



NCST Advisory
Committee Meeting
September 28, 2017

Response to NCST Advisory Committee's 2016 Report to Congress

Dr. Howard Harary
Director
NIST Engineering Laboratory

NCST Background Material

- The National Construction Safety Team (NCST) Act authorizes the Director of NIST to establish Teams for deployment after events causing the *failure of a building or buildings that has resulted in substantial loss of life or that posed significant potential for substantial loss of life* (15 U.S.C. 7301(a)).
- **Building failure** may involve one or more of the following: structural system, fire protection (active or passive) system, air-handling system, and building control system. Teams established under the Act and this part will investigate these technical causes of building failures and will also investigate the technical aspects of evacuation and emergency response procedures, including multiple-occupant behavior or evacuation (egress or access) system, emergency response system, and emergency communication system (15 CFR 270.100(b)).
- The number of **fatalities considered to be substantial** will depend on the nature of the event, its impact, its unusual or unforeseen character, historical norms, and other pertinent factors (15 C.F.R. 270.100(c)).
- The purpose of the investigations is to improve the safety and structural integrity of buildings in the U.S. (15 U.S.C. 7301(b)(1)).
- The Teams shall: (a) establish the likely technical cause or causes of the building failure; (b) evaluate the technical aspects of evacuation and emergency response procedures; (c) recommend, as necessary, specific improvements to building standards, codes, and practices based on the findings; and (d) recommend any research and other appropriate actions needed to improve the structural safety of buildings, and improve evacuation and emergency response procedures, based on the findings of the investigation (15 U.S.C. 7301(b)(2)).



NCST AC Background Material

- The NCST Advisory Committee shall advise the NIST Director on: (1) carrying out the NCST Act; (2) a review of the procedures for the establishment and deployment of Teams; and (3) the reports issued as a result of an NCST investigation (2016 NCST Advisory Committee Charter).
- On January 1 of each year, the NCST Advisory Committee shall transmit a report to congress that includes: (1) an evaluation of Team activities, along with recommendations to improve the operation and effectiveness of teams; and (2) an assessment of the implementation of the recommendations of Teams and of the advisory committee (2016 NCST Advisory Committee Charter).
- The NCST Advisory Committee shall meet at least once per year. Additional meetings may be called whenever requested by the NIST Director or the DFO; such meetings may be in the form of telephone conference calls and/or videoconferences (2016 NCST Advisory Committee Charter).
- NIST may establish subcommittees from among the members as may be necessary, subject to the provisions of FACA (Federal Advisory Committee Act), and its implementing regulations, and applicable Department of Commerce guidance. Any subcommittees established must report back to the parent committee, and must not provide advice and work products directly to the agency (2016 NCST Advisory Committee Charter).



NIST Response to 2016 NCST Advisory Committee Report to Congress

Recommendation	Response	Responsible Party
<p>1. Expertise at NIST The committee notes the special expertise possessed by NIST staff and their building safety orientation strongly suggest that their ability to investigate tornado events other than Joplin and wildland-urban interface fires would be highly beneficial.</p>	<p>The decision to deploy an NCST Team is not dependent on the expertise that already exists at NIST.</p> <p>The NCST Act requires that at least one member of the Team be a NIST employee. Other team members can be experts from the private sector, universities, representatives of professional organizations with appropriate expertise, and appropriate Federal, State, or local officials.</p> <p>The NCST Act allows for the procurement of temporary or intermittent services by experts and consultants.</p>	<p>EL</p>



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<p>2. Criteria for Deploying NCST Teams</p> <p>The Committee urges NIST to review the criteria in the context of apparent climate change; and to consider ways of stretching its resources, perhaps by reducing the length and complexity of reporting in order to conduct more investigations.</p>	<p>The NCST Act is focused on the impact that hazards have on buildings, and subsequent challenges in evacuation and emergency response procedures; the Act does not focus on the hazard type that resulted in building(s) failure.</p> <p>As noted in last year's meeting, a primary consideration for NIST is the limited resources available within the Disaster and Failure Studies (DFS) program and the Engineering Laboratory, more broadly, in order to conduct more investigations.</p> <p>The NCST Act specifies the two criteria the NIST Director must consider in determining whether to deploy a Team under the Act: building failure and substantial loss of life or significant potential for substantial loss of life.</p>	<p>DFS</p>



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<p>3. Safety of Teams The committee suggests that coordination with local fire departments before and during any NIST deployment is prudent. In the longer term, safety training of the type undertaken quarterly by FEMA search and rescue teams may be considered. Participation by NIST personnel in the safety training of other agencies may be feasible.</p>	<p>NIST employees that deploy as part of an NCST preliminary reconnaissance or an NCST investigation must complete a set of safety training courses.</p> <p>The set of safety training courses are updated, as needed, with guidance from EL's Safety Professional and OSHE, borrowing material whenever needed from other agencies.</p> <p>NIST employees that have NCST credentials issued by the NIST Director will discuss the status of their safety training with their managers twice per year during biannual and annual reviews.</p>	<p>DFS</p>



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<p>4. Longitudinal Studies The committee encourages NIST to consider follow up of its investigations. One reason is to assess and update amendments to the deployment criteria, which include 'Consequences to Resilience.' Revisiting a damaged site, possibly six months after an event, permits exploring what changes in building safety have been implemented and whether damage models are reliable for resilience planning.</p>	<p>Longitudinal studies for NCST investigations would allow better tracking of the impact from recommendations (and their adoption) on improvements of building standards, codes, and practices based on the NCST findings.</p> <p>A follow up of NCST investigations, even not at the original site could prove beneficial to promote best practices across multiple hazards. DFS and the WUI Group plan to study public messaging (that is a direct result of the Joplin NCST investigation) related to the evacuation in the Gatlinburg WUI fire, which resulted in many fatalities.</p>	DFS





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Questions?