Sustainable Jersey Climate Change and Flooding Forum

Becoming Resilient and Prepared Communities – What Are New Jersey Communities Already Doing to Prepare?

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Hoboken Demographics: Hoboken v. (New Jersey)

- Population: 50,005
- Median Age: 31.2 years old (39.0 y.o.)
- White: 82.2% (68.6%)
- Hispanic or Latino: 15.2% (17.7%)
- Asian: 7.1% (8.3%)
- Black: 3.5% (13.7%)
- Households: 25,041
- Family HH: 37.8% (69.3%)
- Owner-occupied: 32.1% (66.9%)
- Renter-occupied: 67.9% (33.1%)
- H.S. Graduate or higher: 91.5% (87.3%)
- B.A. degree or higher: 71.6% (34.6%)
- Drove alone: 26.4% (71.6%)
- Public Transit: 56.3% (10.6%)
- Walked: 9.7% (3.3%)
- Per Capita Income: $69,085 ($34,858)
- Median HH Income: $101,782 ($69,811)
- Mean HH Income: $137,166 ($93,475)
- Housing Tenure/2005 or later: 58.7% (29.1%)
- Median HH Value: $572,900 ($357,000)
- Median HH Rent: $1,640 ($1,092)
14 things I learned from Superstorm Sandy...

1. Water travels down hill...
   - More than two-thirds of Hoboken is within the floodplain.
   - Despite the completion of a $16+ million pump station in 2011, a storm event during a high can have devastating consequences.
   - Two 50 mgd pumps took five days to clear the floodwaters.
   - It is estimated that more than 500 million gallons of water entered the city from the Hudson River storm surge.
Storm Surge/Mode of failure
14 things I learned from Superstorm Sandy...

2. This is not Venice! Most residents of American cities do not have their own personal floatation devices.
14 things I learned from Superstorm Sandy...

3. Ambulances don’t float.

- Neither do Fire trucks, police cars or most municipal vehicles.

- Salt water can ruin a vehicle by just driving through it.
14 things I learned from Superstorm Sandy...

4. This is not a drill...

- Most of New Jersey’s first responders are not properly equipped for urban flooding situations.
- Police, Fire and Ambulance squads need better training, vehicles and equipment.
5. Water and electricity don’t mix!

- 3 Major PSEG substations located in Hoboken.
- All substations in Hoboken are located within the floodplain.
- All substations are more than 60 years old and have not upgraded.
- It is extremely difficult finding 60 year old replacement parts for electric substations.
- There are only a small number of qualified substation repair technicians in New Jersey.
- PSEG is considering mitigating hazards through construction of walls, berms or floating transformers.
- Federal Stafford Act does not fund hazard mitigation strategies by non-public organizations (i.e. Private utility companies).
14 things I learned from Superstorm Sandy...

6. Don’t count on modern forms of communication when the power goes out...
   • TV, radio, internet, cell phones don’t work without power.
   • Public notices through Facebook, twitter, Nixle, etc. don’t work either.
   • Replaced by bulletin boards, paper public notices and daily town hall meetings...
14 things I learned from Superstorm Sandy...

7. During a disaster, don’t count on normal food distribution.
   • Grocery stores can be knocked out by a disaster event.
   • The normal supply distribution chain can be disrupted too.
   • Perishable food can become unsafe to eat.
   • It is extremely important to stock up on water and non-perishable food items.
   • The New Jersey National Guard delivered over 25,000 MRE’s (Meals Ready to Eat) to Hoboken residents.
8. Without power, building mechanicals fail...

- Back up batteries for emergency exists and hallway lights only last a couple of days.
- Back up generators run on diesel or gasoline rely upon regular deliveries.
- Fire suppression systems without power will only be fed by gravity (i.e. no fire suppression system above the 6th floor).
14 things I learned from Superstorm Sandy...

9. Note to transit agencies...

Protect your assets.

• A few dozen sandbags are not sufficient to prevent water from flooding your system.

• Move expensive rolling stock to higher ground!
14 things I learned from Superstorm Sandy...
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10. Don’t park your car in a flood zone during a storm event.

- Over 1,000 vehicles damaged or destroyed by flood waters during Hurricane Sandy.
14 things I learned from Superstorm Sandy...

11. Large scale disaster events can disrupt fuel distribution supply chain.

- Gas rationing started within days of disaster event.
- Police, fire and ambulance vehicles and municipal back-up generators left without enough gasoline and diesel.
- Municipal emergency services commandeer local gas stations.
14 things I learned from Superstorm Sandy...

12. After the hurricane comes a tsunami of trash...
14 things I learned from Superstorm Sandy...

13. Flood Insurance doesn’t cover basement level or ground floor apartments located in a floodplain.
14 things I learned from Superstorm Sandy...

14. The debate is over...