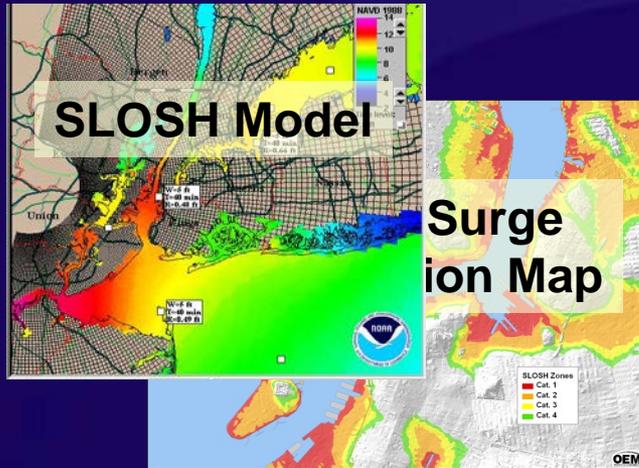


Overview of Updates to Evacuation Zones

Last Revised: Apr 2013

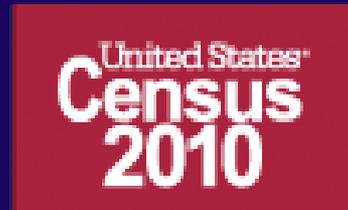


What is Different?



2010 SLOSH Model and 2011 Storm Surge

- Model accounts for bigger, slower storms (represents recent storm characteristics)
- Datum matches current standard
- Resolution is 4 times greater
- Best available land elevation data (LiDAR)



2010 Census

- New population estimates for geographic areas at risk



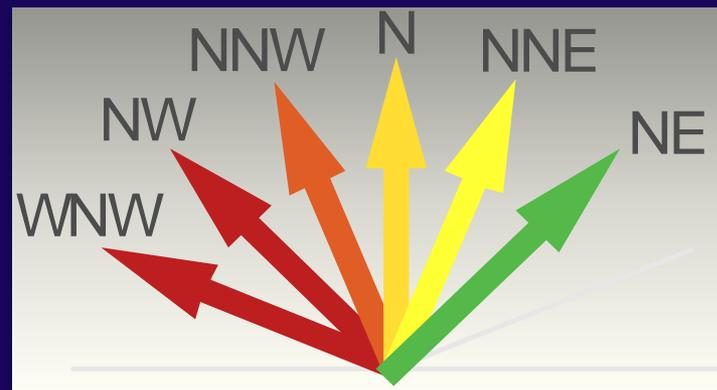
Hurricanes Irene and Sandy

- Real events that can inform actual behavior, sheltering demand, mode of transit, and clearance times

