

28 Create Emergency Plans

I. Summary

Issue:

The multiday loss of power and extreme flooding from Superstorm Sandy exceeded most planning scenarios. As a result, few buildings or residents had plans to manage such emergencies.

Recommendation:

The city should work with industry experts to develop emergency preparedness information and instructions for apartment residents and homeowners including model emergency operating procedures and a building contact directory.

II. Proposed Legislation, Rule or Study

Amendments to the Rules of the City of New York:

1. The Office of Emergency Management and Fire Department should work with building owners to amend the Fire Safety Guide in Appendix 1 of Rule 408-02 of Title 3 to include instructions for preparedness for extreme weather events and extended utility outages. This information should include:
 - a. The nearest Evacuation Center and list of resources from the Office of Emergency Management.
 - b. When to contact 911 and when to contact 311.
 - c. Whether, in the event of an extended utility outage, the building will provide any of the following: potable water; corridor, egress, and common area lighting; fire safety and fire protection; elevators; charging locations for cellular telephones; domestic hot water; or heating and cooling.
 - d. For buildings within a special flood hazard area:
 - i. Precautions the building has taken against flood risk including: sandbags and sandbag deployment training; installation of flood barriers; moving equipment above the design flood elevation; and floodproofing of areas below the design flood elevation.
 - ii. Precautions tenants should take in case of flooding, including moving cars from basement garages to above the design flood elevation, unplugging electrical equipment that may come into contact with rising water, and moving valuables and important documents to areas above the design flood elevation.
 - iii. Circumstances when tap water might become unsafe.

- e. How to contact building staff for information during emergencies, including email addresses, phone numbers, and other means of communication (such as any common area notice board) when traditional means of communication are impaired.
 - f. Activities that would help the building and the city in cases of emergency, including:
 - i. During floods and extreme rainfall, clearing the sewers of leaves and debris;
 - ii. During high winds, removing furniture from rooftops and balconies;
 - iii. During power outages, reducing water consumption for buildings that require pumps for water, reducing emergency power consumption in certain circumstances, and not using personal generators indoors; and
 - iv. During water outages, only using water for essential sanitation functions.
2. Amend Section c(3)(C) of Rule 408-02 of Title 3 as follows:
- (C) The number of floors in the building, above and below ground level, and number of units.
3. Amend Section c(3) of Rule 408-02 of Title 3 to add new paragraphs J-L as follows:
- (J) The location of utility shut offs;
- (K) For buildings located in a special flood hazard area, the location and quantity of any item on the hazardous substance list, as defined by the department of environmental protection under Section 24-703 of the Administrative Code;
- (L) A list of building contact personnel;

Recommendations for the Office of Emergency Management:

1. The Office of Emergency Management (OEM), Fire Department, Department of Environmental Protection, Department of Health and Mental Hygiene, and Department of Buildings should work with building owners, operators, residents, and homeowners to develop standard emergency operating procedures for commercial and residential buildings as needed to supplement existing OEM resources. The plans should be general enough for application to a range of extreme weather events and extended power failures. The city should actively reach out to buildings located within flood zones for training. Depending on building type, key points could include:
- a. Protection
 - i. Informing buildings and homeowners if they are located within the 100-year flood zone.
 - ii. Determining if the building owner will furnish and/or install sandbags, jersey barriers and other protection around specific points around a building.
 - iii. Securing loose items, such as window A/Cs, patio furniture, and flower boxes.
 - iv. Securing windows and doors.
 - v. Proactively shutting down elevators after moving them above the flood line.

- vi. Options to rent equipment to support the building after an event, such as pumps or generators.
 - vii. Instructions for securing construction sites.
- b. Communication
- i. Distributing building specific updates before, during and after an event through email, text, phone and/or written postings in a predetermined location.
 - ii. Determine who would send these communications.
 - iii. Posting citywide events that train individuals on resources, communication, and procedures provided by New York City.
 - iv. Direct occupants to the Office of Emergency Management's website, which provides guidance on preparing for different hazards and how to stay informed.
- c. Shelter in Place
- i. Direct occupants to the Office of Emergency Management's website for guidelines on sheltering in place.
 - ii. Refer to the Office of Emergency Management for guidelines on care of seniors or people with special needs. Identifying residents who would like additional help could be included in the standard operating procedures.
 - iii. Create guidelines for occupants and building staff on operating the building during power failures, including the use of shades and operable windows and activation of any backup systems that may exist like common area drinking water, generators, or battery lighting.
- d. Recovery
- i. Direct occupants to the Office of Emergency Management, nyc.gov, local utility provider, and Department of Health and Mental Hygiene for the most current guidelines on recovering from an event, including use of alternate power sources and mold remediation.
- e. Community Response Teams
- i. Encourage building occupants to become members of New York City's Community Emergency Response Team (CERT), which trains volunteers to support first responders in a variety of emergency events.
2. The city should also develop an annually updated registry of building contacts for use during emergencies.

