

NCST Advisory Committee Meeting

September 12, 2024

- Please keep your cameras on if you are comfortable doing so, especially during discussion periods.
- Please unmute your microphone if you wish to speak.

Meeting Goals

- Review Disaster and Failure Studies Program scoring of events and readiness of teams
- Review the progress on implementation of recommendations from the Joplin tornado NCST investigation
- Review the status of the NCST investigation of the partial collapse of Champlain Towers South in Surfside, Florida
- Review the status of the NCST investigation of Hurricane Maria's effects on Puerto Rico
- Develop the Committee's annual report to Congress

Agenda

Time (ET)	Topic
9:00 – 9:25 am	Opening Business <ul style="list-style-type: none">• Call to Order/Roll Call• Welcome/Opening Remarks• Meeting Goals/Review of Agenda
9:25 – 10:00 am	Disaster and Failure Studies Program Update & Committee Discussion
10:00 – 11:10 am	Progress on Implementation of Recommendations from Joplin tornado NCST Investigation & Committee Discussion
11:10 – 11:25 am	BREAK
11:25 am – 12:20 pm	Summary of Champlain Towers South NCST Investigation Progress & Committee Discussion

Time (ET)	Topic
12:20 pm – 1:15 pm	LUNCH
1:15 – 2:05 pm	Summary of Hurricane Maria NCST Investigation Progress & Committee Discussion
2:05 – 2:25 pm	Public Comment Period
2:25 – 2:35 pm	Summary Remarks
2:35 – 2:50 pm	BREAK
2:50 – 5:00 pm	NCSTAC Preparation of Annual Report to Congress
5:00 pm	ADJOURN

Disaster & Failure Studies Program Updates

Tanya Brown-Giammanco, Ph.D.
Director, Disaster & Failure Studies Program
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NATIONAL INSTITUTE OF
STANDARDS AND TECHNOLOGY
U.S. DEPARTMENT OF COMMERCE

NIST's Disaster and Failure Studies Program

Statutory Thrust

- Evaluate hazard events against deployment criteria
- Manage identification, vetting, and onboarding of NCSTAC members
- Develop agenda, manage logistics, and set frequency for NCSTAC meetings
- Create annual NCST reports to Congress
- Coordinate statutory activities across programs related to disasters
- Conduct field studies under various authorities

Research Thrust

- Research program focused on disaster metrology, including structural performance and social sciences
- Coordinate research activities with NIST EL Groups, Disaster Statutory Programs, NIST EL Divisions, and other NIST Labs
- Coordination with the Center of Excellence for Risk-Based Community Resilience Planning on field studies
- NSF/NIST Disaster Resilience Research Grants Program
- Outreach and dissemination

Procedures Thrust

- DFS Standard Operating Procedures
- HOT Team membership, training, and credentials
- Field and safety protocols
- Human subjects protocols
- Manage equipment for disaster metrology and personnel protection
- Data preservation, security, and management
- Field tools (NDA's, permissions, survey instruments)
- MOUs with other agencies, academics, and others
- NIST Disaster Working Group

Deployment Team Readiness



- 21 “Hot Team Members”
 - 1st deployment wave, establish connections and review authorities w/local incident command
 - Gather information/data to update initial event score to help evaluate next steps
 - Begin detailed data collection and evidence preservation activities if an NCST investigation or research study under another authority is declared
 - Hold DOC Investigator Credentials and “Federal Emergency Response Official” badge
- 13 “Emergency Response Officials”
 - 2nd deployment wave, data collection and evidence preservation focus
 - Hold “Federal Emergency Response Official” badge

- Safety and Equipment Updates
 - Hazard Review published November 2023
 - Transitioning to “FirstNet” phones in 2025
 - 1 high-resolution zoom camera
 - 16 helmet cameras
 - Scale bar and GPS targets for use with drones
 - Time lapse cameras coming in 2025

Cross-Investigation Coordination

Single technical report preparation support contract

Report series available

- NCSTAR: NCST Act Reports
 - NCSTAR 4 Hurricane Maria
 - NCSTAR 5 Champlain Towers South
- NCST GCR: NCST Grant/Contractor Reports
- NWIRP: National Windstorm Impact Reduction Program Series
- NWIRP GCR: National Windstorm Impact Reduction Program Grant/Contractor Reports

Streamlined internal report reviews



Internal Report Reviews: Technical

1. Program Review—program/group/investigation leaders review for quality, ensure papers are ready for other reviewers

2a. Inside Division Review—non-author team members review for technical and editorial quality, and policy

