

NIST Response to the 2013 National Construction Safety Team Advisory Committee (NCSTAC) Recommendations

Recommendation	NIST Response	Response	Responsible Party
<i>Recommendations</i>			
<p>1. Joplin Recommendations Implementation The Committee recommends that NIST develop a strategic plan for implementing the 16 recommendations, recognizing the bureaucratic, financial and human obstacles that it will face.</p>	<p>Accept</p>	<p>NIST agrees with your recommendation. Last April – one month after we released our final Joplin report – NIST began working to develop a strategic plan for implementing the Joplin recommendations. Part of the plan is to establish and fund a special project to implement those recommendations. This project commits to seek implementation of all 16 Joplin study recommendations at the earliest possible date, based on code and standard development cycles, by:</p> <p>(1) developing, or coordinating the development of, guidelines, national standards, and code change proposals; (2) coordinating/championing their adoption in the national model codes; and (3) conducting/coordinating research to enable development/deployment of technology for improved emergency communication, tornado hazard characterization, and public perception of risk and response during emergencies.</p> <p>The full plan includes milestones all the way through FY 2020, but with many actions already under way.</p> <p>In addition, NIST also convened strategy meetings with the leadership of key stakeholder organizations with primary responsibility for implementing Joplin recommendations. This was to (1) affirm their commitment, (2) develop appropriate strategies, and (3) coordinate activities.</p> <p>Here are highlights of some of the major interactions to date:</p> <ul style="list-style-type: none"> • American Society of Civil Engineers (ASCE): <ul style="list-style-type: none"> - We worked with ASCE to form a committee to develop a new ASCE/SEI <i>Wind Speed Estimation Standard</i>. NIST staff co-chairs. 	<p>L. Phan M. Levitan E. Kuligowski</p>

		<ul style="list-style-type: none"> - This committee will develop standardized methods for estimating the intensity of tornadoes and other severe windstorms. - This addresses Joplin recommendations #2 and #4, and supports #1 and #3. - NIST staff also formed and led a <i>Tornado Working Group</i> within an ASCE committee to address recommendation #5 and to support #6. • International Code Council (ICC): <ul style="list-style-type: none"> - We first met in April 2014 and have developed a joint NIST-ICC action plan to carry out recommendations #7, #10, and #11. • Nuclear Regulatory Commission (NRC): <ul style="list-style-type: none"> - Last July, we met and discussed strategy for implementing recommendation #3. • National Science Foundation (NSF): <ul style="list-style-type: none"> - Also beginning last July, we've discussed strategy for implementing recommendation #15. • Federal Emergency Management Agency (FEMA): <ul style="list-style-type: none"> - In August 2014, we met and talked about specific code change proposals related to tornado shelters and public sheltering strategies; these are relevant to recommendations #7 and #8. • National Fire Protection Association (NFPA): <ul style="list-style-type: none"> - We've developed a joint NIST-NFPA action plan for recommendations #3, #11, and #13. <p>Several of these interactions address our recommendation #3 calling for development of tornado hazard maps for use in tornado-resistant design of buildings. That is something this committee specifically endorsed. For this recommendation, NIST has awarded a contract for development of Tornado Risk Maps for building design. This provides the technical underpinning for success in carrying out recommendations #5 and #6.</p>	
<p>2. Joplin Recommendations Implementation In addition to alerting the public to an imminent threat, the Committee encourages a program of public education as to the nature of</p>	<p>Accept</p>	<p>NIST agrees with your recommendation. This recommendation is related to NIST Joplin tornado recommendation #13 regarding public alert and communications systems and public response planning. We met and discussed strategy for carrying out this recommendation with NFPA and with NOAA and FEMA.</p>	<p>L. Phan M. Levitan E. Kuligowski</p>

<p>tornado threats and how to respond to alerts. The Committee recommends that NIST develop an education package based on a standard response plan that could be adapted by local safety officials. The investigation of public response to alerts prior to touchdown of the Joplin, MO tornado uncovered a degree of misunderstanding about the nature of tornado hazards and about the reality of the threat to Joplin. A standardized, authoritative education package can be the basis of helping citizens to protect themselves.</p>		<p>Doing specific education-related work about the nature of tornado threats and how to respond to alerts – including preparation of education packages – is not within NIST’s mission. However, we have spoken to NFPA and NOAA about education and outreach in emergencies, and we are trying to catalyze their work in this area. As a result, NIST is expecting a substantive discussion of NOAA's work and their plans in this area where they play a lead role. We’ve made sure that both organizations are aware of the Committee’s concerns and views.</p>	
<p>3. Wildland-Urban Interface (WUI) Fires The Committee recommends that NIST consider science and engineering methodologies similar to those that reduce the fire risk in building interiors to reduce the fire risk of building exteriors in WUI fires. Such methodology could lead, for example, to methods for fire hardening of the exterior of the structures that could significantly reduce the damage from firebrands and flame radiation in WUI fires.</p>		<p>This is outside the scope of the National Construction Safety Team Advisory Committee Charter.</p>	
<p>4. Lifeline The Committee urges that the NCST Act be broadened to include lifeline</p>		<p>This is a recommendation to Congress, not NIST. NIST has no response.</p>	

<p>incidents in order that future NIST investigations may address and achieve a balance between investigation of buildings and infrastructure. This is consistent with the growing recognition of resilience as a primary goal in protecting communities from the effects of natural hazards.</p>			
Informal Suggestions			
<p>5. Joplin Recommendations Implementation The Committee endorses the recommendation by NIST that a probabilistic tornado hazard map be prepared in a format similar to those for seismic and conventional wind hazards. Recommendations should be developed enabling engineers to generate design loads in the manner of ASCE/SEI 7, the standard design loads document used in the United States. This document is advisory and may be implemented in local building codes at the discretion of the local authority.</p>	Accept	<p>NIST agrees with this endorsement. NIST has awarded a contract for development of Tornado Risk Maps for building design. The contractor is Applied Research Associates, Inc. (ARA), a firm with strong expertise in wind engineering. This provides the technical underpinning for success in carrying out NIST Joplin recommendations #5 and #6.</p>	<p>L. Phan M. Levitan E. Kuligowski</p>
<p>6. Joplin Recommendations Implementation The Committee also endorses the recommendation by NIST to develop a nationwide protocol defining standards for the</p>	Accept	<p>NIST agrees with this endorsement. NIST is working with the technical committee of NFPA 1616 <i>standard on mass evacuation and sheltering program</i> to develop guidance on the use of emergency communication technologies and to disseminate public alerts and warnings.</p>	<p>L. Phan M. Levitan E. Kuligowski</p>

<p>technology and use of public alert systems. In the absence of national guidelines, local jurisdictions develop their own protocols without benefit of advice on modern technology such as reverse 9-1-1 cell phone communication. The goal of this recommendation is to warn the public in an unambiguous and timely manner.</p>			
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