

# 2023 WEBINAR SERIES

## Disaster Risk Reduction

**Policies and Plans to  
Prevent, Protect, Mitigate,  
Respond, and Recover**

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Engineering Leader at...



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## What is a Disaster?

### **Natural Disasters**

- Severe Convective Storms
- Hurricanes/Tropical Storms
- Wildfires
- Earthquakes
- Floods
- Drought
- Blizzard and Ice Storms

### **Human Disasters**

- Industrial Accidents
- Shootings
- Acts of Terrorism
- Mass Violence
- Pandemics

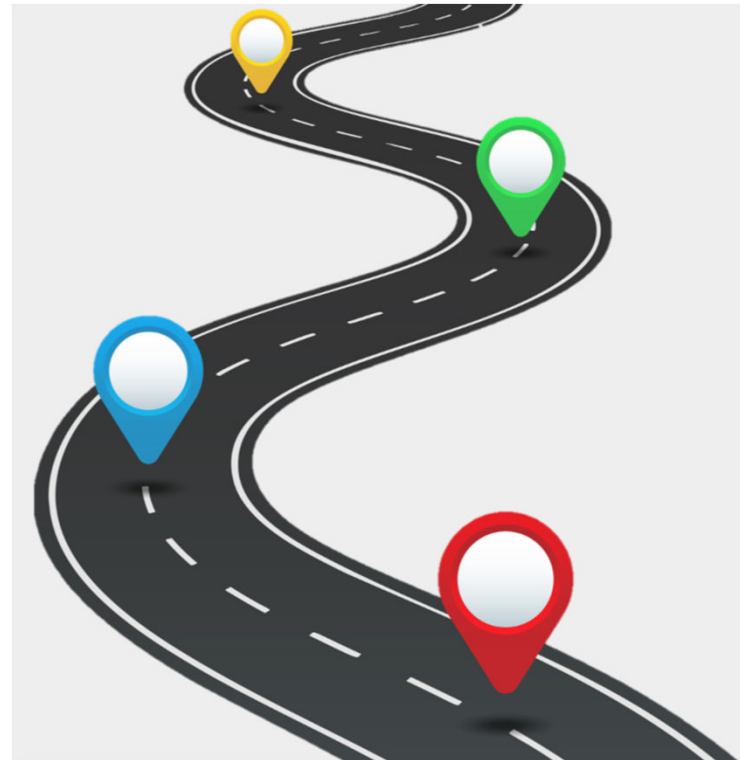
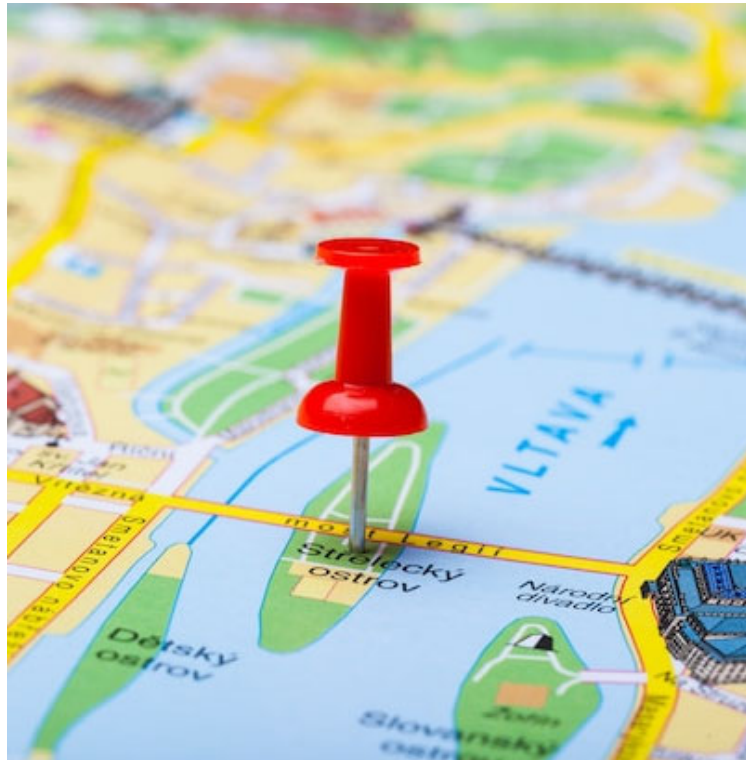
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## Disaster Risk Reduction

### Policy

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Policy or Plan?



