

Opportunities and Challenges to Building Greener Infrastructure: Lessons from Hurricane Sandy

Commission for Environmental Cooperation of North
America

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www.littoralsociety.org

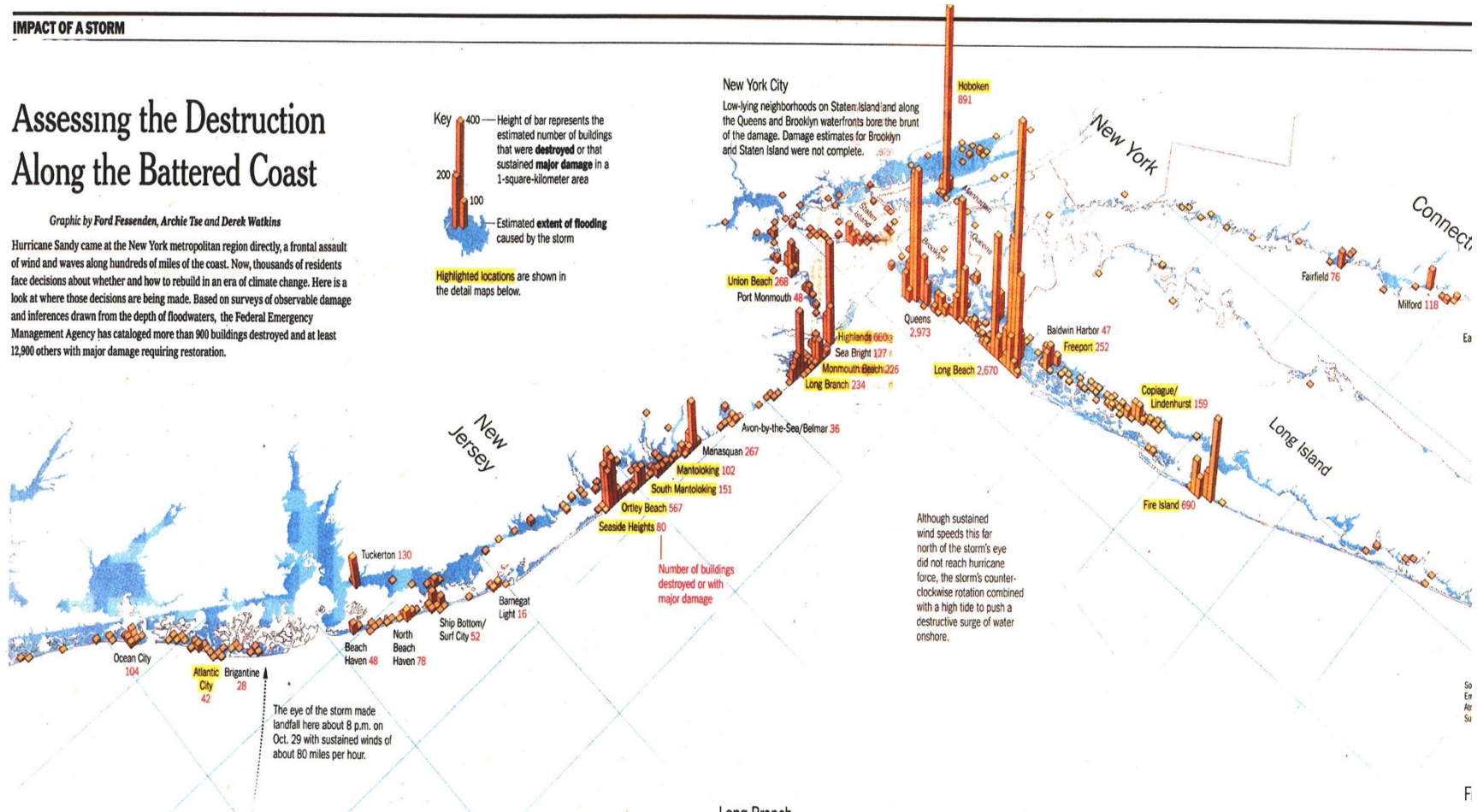
Impact of Hurricane Sandy

IMPACT OF A STORM

Assessing the Destruction Along the Battered Coast

Graphic by Ford Fessenden, Archie Tse and Derek Watkins

Hurricane Sandy came at the New York metropolitan region directly, a frontal assault of wind and waves along hundreds of miles of the coast. Now, thousands of residents face decisions about whether and how to rebuild in an era of climate change. Here is a look at where those decisions are being made. Based on surveys of observable damage and inferences drawn from the depth of floodwaters, the Federal Emergency Management Agency has cataloged more than 900 buildings destroyed and at least 12,900 others with major damage requiring restoration.





Coastal Change: Coastal Development, Chadwicks



1930s



Image Source: New Jersey Department of Environmental Protection

2002



Image Source: NJ Office of Information Technology, Office of GIS

0 0.15 0.3 Miles
0 0.25 0.5 Kilometers



Table IV-7. Policy/Programmatic Measures Matrix

Aggregated Measure Category	Specific Measures
Floodplain Management	Strategic acquisition, rolling easements, relocation/managed retreat
Land Use Planning	Land use zoning, subdivision regulations, design and location of services and utilities
State/Municipal Policy	Building codes, housing codes, tax adjustments
Natural Resources	Wetland migration, coastal zone management, beneficial use of dredged material, regional sediment management, ecosystem protection
Surface Water Management	Low impact development, stormwater best management practices
Increase Awareness in Vulnerable Coastal Populations	Education, special assistance programs

Mantoloking, New Jersey





Opportunities and Challenges

- Awareness of vulnerability; growing awareness of value of natural and nature based systems for risk reduction
- Local economic imperatives drive response
- Unclear how much existing mechanisms promote greener infrastructure decisions
- Differing concepts of “resiliency” drive choices
- Connect immediate responses to existing problems
- Role of leadership in optimizing greener infrastructure

From Obstacles to Opportunities

Restore America's Estuaries Report

- Four major obstacles to use of living shorelines/greener approaches:
 - Institutional inertia
 - Lack of a Broader Planning Context
 - Shoreline variability
 - Lack of an advocate

Response Strategies

- Education and Outreach
- Regulatory reform
- Increase institutional capacity
- Public agencies as role models

www.estuaries.com