



MINUTES
NFPA Technical Committee on Fundamentals
NFPA 101 and NFPA 5000 Second Draft Meeting

Wednesday, June 22, 2016
Hilton Fort Lauderdale Marina
Fort Lauderdale, Florida

1. Call to order. The meeting was called to order by Chair Wayne “Chip” Carson at 8:00 a.m. on June 22, 2016 at the Hilton Fort Lauderdale Marina, Fort Lauderdale, FL.
2. Introduction of committee members and guests.

TECHNICAL COMMITTEE MEMBERS PRESENT

NAME	COMPANY
Wayne Carson, Chair	Carson Associates, Inc.
Nasser Al Zeyara, Principal	Qatar Civil Defense
Andrew Blum, Principal	Exponent, Inc.
Amy Cheng, Principal	Clark County Department of Development Services
David Frable, Principal	US General Services Administration
Ralph Gerdes, Principal	Ralph Gerdes Consultants, LLC Rep.: American Institute of Architects
Norman Groner, Principal	John Jay College of Criminal Justice
David Jacoby, Principal	Simpson Gumpertz & Heger
Chris Jelenewicz, Principal	Society of Fire Protection Engineers
David Klein, Principal	US Department of Veterans Affairs
Scott Laramie, Principal	Aon Fire Protection Engineering Corporation
Vickie Lovell, Principal	InterCode Incorporated
Ricardo Murga, Principal	US Department of Health & Human Services
Milosh Puchovsky, Principal	Worcester Polytechnic Institute
Rodger Reising, Principal	Tyco/SimplexGrinnell Rep.: Automatic Fire Alarm Association
Jon Roberts, Principal	UL LLC
David Tyree, Principal	American Wood Council
Victoria Valentine, Principal	National Fire Sprinkler Association, Inc.
Daniel Finnegan, Alt. to Jack McNamara	Siemens Industry, Inc. Rep.: National Electrical Manufacturers Association

Thomas Hammerberg, Alt. to Rodger Reiswig	Automatic Fire Alarm Association, Inc. Rep.: Automatic Fire Alarm Association, Inc.
Jonathan Humble, Alt. to Farid Alfawakhiri	American Iron and Steel Institute Rep.: American Iron and Steel Institute
Jake Pauls, Alt. to Stanley Harbuck	Jake Pauls Consulting Services Rep.: American Public Health Association
Gregory Harrington, Staff Liaison	National Fire Protection Association

**TECHNICAL COMMITTEE PRINCIPAL MEMBERS NOT PRESENT
(NOT LISTED WHERE ALTERNATE ATTENDED)**

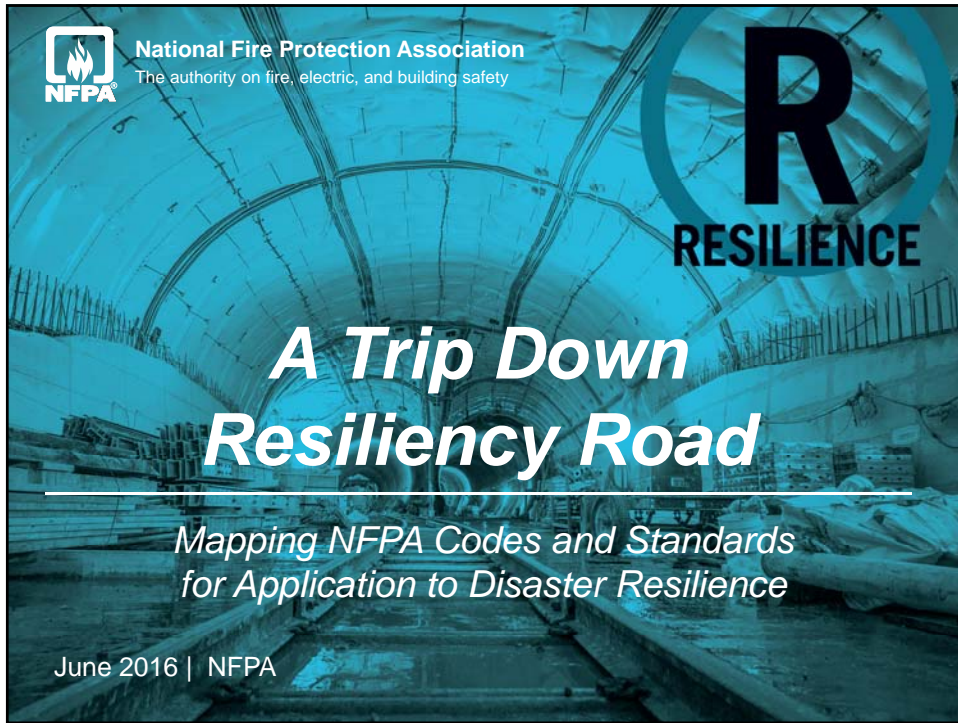
NAME	COMPANY
Salvatore DiCristina, Principal	Rutgers, The State University of New Jersey
Michael Gencarelli, Principal	US Department of the Navy
James Lathrop, Principal	Koffel Associates, Inc.
Thomas McKeon, Principal	Everest National Insurance
Patrick Saba, Principal	Hewlett Packard Company
Steven Wydeveld, Principal	Wydeveld Construction & Consulting, Inc.