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## A Policy AND a Plan!

### Policy:

- high-level
- general goals
- acceptable procedures

*The policy ensures consistency and compliance.*

### Plan:

- method of doing something
- PROCEDURE

*The plan must follow the policy.*

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September is **NATIONAL  
PREPAREDNESS  
MONTH**     

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## Policy Framework

### National Preparedness Goal, 2nd Edition

- A secure and resilient Nation
- Capabilities across the whole community to:
  - Prevent
  - Protect against
  - Mitigate
  - Respond to
  - Recover from
- Threats and hazards that pose the greatest risk



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We achieve the National Preparedness Goal by:

- Preventing or stopping threat or act of terrorism
- Protecting people, assets, systems, and networks
- Mitigating loss of life and property due to **future disasters**
- Responding quickly after an incident
- Recovering through **strengthening** and **revitalizing**

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## NFPA Update

### **NFPA 1660**, Standard for Emergency, Continuity, and Crisis Management: Preparedness, Response, and Recovery

- **1600** Standard on Continuity, Emergency, and Crisis Management
- **1616** Standard on Mass Evacuation, Sheltering, and Re-entry Programs
- **1620** Standard for Pre-Incident Planning

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## Leadership and Commitment

### NFPA 1660, Chapter 4.2.2

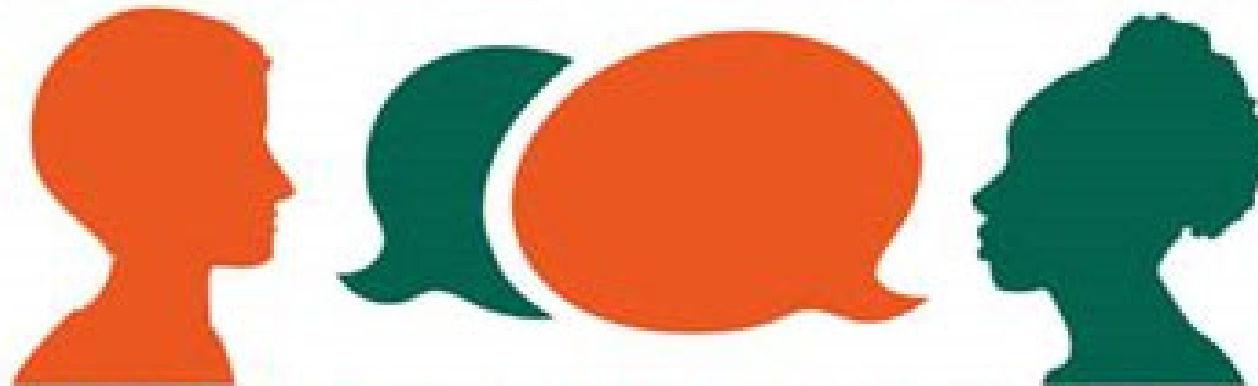
The leadership commitment **shall** include the following:

- (1) Support the development, implementation, and maintenance of the program (**policy**)
- (2) Provide necessary **resources** to support the program
- (3) Ensure the program is reviewed and evaluated as needed to ensure program effectiveness (**audit**)
- (4) Support **corrective action** to address program deficiencies

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**DON'T WAIT. COMMUNICATE.  
MAKE YOUR EMERGENCY PLAN TODAY.**



**SEPTEMBER IS NATIONAL PREPAREDNESS MONTH!**



AMERICA'S  
***PrepareAthon!***

Ready 

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### Plans



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## Risk Assessment - NFPA 1660

### 5.2.2.1 Hazard Identification

1. Geological
2. Meteorological
3. Biological
4. Accidental human-caused
5. Intentional human-caused
6. Technological
7. Economic/Financial
8. Strategic
9. Humanitarian issues



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## Risk Assessment - NFPA 1660

### 5.2.3 Impact

- Health and Safety
- Information Security
- Business Continuity
- Critical Infrastructure
- Service Delivery
- Supply Chain
- Environment
- Economic/Financial
- Legal Obligations
- Reputation
- Labor Agreements

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PREVENTION



## Disaster Risk Reduction

Prevention



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## Prevention – NFPA 1660

6.2.1 The entity shall develop a strategy to prevent an incident that threatens

- Life
- Property
- Operations
- Information
- Environment

6.2.2 The prevention strategy shall be kept current using

information

collection and

intelligence

techniques

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## Prevention – NFPA 1660

6.2.3 The prevention strategy shall be based on the results of

- hazard identification
- risk assessment
- analysis of impacts
- program constraints
- operational experience
- cost-benefit analysis

6.2.4 The entity shall have a process to

- monitor the identified hazards
- adjust the level of preventive measures to be commensurate with the risk.