Maximum Surge Heights by Storm Bearing

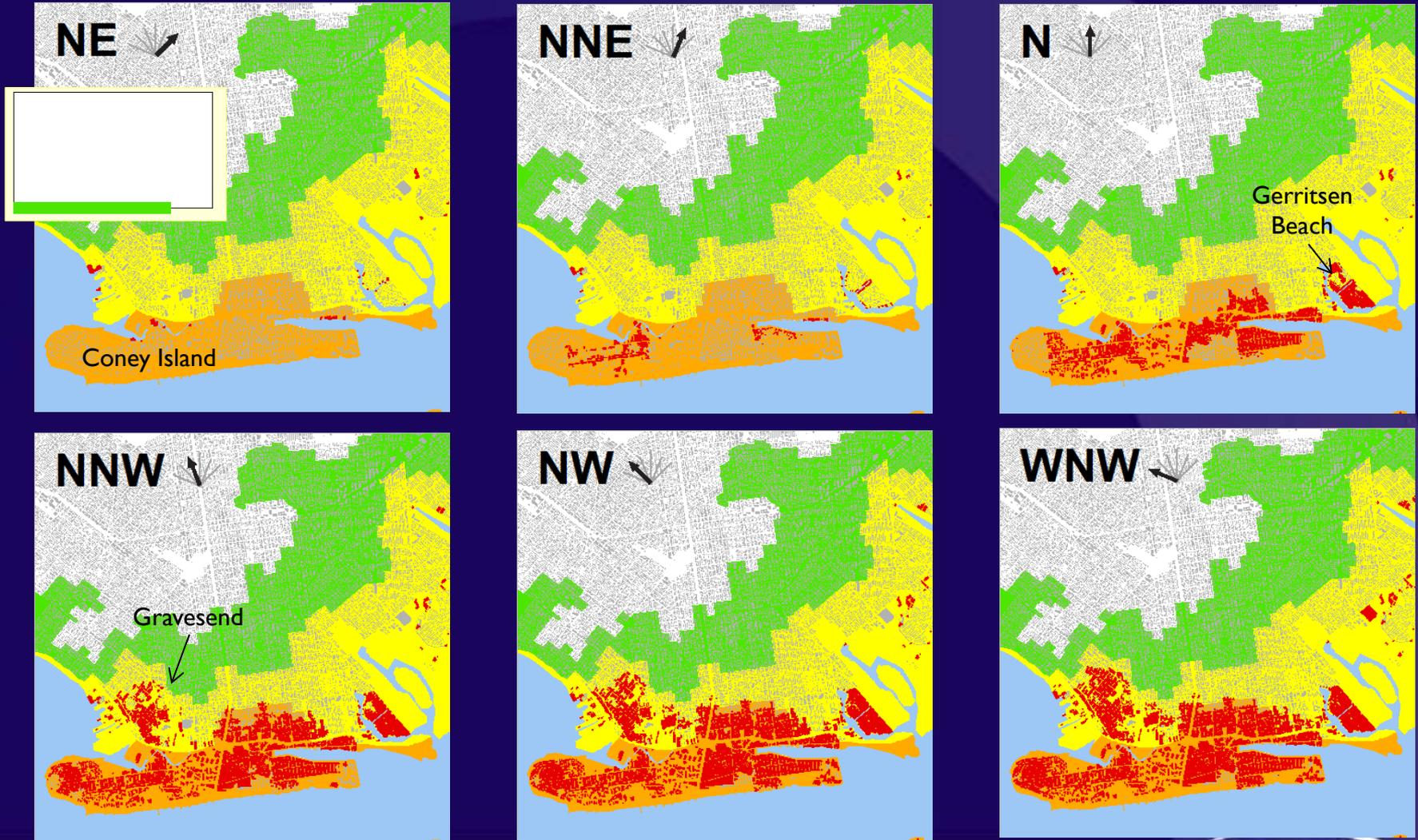
	WNW	NW	NNW	N	NNE	NE
Category 1	12.6	12.1	10.7	8.8	6.6	5
Category 2	20.9	20	20.1	16.5	11.4	8.1
Category 3	26.6	27.6	27.4	23.4	17	11.3
Category 4	32.4	33.9	33.9	30.6	21.7	14.6

