

Emergency Preparedness: Lessons Learned From Superstorm Sandy

Manhattan Community Board 1

January 22, 2013

Introduction:

This report summarizes events that transpired within Community Board 1 (CB1) during and after Superstorm Sandy (Monday, October 29, 2012) and includes recommendations for improved emergency preparedness. It has been reviewed by each CB1 committee and, additionally, public members and the public have had an opportunity to comment on it.

1. Communication, Evacuation and Emergency Shelters

Flooding from Sandy extended beyond Zone A and into Zone B. For CB1 residents, Seward Park High School served as the primary emergency shelter. With buses and subways shut down and limited taxis, transportation to the shelter was difficult, encouraging some individuals to remain in Zone A. When Seward Park High School lost power, evacuees were forced to move to other shelters.

Notify NYC informed people of the evacuation of Zone A and provided relevant updates before, during, and after the storm. The City, however, wavered in announcing the evacuation and provided less than 24-hour notice. This mixed message and late notice created confusion and possibly discouraged residents from following evacuation orders.

CB1 Recommends:

Public Sector

- An updated evacuation map that reflects both anticipated storm surges associated with hurricanes and predicted flooding from “once in 100 year flood” and “once in 500 year flood” zones.
- Widely disseminated educational material on the dangers of storm surges and other disasters.
- Widely disseminated educational material on proper evacuation procedures for buildings.
- An annual dialogue and update on emergency shelter locations for CB1 residents.
- Promotional campaigns to encourage citizens to sign up for Notify NYC.
- Contingency plan to disseminate information to residents without access to technology in an emergency situation.
- An increased number of emergency shelters with back-up power capabilities. Agencies such as NYPD, FDNY, and OEM should increase public advocacy for usage of emergency shelters.
- Adequate funding of the National Oceanic and Atmospheric Administration (NOAA), which includes the National Weather Service, a critical source for forecasting and warnings regarding the potential hazards from storms and storm surges.

2. Quality of Life

The aftermath of Sandy caused numerous impacts to quality of life as residents coped with the effects of the storm. Some residents went days and others weeks without utilities, and at the beginning, information on available resources was limited and inadequate. Suspended mail service caused great inconvenience and jeopardized the health of residents dependent on medical subscription mail services. Vulnerability to flooding at our hospitals crippled emergency care resources and raises serious issues for Lower Manhattan health care and emergency needs.

CB1 Recommends:

Public Sector

- Pre-designated areas for distribution of water, food, baby formula, blankets, diapers, and other essential items.
- Pre-designated areas for charging phones and laptops.
- Proper flood protection and back-up generators for hospitals.
- Back-up power for street lights and traffic signals.
- Contingency plan to expedite pharmacy openings.
- Contingency plan to distribute medicine to those unable to access pharmacies and/or subscription mail services.
- Contingency plan for delivering mail when service is suspended.
- Contingency plan to retrieve lost pets.
- Better utilization of city-wide CERT Teams.
- Readily available instructions and tools for residents to protect themselves against impacts to air quality caused by temporary mechanical equipment.
- Solar-powered back-up systems for waste water treatment plants.

Private Sector

- Installation of back-up power for cell phone towers.
- Contingency plan for wireless data services.

3. Housing Safety Precautions

Superstorm Sandy revealed that residents may be voluntarily or involuntarily confined to buildings without power or functioning infrastructure, including basic necessities such as elevators, water, heat and phone and internet services. Additionally, seniors and vulnerable individuals, especially those on upper floors, had difficulty in the days after the storm accessing basic essential items such as water and food. In such circumstances, where residents encountered darkened hallways and staircases, it is essential that steps are taken to make buildings as safe as possible.

CB1 Recommends:

Public Sector

- Development and annual update of a special needs registry to ensure that frail seniors, people with disabilities and the homebound are properly evacuated, when required, and provided assistance when water and power are no longer available.

Private Sector

- Identification of designated meeting areas on lower, above ground-level locations in residential buildings.
- Adequate emergency lighting equipment including adhesive, reflective strips for stairwells, portable glow sticks, and flashlights. Routine (annual) quality control reviews to ensure that equipment functions.

4. Transportation

Flooding caused widespread damage to our transportation infrastructure, including the subway and PATH systems and tunnels, and inconvenienced many residents and workers. With no subway system and a

temporary restriction on cars entering the city, residents and workers were unable to commute to work, attend to their daily lives, or even return home.

CB1 Recommends:

Public Sector

- Proper planning to expedite transportation repairs after an emergency.
- Proper planning to minimize the impact of storm surges on public transportation infrastructure.
- Adequate transportation contingency plans including expanded ferry and bus service for residents and workers in affected areas.
- Inclusion of newly developed bike share program in transportation contingency plans.

5. Schools

Superstorm Sandy revealed limitations in Department of Education (DOE) emergency preparedness and communication procedures. Parent Teacher Associations (PTAs) were instructed to call every student with updates. Parent and students were given less than 24-hour notice of school relocations. Additionally, some students were instructed to return to schools lacking heat or that still housed evacuees, including people with mental illness.

CB1 Recommends:

Public Sector

- A reliable emergency communication platform modeled after Notify NYC.
- Proper flood protection and back-up generators for all schools.
- Relocation announcements delivered with at least 24-hours notice.
- A contingency plan for after-school programs.
- A policy that students are not required to attend school in buildings lacking heat.
- A policy that all people housed in schools used as temporary shelters should be relocated prior to the reuse of the building as a school.
- Contingency plan to maintain requisite 180 days of school during emergency situations.
- School-based, emergency preparedness programs for students.