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## FM Global Data Sheet 10-1

### *Pre-Incident Plan Data Collection Form*

- <https://www.fmglobalfireinsuranceservices.com>
- Click “Training” from the top menu
- Click “Program Resources” from the dropdown menu



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## FM Global Data Sheet 10-2



### Emergency Response Plans

- Earthquake
- Fire and Explosion
- Flood
- Freeze and Snow
- Liquid Leaks
- Wildland Fire
- Windstorm

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## Prevention PLAN

### IMPACT

- Operations
- Brand
- Image
- Reputation
- Market Share
- Ability to do Business
- Relationships

### SERIES OF EVENTS

- Civil Disturbance
  - Fire
  - Bomb Threat
  - Theft
  - Vandalism
  - Violence
- Ransomware Attack
  - Utility Disruption
  - Critical System Failure

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## Prevention Example – Cyber Attack

### **IMPACT**

- Operations
- Brand
- Image
- Reputation
- Market Share
- Ability to do Business
- Relationships

### **Cyber Attack**

- Utility Disruption

### **PREVENTION PLAN**

- Background Checks
- IT Firewall
- TFA Login Credentials
- Air Gap?

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## Disaster Risk Reduction

**Protection**

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## Emergency Operations

6.9.2 The plan shall identify actions to be taken to **protect people**, including **people with disabilities** and other **access and functional needs**, information, property, operations, the environment, and the entity.

6.9.4 The plan shall include:

1. Protective actions for life safety
2. Warning, notifications, and communication
3. Crisis communication and public information
4. Resource management
5. Donation management



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## Evacuation, Sheltering, Re-entry

Entity leadership shall demonstrate commitment to

- Develop, implement, and maintain the program
- Provide necessary resources
- Review and evaluate to ensure effectiveness
- Support corrective action
- Support mass evacuation, sheltering, and re-entry
- **Protect people with disabilities, access, and functional needs, including service animals**

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## Protect Staff Health & Safety

- **Protect persons with disabilities**, including those with access and functional needs
- Monitor the health and well-being of response personnel
- Security and **protection for response personnel**
- Provide appropriate **personal protective equipment (PPE)**

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## Operational Procedures

### 12.10.3 Procedures shall consider

- life safety
- **property conservation**
- incident stabilization
- continuity
- **protection of the environment**
- **protection of cultural artifacts and buildings**

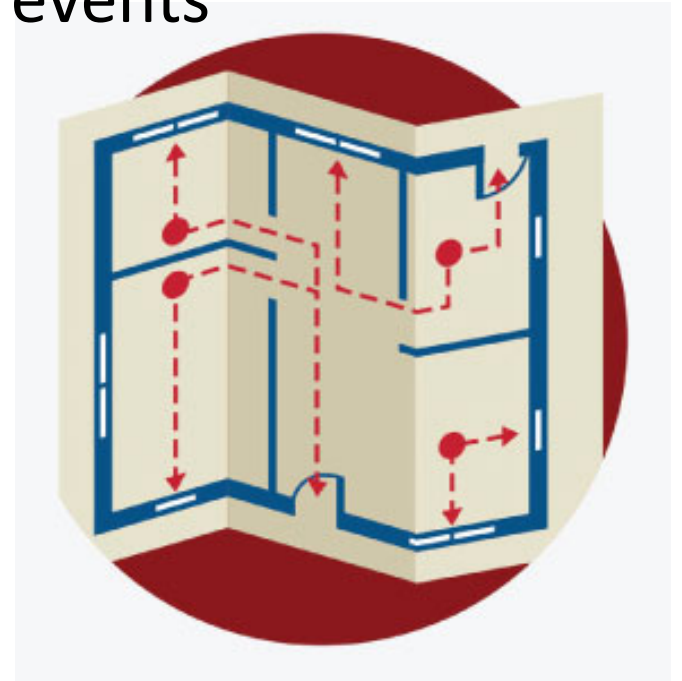
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## Pre-Incident Planning – NFPA 1660

### Chapters 17 through 23

Develop pre-incident plans to assist personnel in:

- Effectively managing incidents and events
- **Protecting**
  - Occupants
  - Responding personnel
  - Property
  - Environment.