Storm bearings



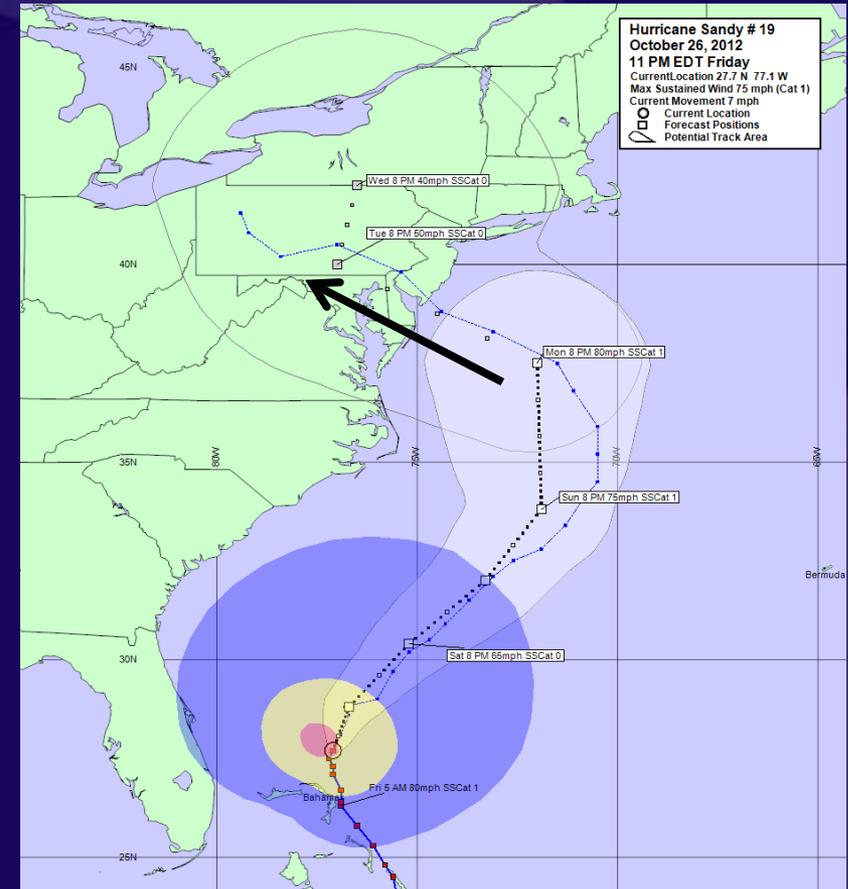
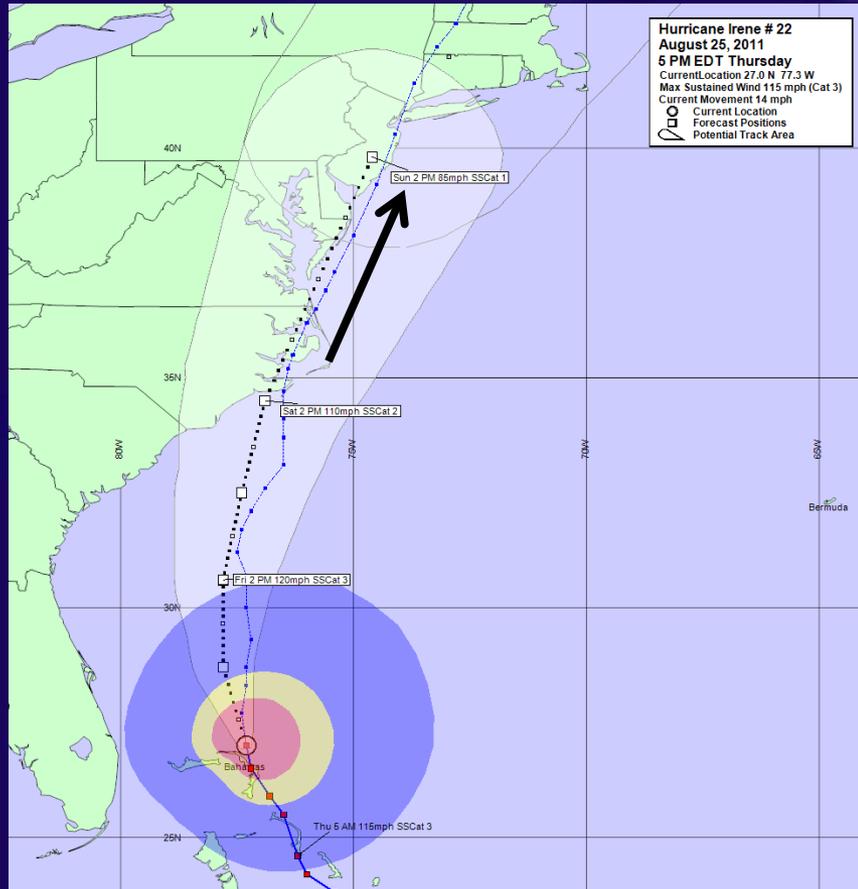
Potential Building Impacts: Cat 1 Hurricanes

Buildings potentially impacted by worst-case surge based on hurricane bearing



Irene – NNE bearing

Sandy – WNW bearing (NW at landfall)



Predicted storm tracks for both storms 70 hours before landfall

Bearing Based Proposal

- Bearing has significant effect of storm surge
- Allows for more flexibility in evacuation (less likely to over- or under- evacuate)
- Storm track predictions are more accurate than predictions of intensity

