



The following will serve as a guide to outline the Final Recommendations Report prepared for LES Ready and GOLES (Good Old Lower East Side), by the students in the Fall 2013 Fundamentals of Planning Studio of Pratt Institute's Programs for Planning and Sustainable Development.

There are 27 recommendations in total, which are grouped into six categories. Each recommendation is summarized in this document and expanded on in the full report which can be accessed here:

<http://prattlesready.wordpress.com/reports/>

1 Develop Efficient and Effective ways to Disseminate Disaster Related Communication for Preparedness, Response, and Recovery

1.1 Use diverse and innovative means to spread information about disaster preparedness, response, and recovery.

Educating community members on disaster related issues is key to achieving a resilient community. Create media should be developed to engage, educate, and raise awareness among community members. This can take the form of art installations, posters, and flyers. Media should be geographically targeted where applicable (ex. storm surge zones), accessible to all members of the community (Foreign language speakers, hearing impaired, vision impaired, etc), and address pre-storm preparedness, response, recovery, and post-disaster planning. **(Final Recommendations Report page 25)**

1.2 Establish an Emergency Information Communications Network (EICN).

Communication between organizations and with residents on the ground is crucial at all stages of disaster planning and response. CBO's can develop phone/email trees that serve to ensure seamless communication between all neighborhood CBO's, as well as to transmit information from city agencies to residents and vice versa. Additionally, residents should be encouraged to sign up for currently established alert systems, such as OEM's Advanced Warning System. **(Final Recommendations Report page 29)**

1.3 Promote the use of community reporting networks (such as 311) to ensure that area issues are fully known and can be addressed in a more appropriate manner.

Residents cannot rely on city agencies to be fully aware of conditions on the ground and should therefore be encouraged to use reporting networks such as 311 and Notify NYCHA (only applicable to NYCHA residents). Through this action, residents can relay up to the moment information on disaster-related issues to city agencies. **(Final Recommendations Report page 32)**

1.4 Distribute Go Bags at public events and empower individuals to make go bags at home.

Residents must be prepared to evacuate in the event of a disaster. To ensure the safety of this process, residents should be equipped with go-bags containing basic, easily transportable supplies, including flashlight and batteries, first-aid kit, and non-perishable food items. Go-bags can be distributed through CBO's, or prepared by community members themselves. Outreach can be conducted to educate residents on how to prepare their go-bags. **(Final Recommendations Report page 33)**

1.5 Develop mold remediation guidelines and/or give them to members of the community.

Mold can present a danger in post-disaster environments, where it can pose a serious health risk, especially for those with previously diagnosed respiratory diseases. Residents should be educated on the health risks posed by mold, how to recognize it, and finally how to remediate it. **(Final Recommendations Report page 35)**

1.6 Disperse information about opportunities to lower demand on energy grid.

Both prior to, and following a disaster, a high demand can be placed on the energy grid. To address this problem, residents can be briefed on how to lower their energy demand, not only during disasters, but in their daily lives. Furthermore, there exist a number of subsidies to aid in the greening of buildings. **(Final Recommendations Report page 37)**

2 Incorporate Vulnerable Populations in Preparedness, Response, and Recovery Planning

2.1 Partner with residents associations and World Cares Center to develop a Neighbor to Neighbor Preparedness and Response Network.

In the hectic environment of a disaster, it can be difficult to keep track of all a community's residents and it is often the most vulnerable residents who will have difficulty communicating their status and needs. To combat this problem, a Neighbor to Neighbor Preparedness and Response Network can be established. For example: each unit in a building would be responsible for checking on their immediate neighbor, this information would then be relayed to a Community Emergency Response Team (CERT) trained floor captain, building captains would be assigned to every five floor captains to further consolidate information and relay to a base captain, who can then coordinate CERT Special Task Force teams on the ground to respond to resident needs. **(Final Recommendations Report page 43)**

2.2 Coordinate Pre-Storm Supply Points of Distribution in public housing buildings and stock them with critical goods.

While go-bags are critical in an evacuation scenario, many individuals, especially those in sturdy high-rise buildings, may choose to shelter in place. To accommodate these residents, supplies must be on-hand to ensure that people have what they need to weather an extended stay in their homes. To respond to this need, Pre-Storm Supply Points of Distribution (PODs) can be established to serve as central locations for acquiring needed goods. Residents would be notified of POD locations and available supplies prior to a disaster event. **(Final Recommendations Report page 47)**

2.3 Inform decision-makers to ensure disaster service centers are located in areas accessible to all members of the community and disaster-resilient.