III. Supporting Information

Expanded Issue and Benefits:

During and after Superstorm Sandy, many buildings suffered damage that could have been prevented, or from which they could have recovered more quickly, with the benefit of advanced planning. Few residential buildings or residents had plans to manage a multiday utility failure, and most lacked an understanding of the roles of various parties in the prevention or mitigation of problems.

The residents of multifamily buildings should be made aware of those building resources that will be available during extended emergencies so they can plan accordingly. For instance, residents should be informed whether drinking water will be available during a power failure, such as from a common area faucet on a low floor. Residents should be made aware of applicable evacuation routes and of local community resources like shelters. This information should be updated and provided to residents alongside their annual Fire Safety Plans.

Residents and building staff should be educated regarding the use of applicable building systems during utility failures. These operations could include the use of shades and operable windows to reduce heat build up during summer and the use of curtains to keep heat in during winter. In particular, building staff should be trained to operate any backup systems in the building – whether generators, battery lighting in stairwells, or common area drinking water. These systems should be clearly labeled as to their operation, and residents should be made aware of their potential use during an emergency period.

Residents and building staff should be educated about remediation that might, or must, be performed during the recovery period following an emergency. For example, homeowners and multifamily building residents should be educated about the hazards of leaving mold in place, where it is most likely to occur, and how it might be removed safely.

Clear operating procedures for emergency events will allow owners, managers, residents, and homeowners to prepare effectively. For instance, advanced planning will enable protective materials to be gathered before an event and clearly outline the roles and responsibilities of the team that is mobilizing protection. The emergency preparedness team in a residential building will typically consist of ownership, management, and residents. In a commercial building, or a critical building, the team might consist of management, operating staff, and tenant representatives. In hospitals, the Joint Commission, which accredits and certifies health care organizations, requires emergency preparedness plans that outline response and recovery strategies.¹

An additional challenge during recent storms involved communication. Many residents of multifamily buildings received media broadcasts for citywide information, but not building-, or neighborhood-specific information. As a result some occupants were not aware of available resources within their own building or community. In other facilities basic planning like removing cars from below grade parking areas threatened by flooding was not undertaken, with grave financial and environmental consequences.

To improve communication, the standard procedures of multifamily buildings should outline how information will be shared in the event of an emergency. The communication system could be

¹ Joint Commission, Standard EM.02.01.01.

as complex as the Building Link management tool or as simple as a bulletin board posting. Any communications plan should include multiple forms of communication because access to power or cell phone towers will vary during emergencies.

Communications challenges also extend to the city's communication with building owners and managers, who play a critical role during extended emergencies. While many owners can be reached through professional associations and contact lists, the city does not have a way to directly contact all owners. The Department of Housing Preservation and Development requires residential building owners (except owner-occupied 1-2 family) to register annually, but the department only requests a single telephone number. It does not collect cellular telephone numbers, email addresses, or contact information for building managers and superintendents. The proposal thus recommends the city develop a citywide building contact list.

Careful planning, effective communication and targeted training will improve the level of building and occupant protection while minimizing panic and confusion.

Implementation:

The market presents no major hurdles to the implementation of these recommendations.

The only anticipated challenges relate to the voluntary organization of people and building owners to create these procedures and resources that dispense information. It is hoped that the experience of previous storms and the likelihood of future events will motivate the responsible parties to outline these plans in a timely manner. Education regarding this recommendation and the available resources would need to be communicated through media and relevant professional associations to ensure that as many city residents as possible are aware of the advanced planning that should be undertaken.

Cost:

Model emergency operating procedures and preparedness information should continue to be developed by OEM and made available online to owners and tenants. Building owners, managers, and occupants should utilize these available resources to develop their own building specific standard operating procedures. In the event of an emergency, the cost of protective provisions would vary by building and event.

If a building chooses to hire someone to prepare the building's standard operating procedures, consultants are available and costs will vary based on the robustness of the plan and the size of the facility.

No cost estimation was performed for this proposal.