Palos Verdes which could cause high amplitude waves on the coast in the area, and also be a source of off shore landslides. Mr. Flaner suggested the SC consider the Sierra Madre Fault scenario due to the possibility of dam failures which could cause flooding. Los Angeles County has responsibility for dam safety and they could be brought in on the discussion. A comment was made that the Newport Inglewood Fault should be chosen over the Palos Verdes Fault because the Newport Inglewood sits beneath a densely population area, while the Palos Verdes is in the ocean. There was also a question about previous earthquakes and if they release stress built up on the fault. Dr. Hudnut stated that is the perception of many people but it is not true. For example, the earthquakes in the San Fernando Valley in 1971 and 1994. There was no stress relieved from the earlier quake. After much discussion, the consensus of the SC was that the San Andreas, Puente Hills, Sierra Madre, Santa Monica, and Newport Inglewood faults would be used for the



scenarios. For more information, please refer to the attached City of Los Angeles; Local Hazard Mitigation Plan Update Earthquake Scenarios for Los Angeles presentation by Dr. Ken Hudnut, USGS NHMA SAFRR, Science Advisor for Risk Reduction.

AdaptLA Workshop Discussion

Juliette Park (via phone) provided an overview of the Modeling Meets Planning: Final Results from the Coastal Storm Modeling System (CoSMoS) and Next Steps in Coastal Adaptation Planning workshop held on February 22, 2017. The workshop focused on the final modeling results from the U.S. Geological Survey's Coastal Storm Modeling System (CoSMoS) and discussed how models can be used in on-the-ground adaptation planning efforts. The workshop included the uses, differences and consistencies among the CoSMoS and the LA regional coastal change modeling conducted by the Environmental Science Associates (ESA) and the TerraCosta Consulting Group (TCG). The results from the ESA and TCG projects are available on the [AdaptLA webpage](#), including the full technical reports and an executive summary.

Juliette informed the SC of the Sea Level Rise (SLR) modeling in California. New guidance will be released in 2018. Juliette stated the greenhouse gas trajectory is leading to higher level scenarios for SLR. Beyond that, higher storms and tides are causing greater vulnerability for Southern California. Juliette said by the year 2100, SLR will be 5.5 feet + with a 100 year storm. There are 40 different scenarios of SLR and coastal storm projections available. Rob stated the maximum project life for FEMA is 30 years, and recommended to go with the scenario of 30 years maximum with a 100 year storm surge for the HMP. Additional information can be found at [Our Coast Our Future](#), and the [Climate Smart Cities: Los Angeles](#) and USGS's [Hazard Exposure Reporting and Analytics](#) tool.

Plan Review

- Mr. Flaner provided a handout from Carole Baumann with Tetra Tech for the update of the HMP risk assessment. Mr. Flaner reviewed the handout with the SC. The handout covers the base map data, general building stock update, critical facility database update, and the relevant natural hazards: flood, earthquake, landslide, dam and reservoir failures, wildfire, tsunami, and sea level rise. A question arose on what data to use for sea level rise. Rob stated a maximum of 30 years with 100 year surge / 25 centimeters to 12 feet. Tetra Tech is working with USC Sea Grant to determine which data for exposure analysis will best represent the highest level and mean level of sea rise. The handout also refers to demographic data from the 2010 Census, and current and future land use downloaded from the City Planning Department's website.
- Mr. Flaner provided a handout on the Objectives Exercise available on Survey Monkey for the SC to select objectives for the HMP, and reported that 17 SC members completed the survey. Of the 50 objectives statements listed on the survey, 15 of them were selected by 50% or more of the respondents. The objectives meet multiple goals and include private property. Rob reminded the SC that two-thirds of the actions in an HMP impact private citizens and their property. The City EMD suggested that the 15 objectives that were selected by the respondents would be the objectives for the HMP revision. The SC had no objections to the suggestion. Mr. Flaner stated SC members mentioned Goal 6 was confusing and needed to be clarified. Rob reworded Goal 6 to state "Strive to increase adaptive capacity to reduce risk from hazard impacts based on future conditions." It was agreed by the SC that the rewording of Goal 6 was easier to understand, and would replace the previous goal 6 of the Los Angeles HMP goals.
- Mr. Flaner stated the SC needs to decide on the definition of a critical facility for the HMP. The SC had previously reviewed the critical facilities in a handout at the last SC meeting, along with the



critical facilities defined in the 2011 HMP. Rob said Section 201.6 44CFR requires that the HMP provide a description of the jurisdictions vulnerability to the hazards of concern and that includes critical facilities. He talked about the Department of Homeland Security definition of critical facilities used in many plans that includes 16 infrastructure sectors vital to the operations of the City security and national public health and safety. The City has identified 20 facilities (The Big 20) vital to the operations and continuity of the City. A hybrid was developed for the 2015 Los Angeles Floodplain Management Plan (FMP) that borrowed from both of these definitions and remained consistent with the requirements of the HMP. Mr. Flaner suggested the SC adopt the definition from the FMP as the critical facilities definition for the HMP revision. The definition of critical facilities in the FMP is:

Critical Operating Facilities are the facilities that house most City personnel and are required for the day-to-day conduct of City business: City Hall, City Hall East, City Hall South, Parker Center, Piper Technical Center, Personnel Building, West Los Angeles Municipal Building, Van Nuys Marvin Braude Building, and San Pedro Municipal Building.