6. Utilities

The loss of utilities – electricity, heat, and phone and data service – greatly impacted residents and workers of CB1. While electricity was restored to most customers within a week, and heat within two weeks, many residents went several weeks without these basic necessities. Steam heating systems are vulnerable to flood damage and delayed the restoration of heat for many buildings. Lack of phone and data services halted business operations for small and big businesses alike, with many businesses as well as residents still using interim services as Verizon installs the new fiber optic system. Battery Park City, on the other hand, warrants study for future planning as most of that neighborhood did not lose utility service following the storm.

CB1 Recommends:

Public Sector

- Examine redundancy (or lack of redundancy) in NYC's utility systems.
- Study Battery Park City guidelines and procedures for development and design of utility infrastructure to determine the extent to which they played a role in Battery Park City's resilience during the storm.

- Incentives to encourage the development of alternative energy sources to decrease load on power plants and reduce impact on energy grid during emergency situations. Alternative energy options include solar, wind, cogeneration, battery storage, ice storage, and the capture of methane from waste water plants.
- Utility workers should have access to oil reserves to expedite restoration of services in emergency situations.

Private Sector

- Build circuit redundancy for utility services including electricity and data to reduce impacts from outages in emergency situations.
- Development of flood protection for critical utility centers.
- Improve communication including use of social media platforms for utility updates.
- Update online Con Edison Outage Platform with up-to-date information and user-friendly interface.
- Contingency plan to rapidly deploy interim phone and data services.
- Development of infrastructure to withstand flooding and salt water.
- Expanded use of smart grid technology and smart meters.
- Establishment of oil reserves for utility operations during fuel shortages.

7. Residential and Commercial Buildings

Superstorm Sandy created a myriad of building-related issues for residents, workers, and building managers. A majority of buildings in CB1 house their mechanical infrastructure in basements to maximize floor area ratio for the primary function of the building. Basements in Zone A and beyond were inundated by Superstorm Sandy and some buildings still remain without utilities due to damage from the flooding. Generators and other temporary, mechanical equipment filled our streets and reduced air quality, posing a serious health issue.

In addition, residents lacked information concerning the safety of their buildings, and in some instances, did not receive any communication for days from their building managers. In turn, building managers did not know where or to whom to turn to for repairs, permits and inspections until the LMCCC successfully stepped in to provide a much-needed bridge between city agencies and building managers.

CB1 Recommends:

Public Sector

- An easily accessible, web-based platform that provides up-to-the-minute information on Department of Buildings (DOB) inspections, utility services and other relevant information.
- A guide outlining the roles and responsibilities of DOB, Con Edison, building managers and owners and other relevant parties in making emergency repairs to residential buildings.
- A system in place to enable residents to hold building managers and owners accountable for making storm-related repairs.
- Zoning regulations that require building developers to install mechanical infrastructure in “flood zone-safe” locations without incurring a loss of floor area ratio.
- Government incentives to encourage retrofitting of existing buildings to place mechanical infrastructure on “flood zone-safe” floors.
- Distribution of retrofitted generators to decrease adverse impacts to air quality caused by diesel generators.

Private Sector

- Development of emergency management plans including use of social media for building managers to improve communication with and provide updates to residents when phone and internet service is down.

8. Small Businesses

Many small businesses in CB1 are in dire financial situations after Superstorm Sandy; some were not covered by federal or private flood insurance and are still paying back 9/11 loans. Furthermore many commercial and residential buildings remain closed, depleting local businesses of their customer base. As business owners seek to rebuild, lack of information immediately following the storm and an inability to obtain adequate financing have stalled their rehabilitation.

CB1 Recommends:

Public Sector

- Emergency funds to help small businesses recover in the wake of interruptions caused by natural disasters and other emergencies.
- A guide for small businesses outlining where to turn to for disaster-related help, including loans and grants.
- Readily available legal assistance for small businesses.
- Readily available assistance to businesses that need to navigate the insurance system.
- Statutory policies that provide financial relief to small businesses in the aftermath of disasters, including temporary exemption from City and State taxes, postponement of tax filing deadlines, reduction of property tax assessments to reflect diminished value of damaged properties or those in high-risk zones, and correspondingly reduced property tax rates.

9. Parks, Playgrounds and Ball Fields

Parks, playgrounds and ball fields were flooded during Superstorm Sandy and experienced varying degrees of damage. Some parks and playgrounds are located near temporary generators, posing a potential health concern for children parents. Additionally, the temporary loss of the Battery Park City ball fields presents the potential for a major setback to youth sports leagues in the area for the upcoming spring season.

CB1 Recommends:

Public Sector

- The use of best code practices and maintenance for parks, playgrounds and ball fields to mitigate damage from flooding and storm surges.
- Contingency plans to provide adequate temporary fields for youth sport leagues.
- The use of salt plants and resistant mechanical equipment in parks.

10. Storm Surge Protection

Superstorm Sandy brought a record 13.8 foot storm surge into New York City and flooded portions of evacuation zones A and B. Adequate storm surge protection, including protection from sewage backup, is of paramount importance for CB1 with the entire district classified within an evacuation zone: 58% within Zone A, 19%, within Zone B, and 23% within Zone C. CB1 supports the development of City and

State efforts to protect against storm surges including natural and mechanical structures successfully employed in other locations around the world.

11. City Government

Efforts by CB1 staff to disseminate emergency information exposed the need for improvement in internal city government interactions. Community boards and local elected officials and other representatives at times duplicated services as they tried to provide services and information not provided by the city, state or federal government.

CB1 Recommends:

Public Sector

- A detailed report of emergency preparedness procedures presented annually to community boards, local elected officials and other representatives.
- Designated liaisons in key government agencies, especially NYC OEM, and utility companies, to serve as emergency contacts during emergency situations.
- Improve outreach to increase usage of Notify NYC