GUESTS

NAME	COMPANY
Mike Beady	National Fire Protection Association
Dave Bueche	Hoover Treated Wood
Ben Caldwell	Architect – Skidmore Owing Merrill
Sam Francis	American Wood Council
Marcelo Hirschler	GBH International
Joseph Holland	Hoover Treated Wood Products
Dominique Nigloschy	National Fire Protection Association
Robert Solomon	National Fire Protection Association
Thomas Zaremba	Roetzel & Andress

3. Previous minutes. The July 30, 2015 first draft meeting minutes were approved as submitted.
4. Process. Staff provided an overview of the second draft meeting procedures. See the meeting agenda for the PowerPoint slides.
5. Term “temporary” task group report – Michael Gencarelli, TG Chair. No report.
6. Multi-hazards (other than fire) task group report – Norm Groner, TG Chair. The task group had no activity to report and was discharged with thanks.
7. Formatting task group report (re: No Requirement, No Special Requirement, Reserved) – Jonathan Humble, TG Chair. No report. The task group was discharged with thanks.

8. NFPA 101 Second Draft preparation. The TC reviewed the Public Comments and developed Second Revisions as applicable – see the NFPA 101 second draft report.
9. NFPA 5000 Second Draft preparation. The TC reviewed the Public Comments and developed Second Revisions as applicable – see the NFPA 5000 second draft report.
10. Other business.
 - a. Robert Solomon, NFPA, gave a brief presentation on disaster resilience. The concept could be incorporated into future editions of the codes. See attachment.
 - b. Norm Groner raised the issue of risk analysis in NFPA standards, and how it is addressed across the code set. A motion passed to submit a request to the Fire Protection Research Foundation to initiate a code fund project to evaluate how risk analysis is addressed within NFPA standards. Staff will coordinate with the chair and Mr. Groner.
11. Future meetings. The committee will next meet to prepare the first drafts of the 2021 editions of NFPA 101 and 5000 in 2018.
12. Adjournment. The meeting adjourned at 1:00 p.m.




Resilience and NFPA

300
CODES/STANDARDS
/ GUIDES


225 technical COMMITTEES

65,000 Members

7,200
TECHNICAL
committee MEMBERS




Federal, Regional, NGO Efforts




Community Disaster Resilience


Helping cities around the world become more resilient to the physical, social, and economic challenges that are a growing part of the 21st century.




SPUR IDEAS AND ACTION FOR A BETTER CITY
a member-supported nonprofit organization





ARISE –
an alliance to unlock public/private DRR/DRM potential






100 RESILIENT CITIES

Helping cities around the world become more resilient to the physical, social, and economic challenges that are a growing part of the 21st century.