Proposed zones

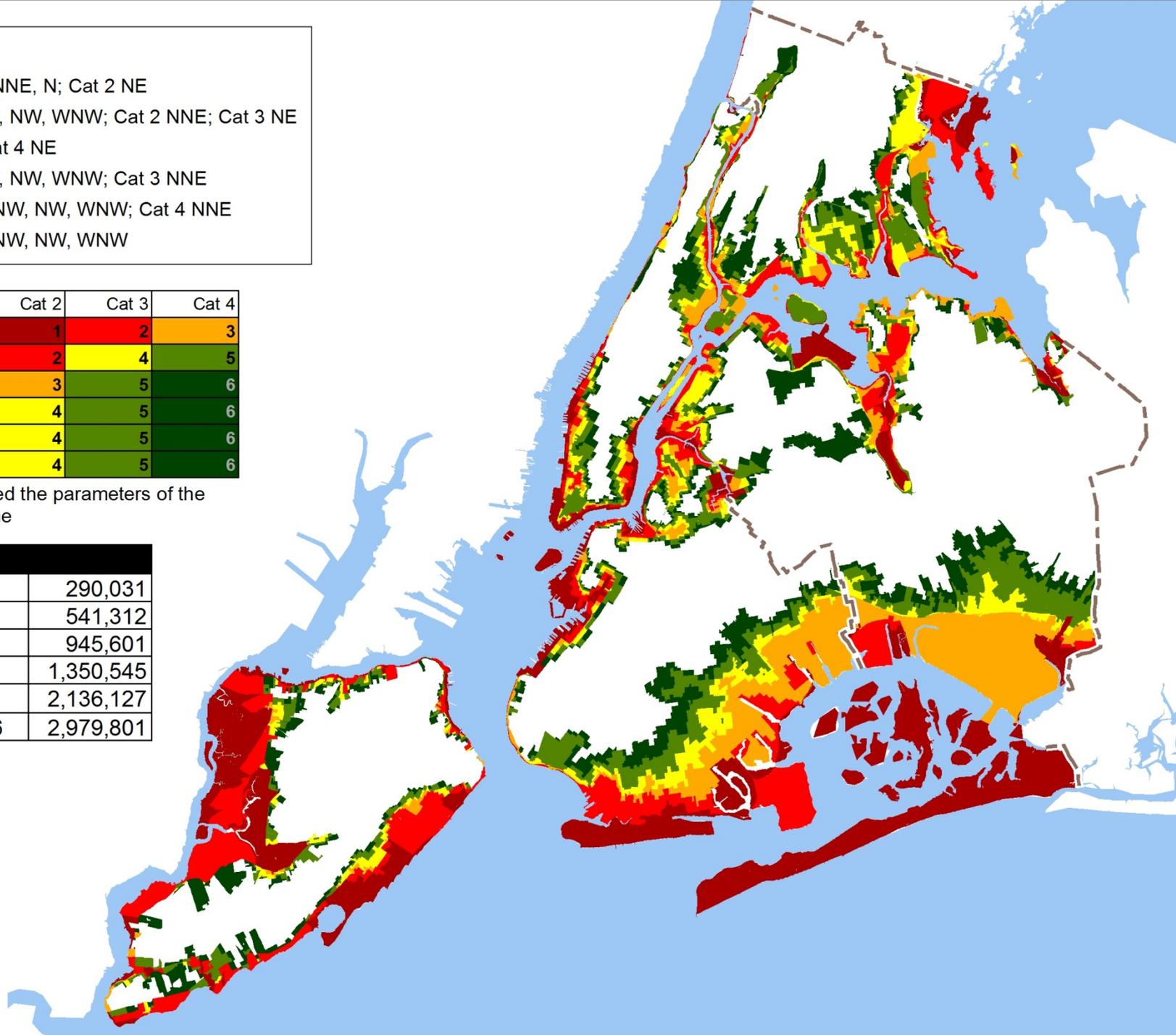
- 1 - Cat 1 NE, NNE, N; Cat 2 NE
- 2 - Cat 1 NNW, NW, WNW; Cat 2 NNE; Cat 3 NE
- 3 - Cat 2 N; Cat 4 NE
- 4 - Cat 2 NNW, NW, WNW; Cat 3 NNE
- 5 - Cat 3 N, NNW, NW, WNW; Cat 4 NNE
- 6 - Cat 4 N, NNW, NW, WNW

	Cat 1	Cat 2	Cat 3	Cat 4
NE	1	1	2	3
NNE	1	2	4	5
N	1	3	5	6
NNW	2	4	5	6
NW	2	4	5	6
WNW	2	4	5	6

* For storms that exceed the parameters of the model, go up one zone

2010 Population

Zone 1	290,031
Zone 1+2	541,312
Zone 1+2+3	945,601
Zone 1+2+3+4	1,350,545
Zone 1+2+3+4+5	2,136,127
Zone 1+2+3+4+5+6	2,979,801



Facility	2012			
	Zone A	Zone B	Zone C	Total
Hospitals	6	2	13	21
Nursing homes	22	12	27	61
Adult care facilities	17	8	9	34

Facility	2013						
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Total
Hospitals	4	4	0	6	9	2	25
Nursing homes	23	6	8	6	19	9	71
Adult care facilities	17	4	2	7	6	3	39

Next Steps

- Finalizing the zone boundaries
- Identify HCFs within the new zones
- Planning & education