

GEER RESPONSE TO EXTREME EVENTS

GEER Objectives

The GEER Association organizes and supports reconnaissance efforts by geo-researchers after severe natural and human-made disasters (i.e., “extreme events”) and develops techniques to capture perishable data to learn from these events. It distributes findings from these reconnaissance efforts through timely GEER web reports, peer-reviewed papers, and technical seminars. The primary objectives of GEER are:

1. Document geotechnical engineering and related effects of important extreme events to advance research and practice.
2. Employ innovative technologies for post-event reconnaissance.
3. Advance the capabilities of individuals performing reconnaissance of extreme events.
4. Train individuals to perform effective reconnaissance and facilitate access to equipment required for sensing and data collection.
5. Develop a coordinated response for geo-researchers to form effective reconnaissance teams, and work effectively with organizations that focus on other disciplines.
6. Promote the standardization of measurement and reporting in reconnaissance efforts.
7. Disseminate timely and accurate post-event web-based reports and data.

GEER Response Considerations

After collecting as much information as possible about the event based on news reports, correspondence with other agencies, and local contacts, and after discussing the potential benefits of a response, the GEER Steering Committee (SC) votes to decide whether a response is required. GEER does not perform reconnaissance of every significant extreme event that occurs. After each major event, an assessment is made by the GEER SC, in consultation with NEHRP agencies, ASCE, EERI, and other organizations to determine if important data can be garnered that will potentially make significant advancements in the research and practice of geotechnical engineering. Research resources are limited, so the GEER SC should only recommend funding of internal GEER-supported post-event reconnaissance efforts or submission of new proposals for Rapid Response Research (RAPID) if critical information and well-documented case histories can be obtained. This focus on early identification of strategic priorities for study and the potential for lessons to be learned from extreme events should guide not only whether a response is appropriate but also the scale of the response. The GEER Focal Points and Research Topics in Need of Field Observations of Geotechnical Phenomena documents help focus the assessment.

The ultimate decision whether to respond or not is embedded within a series of technically centered considerations:

- the opportunity to learn about new hypotheses or models,
- the availability of additional field data to supplement data gathered in the reconnaissance, and
- the potential for a comparable event to occur in the future in the US.

Pressing research needs that might motivate a response are continually being assessed by the SC.

GEER Team Organization

At the onset, a GEER SC member is identified as the SC Coordinator for the event. The SC Coordinator collects information, serves as the “high-level” coordinator for interactions with outside agencies, stays engaged with the team throughout fieldwork and report preparation, and monitors the effort to ensure the team completes the report in a timely manner. If the GEER SC approves an event response, the SC identifies a team leader and provides a scope of the reconnaissance and budget. After the team leader agrees, primary responsibility for the reconnaissance effort is transferred to the team leader, and she or he selects the team members with input from the SC. Teams should be diverse in terms of reconnaissance experience, age, gender, and geographic location. It is important to provide reconnaissance experiences to a wide range of researchers, such that the pool of researchers experienced in reconnaissance grows. The GEER team performs the reconnaissance in accordance with the GEER Reconnaissance Guidelines and publishes its initial PDF report within weeks after the event. The SC Coordinator serves as one of the report editors.