NFPA and FPRF

November 2014




THE FIRE PROTECTION RESEARCH FOUNDATION
Research in support of the NFPA mission

Disaster Resiliency and NFPA Codes and Standards

Final Report

Prepared by:
Kenneth W. Dungan, P.E.
Performance Design Technologies
Knoxville, TN


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THE FIRE PROTECTION RESEARCH FOUNDATION

FIRE RESEARCH

THE FIRE PROTECTION RESEARCH FOUNDATION
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QUINCY, MASSACHUSETTS, U.S.A. 02169-7471
E-MAIL: Foundation@NFPA.org
WEB: www.nfpa.org/foundation

Report Content

Scope of Work

- Literature Review
- Codes and Standards Mapping/Gap Assessment
- Report on all Findings

Community Resilience as a Metaphor, Theory, Set of Capacities, and Strategy for Disaster Readiness

Fran H. Norris · Susan P. Stevens ·
Betty Pfefferbaum · Karen F. Wyche ·
Rose L. Pfefferbaum



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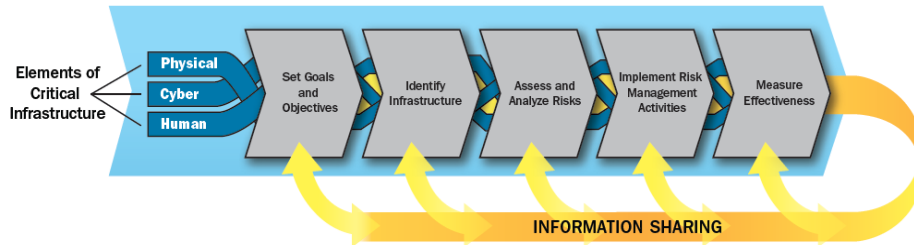
US Federal Government: National Preparedness Goal



Process

National Plan

Figure 3 – Critical Infrastructure Risk Management Framework

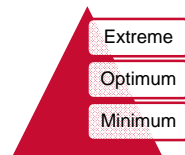


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Goals and Objectives VS. Resiliency

- Safety
 - Fire
 - Structural
 - Use
 - Hazardous Material
- Health
 - Interior
 - Water
 - Contaminants
 - Lighting
 - Sanitation
- Usability
 - Accessibility
 - Barrier-Free Use
- Public Welfare
 - Energy Efficiency
 - Cultural Heritage
 - Mission Continuity
 - Environment



Performance



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Themes

Resilience

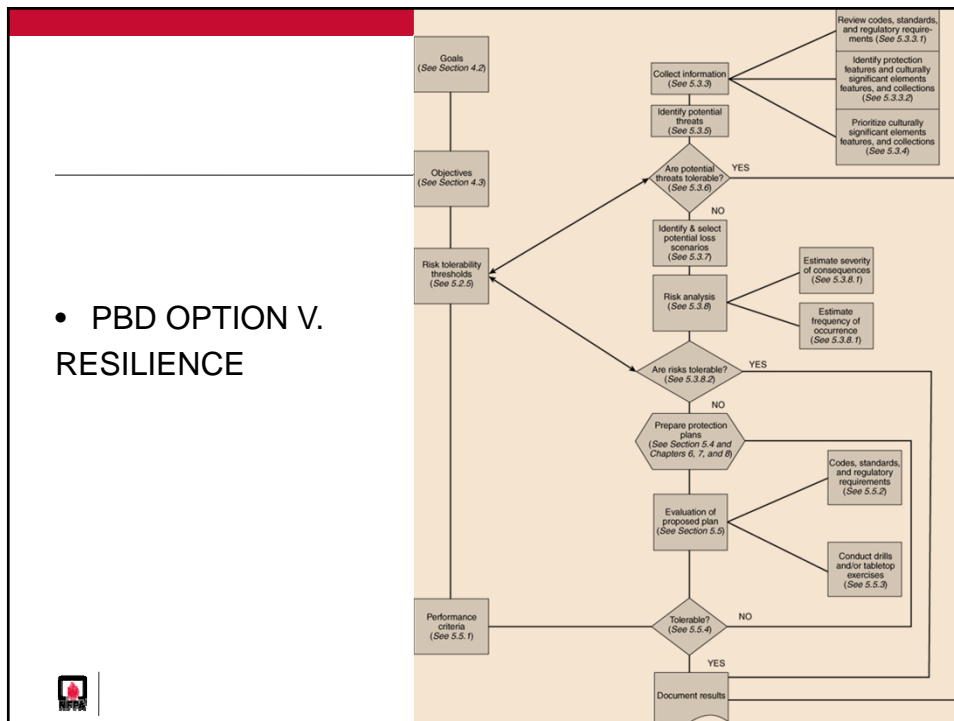
- Includes technical, organizational, social, economic dimensions
- Requires action (plan, prepare, prevent, protect, mitigate, respond, recover)
- Requires preparation/response **2 B** → ADAPTIVE
- Has focus on minimizing damage/disruption to: public health and safety, economy, environment, national security
- Includes ability to manage events **➤** Natural
Human Caused