Critical Response Facilities are the City facilities necessary for hazard event response. They include fire stations, police stations, hospitals, and evacuation centers, such as Los Angeles Unified School District schools, and recreation and park facilities.

Critical Infrastructure consists of public and private infrastructures in two categories: utilities and transportation. Critical transportation infrastructure includes freeways, streets, bridges, railroads, airports and the harbor. Critical utilities infrastructure includes potable water systems (treatment and reservoirs), wastewater systems (treatment plants, major interceptors and sewer lines), electric power systems (power plants, substations and major transmissions lines), oil refineries, natural gas systems, and communication systems.

A question arose if the definition of critical infrastructure included the Internet. The SC decided to add the Internet to the critical infrastructure definition for the HMP. The SC agreed to adopt the definition from the FMP for the Los Angeles HMP revision. A motion was made and approved.

- Mr. Flaner stated by law the HMP must provide a core capability assessment of the City to include a report on each prior mitigation action and their status: have they been accomplished, are they still feasible or no longer feasible, will they be carried over to the HMP revision? This is accomplished by completing a prior action plan review matrix where each previous action status is accounted for. Mr. Flaner stated Denise is conducting the capability assessment with the City. If the City doesn't have a specific capability, it can be identified as an action in the revised HMP. Prior actions that are incomplete can be accomplished through grant opportunities and future projects.

Public Involvement Strategy

- Ms. Davis briefed the SC on the development of a Hazard Mitigation Plan Revision page on the Los Angeles Emergency Management Department website. Denise provided HMP written material for the website to Kate Hutton, Los Angeles Public Information Office. Kate reviewed the material for accessibility and then created the HMP page on the City EMD website. SC members can view the website at <http://emergency.lacity.org/hazard-mitigation-plan>. The HMP page includes an explanation of the HMP revision process and has a drop down menu for other information, i.e., an explanation of hazard mitigation planning; a calendar of events; meeting materials; draft documents; and the public survey and



resources. The website will enable the SC to share the HMP planning process with the public and provide information and invitations for the public to get involved in the planning and participate in the survey.

The screenshot shows the website for the City of Los Angeles Emergency Management Department. The page title is "City of Los Angeles Hazard Mitigation Plan Revision". The main content area includes a "Home" link, a "City of Los Angeles Hazard Mitigation Plan Revision" heading, and a paragraph explaining the city's goal to revise the 2011 HMP to reduce vulnerability to disasters. It also lists grant funding sources available through FEMA: Hazard Mitigation Grant Program (HMPG), Pre-disaster Mitigation-competitive Program (PDM-C), and Flood Mitigation Assistance Program (FMA). A left sidebar contains links for "About the Hazard Mitigation Plan", "What is Hazard Mitigation?", "Calendar of Events", "Meeting Materials", "Draft Documents", and "Survey and Resources".

- Mr. Flaner discussed the need for public engagement meetings to get the public involved in the planning process. Rob asked the SC what events will be taking place in the next 30 – 45 days to set up a booth and engage the public in the HMP planning process. Suggestions for events included opening day at Dodger Stadium, March for Science – Earth Day in Pershing Square, Los Angeles County Science Fair, Los Angeles Marathon, and Quake Smart at the Convention Center. Rob shared previous successes with attending local farmer’s market events from other projects. Rob asked about having a press release for the upcoming public survey. Ms. Davis explained the notification of the survey will go out on NextDoor, a private neighborhood social network, to over 200,000 citizens.
- Due to the time, the handout of the draft Public Survey was provided as homework for the SC to review and provide comments or recommendations at the next meeting. The survey will be on Survey Monkey and has 22 questions focused on citizen concerns about future disasters and the safety of its citizens.

Action Items and Next Steps

- Confirm Public Survey
- Discussion on Plan Maintenance
- Tetra Tech’s Baseline Assessment Tool (**BATool**)

Next Meeting

Thursday, March 23, 2017 1:00pm – 3:00pm

Los Angeles EOC 500 E. Temple Street, Los Angeles, CA 90012