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## Water Supplies / Fire Protection

### NFPA 1660 - Chapters 20

Information on water supplies and fire protection systems shall be included in the pre-incident plan.

- Water Supplies
- Fire Protection Systems
- Fire Alarm Systems
- Fire Extinguishers
- Smoke Control Systems



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## Disaster Risk Reduction

**Mitigation**



**RISK  
MITIGATION**

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## Mitigation

Reduce the

- Impact
- Duration
- Financial
- Human costs

Of **response** and  
**recovery**

**Whole community role**  
in risk reduction:

- Recognizing
- Understanding
- Communicating
- Planning

for **future resilience**

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## Mitigation – Chapter 6.3

- Mitigation strategy limits or controls the **consequences, extent, or severity** of an incident that **cannot be prevented**
- Based on **hazard identification** and **risk assessment**, an analysis of **impacts, program constraints, operational experience**, and **cost-benefit analysis**
- Interim and long-term actions to reduce vulnerabilities



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## Mitigation

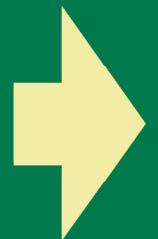
### Facility Hardening

- Roof deck and cover securement
- Window replacement
- Window film and caulk
- Window shutters
- Flood barriers
- Door securement

### Infrastructure Improvement

- Drainage structures
- Site grading
- Utility upgrades
- Evacuation routes

**EVACUATION  
ROUTE**



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## Disaster Risk Reduction

**Response**

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## Response – Implementation

- Crisis Management
- Communication
- Public Information
- Warning Notifications
- Operational Procedures
- Incident Management
- Emergency Operations
- Continuity & Recovery
- Employee Assistance

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## Response – Execution

- Incident Recognition
- Reporting/  
Notification
- Incident Action Plan
- Incident  
Management
- Ongoing  
Communication
- Documenting  
Information,  
Decisions, Actions
- Incident Stabilization
- Demobilize  
Resources
- Terminate Response

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## Response – FM Data Sheet 10-2

### **General Emergency Response Plan**

- Notifier
- Fire Protection Systems
- Salvage Team
- Watch Service
- Support Staff
- Evacuation Coordinator

### **Specific Events**

- Fire
- Flood
- Freeze
- Roof Collapse
- Windstorm
- Earthquake

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## Disaster Risk Reduction

**Recovery**



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## Recovery Procedures – NFPA 1660

### 6.7.3

- Life safety
- Property conservation
- Incident stabilization
- Continuity
- Protection of the environment

### 6.7.4

- Access control
- Identify and account for personnel
- Mobilize/ demobilize resources



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## Recovery Procedures – NFPA 1660

### 6.7.5 Concurrent Activities

Response  
Continuity  
Mitigation  
**Recovery**





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## Recovery Procedures – DS 10-5

### ***Disaster Recovery Planning***

- Prioritize cleanup, rebuilding, replacement of critical equipment
- Temporary operation at remote locations
- Shift key services to other facilities
- Agreements with vital contractors
- Early access for restoration contractors

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## Recovery Opportunities

- Increase overall community resilience
- Capitalize on existing strengths
- Addressing pre-existing weaknesses
- Lessons learned
  - Establish leadership
  - Coordinate structure
  - Develop whole community partnerships
  - Improve pre-incident planning
  - Build capability for future incidents

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## Successful Recovery

We emerge **stronger** and positioned to meet the **needs of the future**.

- Well-coordinated, transparent, and timely
- Restore, strengthen, and revitalize
  - infrastructure and housing
  - economic base
  - health and social systems
  - cultural, historic, and environmental fabric

*Recover*  
**STRONGER**

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## References

[National Preparedness Goal, 2nd Edition](#)

NFPA 1660 (2024 - combines NFPA 1600, 1616, & 1620)

FM Data Sheet 10-01 Pre-Incident and Emergency Response Planning

FM Data Sheet 10-02 Emergency Response

FM Data Sheet 10-05 Disaster Recovery Planning

Other FM Data Sheets:

Earthquake, Wind, Hail, Flood, Wildland Fire, Freeze, Liquid Damage

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## Resources

### Official Websites

- [www.Ready.gov](http://www.Ready.gov)
- [www.dhs.gov](http://www.dhs.gov)
- [www.fema.gov](http://www.fema.gov)

### Other Code Resources

- <https://link.nfpa.org/>
- [www.fmglobaldatasheets.com](http://www.fmglobaldatasheets.com)



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Question  
&  
Answer

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## Thank you!

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