Service centers, such as "HUBs" (command centers with medical services, call centers, etc.), Points of Distribution or "PODs" (where critical supplies are distributed) and Volunteer Reception Centers or "VRCs" (where volunteers are received and dispatched) should be strategically located throughout the district to effectively accommodate the needs of all residents in the area when a disaster occurs. The locations of these centers, their management, and deployment plans need to be established as soon as possible. Selection of appropriate locations for disaster relief centers should include the

following to ensure their effectiveness: (1) distance from the flood zone, (2) accessibility by limited mobility residents, (3) minimum space requirement for storage and people, and (4) level of commitment by organization responsible for space. We offer a series of recommended public spaces that would be appropriate locations. ***(Final Recommendations Report page 49)***

2.4 Disseminate information on resources regarding healthcare preparedness.

It is crucial for all residents with critical needs to be well prepared and informed on how to properly store medication and/or relocate to places that can meet their specific needs. Information and resources regarding the proper storage of medications both for the individual and for shelters, must be dispersed prior to disaster. This information should be provided in multiple languages prior to the disaster at PODs, health facilities, and through CBOs/ tenant associations to ensure the information reaches the residents. ***(Final Recommendations Report page 51)***

2.5 Inform residents on Supplemental Nutrition Assistance Programs on how to use EBT to obtain supplies in the event of a disaster and advocate for the expansion of D-SNAP Program.

After Sandy, stores that would have been able to accept Supplemental Nutrition Assistance Program (SNAP) vouchers via Electronic Benefits Transfer (EBT) were not able to process these transactions because of the power outages. Guidelines should be distributed on the use of EBT during disaster to SNAP recipients and participating businesses. An effort should be coordinated to provide information to SNAP beneficiaries about accessing D-SNAP (Disaster-SNAP) benefits in the event of a disaster, or to business owners about the use of manual vouchers. There is also an advocacy component to this recommendation: continue the efforts to expand the D-SNAP program. Furthermore, these benefits should be made available in more zip codes and affected residents should be allowed more time to apply. ***(Final Recommendations Report page 53)***

2.6 Survey Residents to better understand evacuation processes and plan for future changes.

In New York, evacuation can be either recommended or mandatory, through the order of the mayor, with guidance provided through the NYC Office of Emergency Management (OEM). However, there is a lack of clear, publicly available information on where exactly residents are expected to go during evacuations, and how they are expected reach their final destinations. A survey of residents should be conducted to gain a better understanding of current evacuation patterns to better inform how to improve future evacuation plans. ***(Final Recommendations Report page 55)***

3 Strengthen capacity of Community- Based Organizations and Small Businesses to Withstand Disaster, Continue Operations, and Rebound

3.1 Advocate for a National Flood Insurance Program (NFIP) that accommodates dense urban environments.

The NFIP does not reflect the realities of a dense, urban environment characterized by massive high-rises made of brick and concrete. Informal interviews with business owners and managers of property located in the Lower East Side revealed that many are not insured against flooding, even when that property is located within a FEMA-designated "Special Flood Hazard Area." Advocacy work should be done to join the growing movement to reform NFIP policies to provide building owners access to sensible, affordable flood insurance that is applicable to a dense urban environments. There are flood mitigation strategies unique to dense urban areas that should be

recognized by the NFIP, such as weatherproofing, green infrastructure, stormwater management initiatives, and improved flood warning and response programs. **(Final Recommendations Report page 61)**

3.2 Encourage community-based organizations and small businesses to complete a Continuity of Operations Plan (COOP).

Planning for interruptions is critical for a community-based organization. We recommend GOLES encourage businesses and non-profits in the Lower East Side to adopt a Continuity of Operations Plan (COOP). A comprehensive plan will include measures to (1) protect the safety of employees, (2) enable workers to get to work, (3) protect essential equipment, records, contacts, and other assets, (4) reduce disruptions such as internet connectivity, and (5) identify relocation or alternate sites (Office for Fair Housing and Equal Opportunity 2007). Completing a COOP will help CBOs and small businesses avoid delays in paper work, prevent destruction of paper records, and minimize the loss of financial, programmatic, and client data. COOPs preserve the organization's structure, tools and resources so it can continue to serve the community immediately following a disaster. **(Final Recommendations Report page 65)**

4 Improve the Resiliency of Sewage, Power, Telecommunications, and Transportation Infrastructure Networks

4.1 Advocate for necessary legislation to allow microgrids to be created and implemented in New York City.

Due to flooding during Sandy, the 14th street ConEd Power Station short-circuited. This power outage left thousands of residents, critical infrastructure, and hospitals without power. Advocating for an energy grid that is more redundant, flexible, and independent is crucial for ensuring uninterrupted power supply during future heat waves and flooding events. "Microgrids" act as system that links multiple power generation sources that can be connected to the larger energy grid system, or disconnected to function on its own, in a time of emergency. There are several benefits to instituting microgrids: lowered energy costs, increase overall energy efficiency, improved environmental performance and local electric system reliability. Three levels of advocacy should be taken to create a more resilient energy distribution system: clear policies encouraging microgrid installation, local energy distribution autonomy, and the integration of renewable energy sources onto the energy grid. Since NYCHA owns so much of the property in the LES, NYCHA has the potential to become a valuable partner to achieve reductions in energy loads, and integration of renewable energy sources. **(Final Recommendations Report page 71)**