2b. Outside Division Review—non-team members external to the Division (could be within NIST or external), review for technical and editorial quality, and policy



Simultaneous

Internal Report Reviews: Policy

3a. Division Review—chiefs/deputies or designees provide editorial, technical, and policy review, including certification of Homeland Defense Clearance

3b. Laboratory Review—directors/deputies or designees primarily review for policy, secondarily for technical and editorial

3c. Legal Review—Chief Counsel or designees review for policy and legal

4a. ERB Sponsor Review—primarily reviews for policy and editorial, secondarily for technical review

4b. Interagency Review—agency stakeholders review for accuracy, compliance with authorities, and for concurrence of their role in the recommendations

5. ERB Committee Review—ERB Committee and Chair review for publication clearance

Simultaneous

Simultaneous

Sample Review Timelines



	Technical Review (weeks)			Policy Review (weeks)						Total (weeks)	
	Prog. Lead	Div. Reader	Outside Reader	Div. Chief/ Designee	OU Director /Designee	Office of Chief Counsel	ERB Sponsor	Interagency	ERB Chair		
		Parallel Reviews		Parallel Reviews			Parallel Reviews				
Summary Report (NCSTAR X) Review	N/A	3		3			3			1	10
Summary Report (NCSTAR X) Revision	N/A	4		2			2			0	8
Project Volumes (NCSTAR X-1, X-2, etc.) Review	4	4		3			3			1	15
Project Volumes (NCSTAR X-1, X-2, etc.) Revision	6	6		3			2			0	17

Based on current NIST ERB processes

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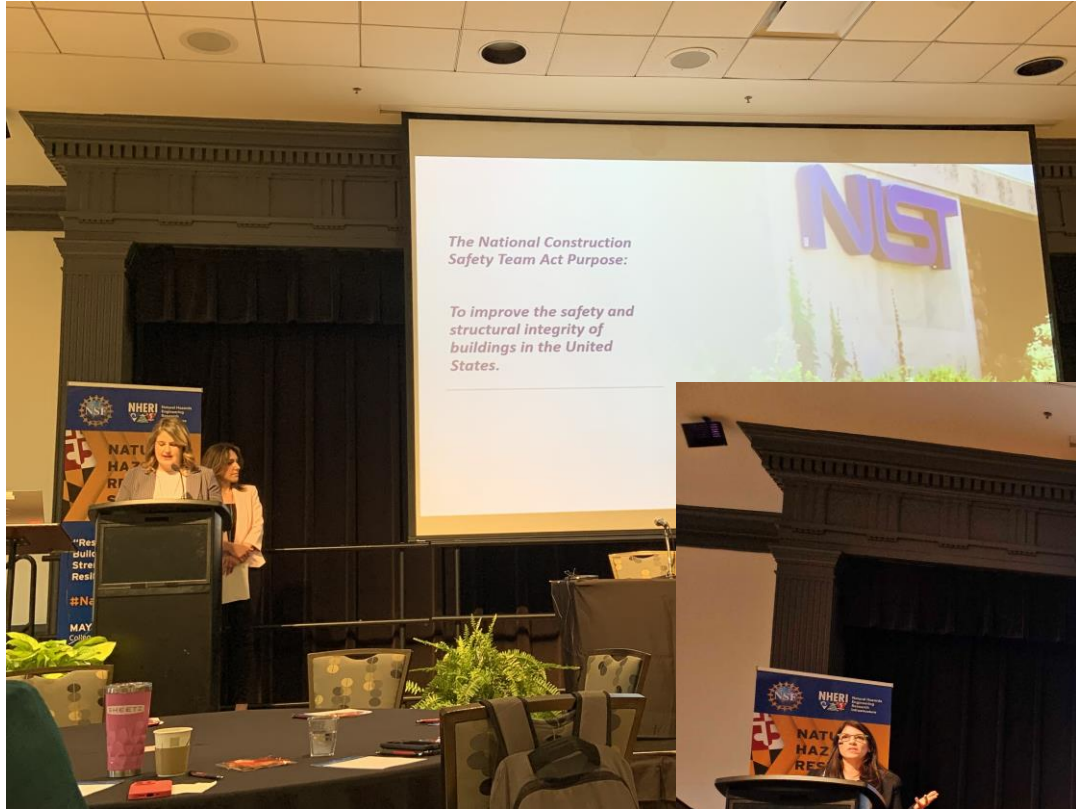
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Outreach: NSF NHERI Natural Hazards Research Summit



Coordination: NASA Disaster Response Coordination System

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What NIST Can Do Under the NCST Authority