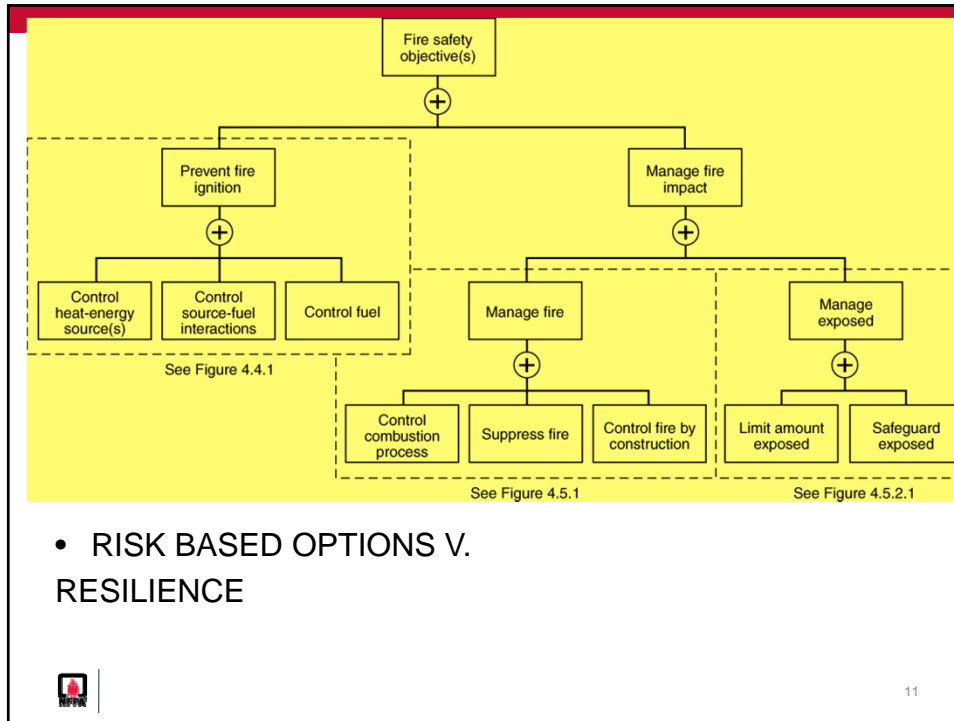


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- PBD OPTION V. RESILIENCE





NFPA 909

POTENTIAL THREATS ASSESSMENT

	N/A	Likelihood of Occurrence			Potential Severity		
		Low	Moderate	High	Low	Moderate	High
Unintentional Act							
Fire/explosion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health emergency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hazardous material spill or release	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transportation accident	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intentional Act							
Terrorism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cyber attack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Arson	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Theft	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vandalism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sabotage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Civil disturbance, public unrest, mass hysteria, riot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strike	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
System Failure							
Loss of electricity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water leak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Building collapse/structural failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fuel shortage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communications system interruption	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air/water pollution contamination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water control structure, dam, or levee failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC system failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Loss of protection systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Geological							
Earthquake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tsunami	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Volcano	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landslide/mudslide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biological							
Pandemic disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Animal or insect infestation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meteorological							
Flood, flash flood, seiche, tidal surge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drought	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wild fire (forest, range, urban)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Snow, ice, hail, sleet, avalanche	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Windstorm, tropical cyclone, hurricane, tornado, water spout, dust/sand storm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Extreme heat/cold	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lightning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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NFPA Documents

- Code
 - Extensive subject area; adopted into law. WHEN TO
- Standard
 - Narrowed subject area; referenced by Code. HOW TO
- Guide
 - Narrowed subject area-usually a process; advisory and informative. ANALYZE
- Recommended Practice
 - Narrowed subject area-usually a good idea; HOW TO-IF YOU WANT