4.2 Collaborate with NYC Green Infrastructure Program to conduct strategically placed green infrastructure projects.

About 27 billion gallons of raw sewage is spilled into New York City waterways each year, causing significant environmental and potential human health impacts. Implementation of green infrastructure projects diverts stormwater from New York City's aging combined-sewer system. Green Infrastructure also includes the benefits of air filtration that reduce asthma rates, and have the ability to lower temperatures during heat waves. There have been several plans developed by different organizations over the last decade to help manage stormwater and flooding issues along the coast of the LES. We recommend installing a variety of green infrastructure projects to improve the quality of life of residents, improve air quality, and manage stormwater and flooding issues. Local agencies

should work together to install bioswales along Pike St and Catherine Slip, and work with NYCHA to create rain gardens on low-lying properties. **(Final Recommendations Report page 75)**

4.3 Organize volunteer tree plantings with the NYC Department of Parks and Recreation in areas that lack a tree canopy.

Planting trees is one of the best strategies to lower average temperatures during heat waves, which in turn lowers our demand on the energy grid during heat waves. Trees also clean our air and water, and help to manage stormwater runoff. This is a relatively low-cost, short-term recommendation that can be quickly implemented. LES Ready should work with the NYC DPR to organize volunteer groups to help plant trees in areas lacking tree canopy throughout the LES. The area along East Broadway near the Manhattan Bridge was identified as one area in particular that could greatly benefit from more trees to help manage storm water, clean the air, and lower temperatures during extreme heat waves. **(Final Recommendations Report page 77)**

5 Fortify the Ability of the Built Environment to withstand Storm Surge and Flooding

5.1 Advocate for the development of a berm and collapsible floodwall.

The lower cost, first phase of this recommendation, is for the City Office of Emergency Management to purchase deployable floodwalls, which would be constructed along the East River Park as part of the preparations for an oncoming storm. These metal walls would be braced on the inland side to be able to withstand the force of a storm surge. Our longer-term, second-phase recommendation is to rebuild East River Park and extend it directly to the doorstep of LES residents by building a berm over the FDR along the park. This would be a substantial capital investment, but would also protect a large area of the LES where the building stock is not well-suited to be flood-proofed. Additionally, the berm would better connect residents to the park, and repair and upgrade the existing infrastructure. This recommendation is adapted from a Rebuild by Design entry from the BIG TEAM, which suggests building a protective berm above a new subway line encircling Lower Manhattan. It is very important to know how crucial it is to understand the potential impacts building a berm could potentially have on the natural environment along the East River. Thorough environmental impact studies must be conducted before this recommendation can be fully supported. **(Final Recommendations Report page 83)**

5.2 Promote and educate the community on flood-proofing measures for at risk structures and on available funding for flood-proofing techniques.

The Lower East Side possesses a diverse building stock with structures of almost every imaginable type and combination of uses. While recent meteorological events have exposed the city's long-standing vulnerability to flooding, Sandy demonstrated that CD3's buildings are more vulnerable than previously thought. Flood-proofing is an effective technique that aids in preparing buildings to withstand flood events, and is a critical measure in protecting the built environment. Knowledge about flood-proofing strategies is an elemental resource that needs to be spread across the community; not only as a strategy to help protect structures and valuables, but also as a method to lower rising flood insurance premiums. LES Ready should distribute information, so building owners and renters can identify the appropriate flood-proofing methods for their building type, understand the procedures to follow, and even be guided in the right direction to obtain funding for flood proofing measures. **(Final Recommendations Report page 85)**

5.3 Partner with organizations such as the New York City Chapter of American Institute of Architects (AIA) to connect building owners and tenants to free technical assistance and support.

Technical services provided by industry professionals are necessary for most reconstruction and flood-proofing efforts. These services are beyond the reach of some building owners, whether because of financial limitations or lack of necessary information. To help get building owners the support and technical assistance they need, partnerships could be formed with professional agencies such as the American Institute for Architects. Essentially, industry professionals could provide their services in exchange for credit they already need to acquire or maintain licensure. An example of this recommendation in action can be seen through the Architecture for Humanity Sandy Design Help Desks. **(Final Recommendations Report page 88)**

6 Ensure Social, Economic, and Environmental Justice in Future Development and Planning

6.1 Partner with government agencies, financial institutions, and universities to increase small business training and workforce development.

