**Abstract**

New York City was recently hit hard by Hurricane Sandy at the end of October, which killed more than fifty people and proved that the city was in dire need to update its storm management programs. Mayor Bloomberg announced his project, PlaNYC and detailed the types of protection they are going to enact in certain areas of the city in order to prevent another storm from striking with equal force. However, most of the details the plan goes into were already enacted before the storm and proved to have been less than efficient at preventing damage.

It is evident that if actual progress for storm preparation would be made, more factors must taken into account. For this reason, this paper discusses the neighborhood of Breezy Point in Queens which was one of the neighborhoods most severely impacted by Hurricane Sandy. The neighborhood was located on the 100-yr flood zone due to its proximity to the water in conjunction with its low elevation. The neighborhood was hit extremely hard with damages ranging from flooded basements to total destruction of homes. However, FEMA has been criticized for the extreme delay in the issuance of recovery funds and the process of rebuilding has been very slow. This paper discusses the potential for the neighborhood to be a case study for future storm preparedness efforts with the goal of preventing future damage to the same extent as this previous storm.

**Introduction**

Hurricane Sandy wrecked havoc long the east coast, dismantling hundreds of homes, flooding critical infrastructure, and knocking out power and water for many people. The storm cost NYC over $33 billion in damages, with 57 killed in just the NYC area. However, its winds only averaged 45-55 mph winds along the southern shores of Long Island. It was the flooding that caused most of the damage: inundation height reached 9 feet at the Battery, and 4-6 feet in Long Island. For this project, we chose two neighborhoods in Flood Zone A that had extensive damage following Sandy, but have been recovering in different ways. We hope to find the community and social dynamics of each area and how that affects storm preparedness efforts as well as the physical storm barriers which would be effective in terms of preventing such extensive damages to these areas.

**Neighborhoods**

The neighborhood contains a mix of residence and businesses due to its status as a tourist destination and proximity to Coney Island. It has the largest immigrant population out of all of NYC, mainly Hispanics and Urbanes (New York Times 2011). Brighton Beach is located on the 100-yr flood zone due to its status as a tourist destination and proximity to Coney Island. It has the largest Hispanic population out of all of NYC.

**Protection Plan**

- **Distance of Coastline for Brighton Beach**: 4000 feet
- **Distance of Coastline for Breezy Point**: 13650 feet
- **Projected Storm Surge Height**:
  - **Breezy Point 2050**
    - LOW: 11.1 in
    - MID: 15.1 in
    - HIGH: 20.1 in
  - **Seagate 2050**
    - LOW: 16.1 in
    - MID: 20.1 in
    - HIGH: 24.1 in
  - **Breezy Point 2020**
    - LOW: 16.1 in
    - MID: 20.1 in
    - HIGH: 24.1 in
  - **Seagate 2020**
    - LOW: 16.1 in
    - MID: 20.1 in
    - HIGH: 24.1 in

**Social Impacts**

During Hurricane Sandy there was extensive damage, but the community itself was experienced with the procedures regarding flood warnings and prepared thoroughly. Veterans to the threat of storm damage and destruction, they were procedural in their response, especially since the area already boasts large and effective relief efforts such as Shorefront, which is now is actually looking to expand post-storm (Vladimirova, 2012). Money also poured in from outside sources, as the city itself later spent more than $270 million restoring the eroded beaches in preparation for the summer ("Mayor Bloomberg and," 2013).

Breezy Point is largely made up of secondary homes that are passed down through generation, and because so few people had been present at the time of the hurricane the mortality rate for the neighborhood was low. However, since FEMA doesn’t cover second homes many homes were left with no way to rebuild.

And due to a neighborhood called the “Wedge”, where houses are positioned quite close together, there were optimal conditions for a large fire to break out and more than 100 houses needed to be rebuilt (Hamill 2013). Thankfully, Ireland has given more than $320k to the rebuilding effort, mainly because the Irish community in Breezy Point keeps close ties (Fessenden & Roberts, 2011).

**References**