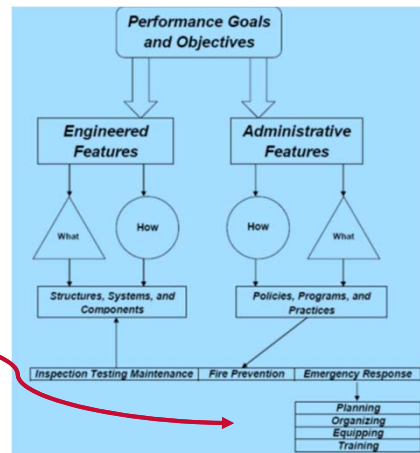
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Which Bucket

- What goal/objective?
- What approach?
 - Mitigation (engineering)
 - Policy (administrative)
 - Response (preparedness)
- What are the refinements?

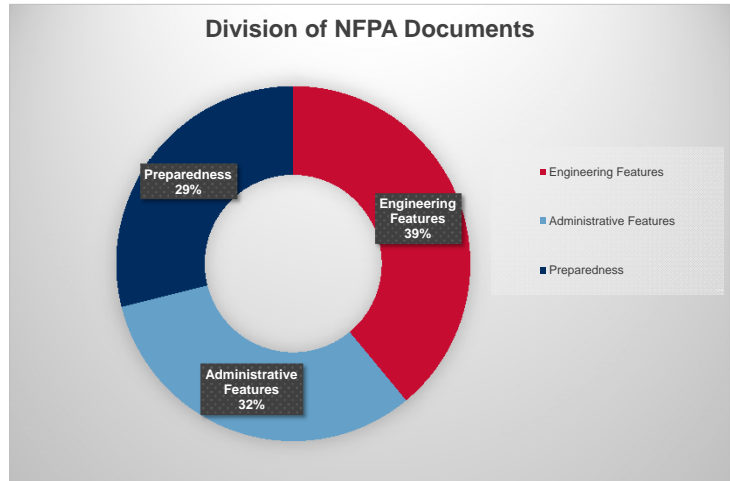
- Plan
- Organize
- Equip
- Train



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Which Bucket



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Next Steps-Roll Out

- ✓ Education
 - ✓ NFPA Membership
 - ✓ NFPA Technical Committees
 - ✓ NFPA Constituents/Stakeholders
- ✓ Many NFPA Codes already have a role
 - ✓ We have been doing this-but didn't have a name for it
- ✓ Where does resiliency fit?
- ✓ Is resiliency an option or....



The screenshot shows a webpage from NIST's Engineering Laboratory. The page title is "Community Disaster Resilience". It includes a "Welcome" section and a "What is NIST doing in resilience?" section. The text discusses the need for disaster resilience standards and the development of a community-centric resilience framework. It mentions that this approach is included in the President's Climate Action Plan and requires multidisciplinary expertise to develop improved methods communities can use to prepare for, resist, respond to, and recover from hazard events more rapidly and at a lower cost. The NIST program is intended to be complementary to disaster resilience efforts within the Federal government and the private sector.



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RULES!

1. You SHALL!
2. You WILL!
3. You MUST!




nfp

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Regulatory Models and Risk Assessments: Setting Resilience Targets

- Metrics Include
 - (1) Human losses
 - (2) Environmental damage
 - (3) Property damage
 - (4) Business interruption
 - (5) Risk control program implementation costs
 - (6) Loss of image
 - (7) Loss of community confidence
 - (8) Loss of structures and objects with heritage significance
- Damage Metrics (Mitigation)
 - ‘Acceptable’ Loss
 - Human
 - Property/Content
 - Mission
 - Quantifying
 - How many (Mortality)
 - How much (Money)
 - How bad (Manage)



Building Design Objectives- Planning to Response to Recovery

Safety

- BI
- Structural Stability
- Fire Safety

Other

- Activity
- Aesthetics
- Comfort
- Cost Effective

Next Steps

Guidance Document for Incorporating Resiliency Concepts into NFPA Codes and Standards

*Prepared for
the Fire Protection Research Foundation, Quincy, MA*

HHS/CMS RIN: 0938-AO91
Title: Emergency Preparedness Requirements for Medicare and Medicaid Participating Providers and Suppliers



National Fire Protection Association
The authority on fire, electrical, and building safety

Thank You



National Fire Protection Association
The authority on fire, electrical and building safety

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