- Conduct **technical investigations** of building failures that resulted in loss of life or the potential for loss of life
- Conduct **technical investigations** of the emergency response and evacuation activities and communications
- Based on the results of investigations, **make recommendations for changes** to building codes, standards, practices, or research needs to improve building safety
- After the completion of investigations, **draft and vote on proposals for changes** to building codes, standards, practices

What NIST Cannot Do Under the NCST Authority

- NIST cannot **make/require changes** to building codes, standards, or practices
- NIST cannot **inspect for or certify safety** of existing/new buildings or sites
- NIST cannot **approve plans** for renovations to existing buildings or sites
- NIST cannot **pass laws** (e.g., regarding building design, inspection, approval)
- NIST cannot **conduct criminal investigations or find fault** associated with building failures, or prosecute, or punish any parties

NCST Advisory Committee Role

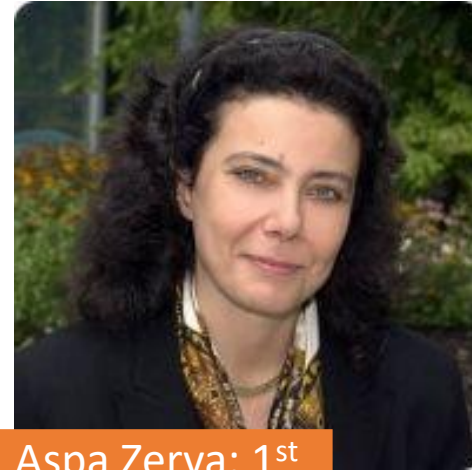


- Advise the NIST Director on carrying out the NCST Act
- Review NCST procedures
- Review the reports issued as a result of an NCST investigation
- By January 1 annually, transmit to the Committee on Science, Space and Technology of the House of Representatives and to the Committee on Commerce, Science, and Transportation of the Senate a report that includes:
 - an evaluation of NCST activities, along with recommendations to improve the operation and effectiveness of NCSTs, and
 - an assessment of the implementation of the recommendations of NCST investigations and of the Advisory Committee

NCST Advisory Committee: Current



Kim Shoaf: 2nd term
expires April 30, 2026



Don Dusenberry & Aspa Zerva: 1st
term expires August 31, 2025



Pepe Izquierdo-Encarnacion: 2nd
term expires September 30, 2026



Lori Peek: 1st term
expires April 2, 2026

???

???

1st term expires:
??, 2027

NCST Advisory Committee Meeting Cadence: Previous



Spring Meeting

- March-June
- Annual ethics briefing
- Review NIST's response to committee's report to Congress
- DFS program updates
- Deep dive presentations on investigations
- Preparation time for committee's report to Congress

Fall Meeting

- September-November
- DFS program updates
- Summary presentations on investigations' progress
- Preparation time for and consensus on committee's report to Congress

As Needed

- Progress on implementation of recommendations from previous investigations
- Preliminary reconnaissance mission briefings
- Research study updates

NCST Advisory Committee Meeting Cadence: Future



Themes

- Annual ethics briefing—first meeting of 2025
- Review NIST's response to committee's report to Congress—first meeting of 2025
- DFS program updates—all meetings
- Preparation time for committee's report to Congress—all meetings
- Summary presentations on investigations' progress—dependent upon each individual investigations' needs
- As needed:
 - Progress on implementation of recommendations from previous investigations
 - Preliminary reconnaissance mission briefings
 - Research study updates

Timing

- Dependent upon each individual investigations' needs

Event Scoring: September 2023-present



Date	Event	Event Consequence Score (max = 5)	Evacuation and Response Score (max = 5)
April 3, 2024	Hualien City, Taiwan Earthquake	4.0	3.0
April 26-28, 2024	Central US Tornado Outbreak*	3.3	1.0
April 30-May 9, 2024	US Tornadoes*	3.3	1.0
May 16, 2024	Tornado & High Wind Events	4.2	1.0
May 21, 2024	Iowa Tornado Event	3.4	1.0
May 22-30, 2024	Late May US Tornado Events	3.3	1.0
July 1-8, 2024	Hurricane Beryl	3.9	1.0
July 18, 2024	San Pedro de Atacama, Chile Earthquake	1.8	1.0

*Preliminary Reconnaissance

Congratulations!

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2024 Science, Technology and Environment

Winner



**Marc Levitan, Long Phan and the Tornado Wind
Loads Team**

Created the world's first tornado-resistant building codes, conducting groundbreaking research that will save lives and protect critical facilities like schools, hospitals and emergency centers from extensive property damage.

Tanya Brown-Giammanco, Ph.D.
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Questions?