Economic resiliency is critical to a community's ability to weather a disaster. Develop partnerships with educational institutions, government agencies, and the business community to provide training and workforce development. This step will foster opportunities for residents to acquire new skills and achieve economic independence, strengthening the ability of residents to cope with fiscal impacts of a disaster. **(Final Recommendations Report page 93)**

6.2 Partner with local CBOs to improve long-term food security and build self-sufficiency for residents to access affordable and fresh foods.

Much of this work has been undertaken by Two Bridges through their NeighborFood Initiative. This program utilizes wayfinding signage and an informational brochure with an accompanying map, to aid residents in locating sources of fresh food in the LES. This is a highly valuable program, as it provides information that can be used by residents to prepare for a disaster event and improve food security/access in their daily lives. **(Final Recommendations Report page 97)**

6.3 Partner with CERT and the New York City Environmental Justice Alliance (NYEJA) to train residents on the use of Hazardous Materials Kits.

In a disaster scenario, we must take into account that first responders from city agencies may have difficulty reaching certain communities. It is therefore important that stakeholders within the community be trained in certain response techniques, so that residents are not solely reliant on a single source of first responders. Due to the presence of combined sewer outfalls in the LES, there is the potential for hazardous waste to enter the community in a flood event. Through partnerships with CERT and NYEJA members of the community should be trained in the use of hazardous material test kits, so that in the event of a disaster, residents can be informed of areas where hazardous materials are present. **(Final Recommendations Report page 98)**

6.4 Initiate a Rezoning of R7-2 Districts to improve resiliency and promote mixed-uses on NYCHA properties and community-serving retail development of underutilized parcels.

The majority of NYCHA campuses in the LES are zoned R7-2, which calls for high-rise towers

surrounded by large quantities of open space. This zoning designation provides for significant advantages, primarily related to the presence of open space, which provides both green spaces and permeable land. However, NYCHA campuses zoned R7-2, particularly those on the waterfront are somewhat isolated from the neighborhood due to their restricted residential character. Additionally, due to updated building codes, residential uses will not be permitted in new construction, or in buildings that have been undergone extensive renovations. We recommend initiating a rezoning for these districts that would allow for commercial spaces in the first floor of NYCHA buildings, as well as limited new commercial construction on NYCHA campuses. Local entrepreneurs would be given preference for some of these spaces, rents from these spaces would go directly into a fund for floodproofing NYCHA buildings, and tenants would be subject to HUD's Section 3 program. This rezoning would serve to extend the mixed-use character present in the LES onto NYCHA campuses. Through this action, NYCHA campuses could be made to feel less isolated, residents would have more ready access to retail goods, and a source of funding retained for the floodproofing of NYCHA buildings. **(Final Recommendations Report page 99)**

6.5 Advocate for FEMA to develop additional studies to create a multi-family design guide.

The National Flood Insurance Program and FEMA literature is largely geared towards one and two family houses, but most of the building stock in the Lower East Side does not fall into this category. *The Post-Sandy Initiative Report* identified the lack of a FEMA multi-family design guideline. LES Ready should advocate for additional studies by FEMA to develop a comprehensive multi-family building design guide. **(Final Recommendations Report page 103)**

6.6 Advocate for the Chinatown Working Group zoning amendment components that seek to ensure tenants' rights as well as opportunities for economic growth that build the socioeconomic resiliency of the Lower East Side.

The fundamental necessity for ultimate disaster preparedness is to strengthen the overall resilience of the economy and residents' stability in the Lower East Side. This recommendation serves primarily to affirm GOLES' existing work on advocating for affordable housing and other issues regarding justice and the economy. Currently, the Chinatown Working Group has been working to develop a series of zoning changes to help address some of the growing concerns of economic and residential affordability and stability. We encourage GOLES to continue advocating for the principles of the Chinatown Working Group's rezoning that are important to strengthening the socioeconomic resiliency of the area. **(Final Recommendations Report page 104)**

6.7 Advocate for the expansion of disaster recovery and resiliency funding for community-based organizations

One of the greatest challenges facing community-based organizations (CBOs) in responding to the needs of the community they serve, both in the preparation for and in the aftermath of a disaster, is accessing adequate funding for their work. Funding for CBOs' efforts come from many different sources. Building on the proposal by the Sandy Regional Assembly and the work begun by the RAMP Initiative, we believe that LES Ready should advocate for greater amounts of funding to be directed to CBOs to improve local resiliency. Furthermore, creative and innovative funding solutions should be explored. **(Final Recommendations Report page 105)**

Link to full report: <http://prattlesready.wordpress.com/reports/>