

Joint Chinese-US Reconnaissance Efforts Related to the May 12, Sichuan Earthquake

Prepared at joint meeting of US and Chinese scientists
Beijing, June 10-11, 2008

Topics Recommended:

○ Field Reconnaissance

- Option 1: Joint China-US Field Team (regions as approved)
 - Data is perishable and such field studies should be completed by mid-July, including near-fault regions, if possible.
 - Made up of academic, private, and US government experts and appropriate Chinese counterparts
 - Data types of interest to US Reconnaissance (EERI and GEER)
 - Statistical data, as available, of ground motion intensity vs. damage and/or losses
 - Strong ground motion records and location of recordings
 - Building types and ages in affected areas
 - Detail of building characteristics subjected to this earthquake for potential use for predicting losses in central and eastern US.
 - Study of liquefaction, landslides and other soil movement including relationship to structural damage.
 - Collaborative use of ground based LIDAR to capture high resolution structure and ground movements and interpretation of data
 - Damage from fault rupture and associated near surface movements.
 - Types of bridges and damage suffered
 - Damage to Lifelines and effects on service
 - Performance of earth, rockfill, and concrete dams
 - Performance of special occupancies (police/fire stations, EOC, hospitals, schools, etc.)
 - Emergency Response issues
 - Temporary housing needs and strategies
 - Reconstruction issues including repair/retrofit/rebuilding strategies
 - Provision of medical care
 - Technical and human response issues related to post earthquake continuing risks (aftershocks, landslides, quake lakes)
 - Data concerning some of items of interest may be more available than others and some information on some items may not be

available at all. Guidance on available fields of investigation will be developed by Chinese experts.

- A joint publication documenting this reconnaissance would be developed
- Option 2: Meeting/Workshop
 - Three day workshop to be held, possibly in July of 2008 in Harbin, with CEA personnel with reconnaissance experience and 10-15 US experts in disciplines corresponding to available data. Results of Chinese Reconnaissance effort would be presented. Agenda would be developed using exchanges of requests for information and definition of available data between representatives of the sides in preparation for the workshop. Joint conclusions would be reached and published in a record document.
 - Either option would also result in definition of potential future collaborative research topics
- **Strong Ground Motion Records**
 - US requests access to all strong ground motion records, main shock and important after shocks, free field or in structures, recorded for this event within China.
 - Based on the June 11-12 meetings, these records are expected to be released outside of China, but not at least for several months.
- **Request for US Technical Assistance identified at June 10-11 meetings.**
(Additional items may be identified in future.)
 - Inexpensive methods for rural prescriptive residential construction
 - Methodology to set seismic design criteria (performance goals) for various occupancy types given site seismicity
 - Method to evaluate and/or mitigate hazards from rock (boulder) falls/slides in steep canyons
- Contact: Wang Zifa, Director, IEM, CEA; zifa@iem.net.cn