



Transportation in the Age of Climate Change





n elevators stopped functioning. They
 ed with the National Guard and the Red
 s to distribute emergency supplies.

1. Able to bounce back after change or adversity
2. Capable of preparing for, responding to, and recovering from difficult conditions

even as the people of the city focused on
 y and the destruction it had wrought across
 ve boroughs, it became clear that relief and
 very efforts alone would not be a sufficient
 onse to this disaster. It was critical for the
 also to turn simultaneously to the future and
 epare—not just for “the next Sandy,” and
 ust for hurricanes and storm surge. It was
 ntial to redouble the broader preparations
 imate change begun with PlaNYC.

December 2012, Mayor Bloomberg delivered
 eech announcing a major new effort to
 y the city for the future. *A Stronger, More
 lent New York* is the response to the
 or’s call to action. The nearly \$20 billion
 contained in this report (towards which the
 will contribute up to \$1 billion in new

resilient [ri-zil-yuhnt] adj.

the city, including our energy grid, transporta-
 tion systems, parks, telecommunications net-
 works, healthcare system, and water and food
 supplies. Meanwhile, for the areas of New York
 that Sandy hit especially hard, this plan pro-
 poses local rebuilding initiatives that will help
 these communities emerge safer, stronger, and
 better than ever.

The underlying goal of this report is resiliency.
 That is, to adapt our city to the impacts of cli-
 mate change and to seek to ensure that, when
 nature overwhelms our defenses from time to
 time, we are able to recover more quickly.

In short, we have to be tough.

And toughness, as we all know, is one of the
 defining traits of New Yorkers.

become more united as a city.

We must come together again with a
 stronger commitment to slow the progr
 climate change while simultaneously pre
 for the changes already evident around
 and those yet to come.

If we embrace this plan today, we v
 positioned to meet the challenges that c
 change may bring tomorrow, and a
 certainly will bring in the years and de
 ahead. If we take action now, w
 make New York City stronger, safer, and
 resilient—not only for our own b
 but for the benefit of future generati
 New Yorkers.

**The time has come to make our
 even tougher.**



Hurricane Sandy's Impact

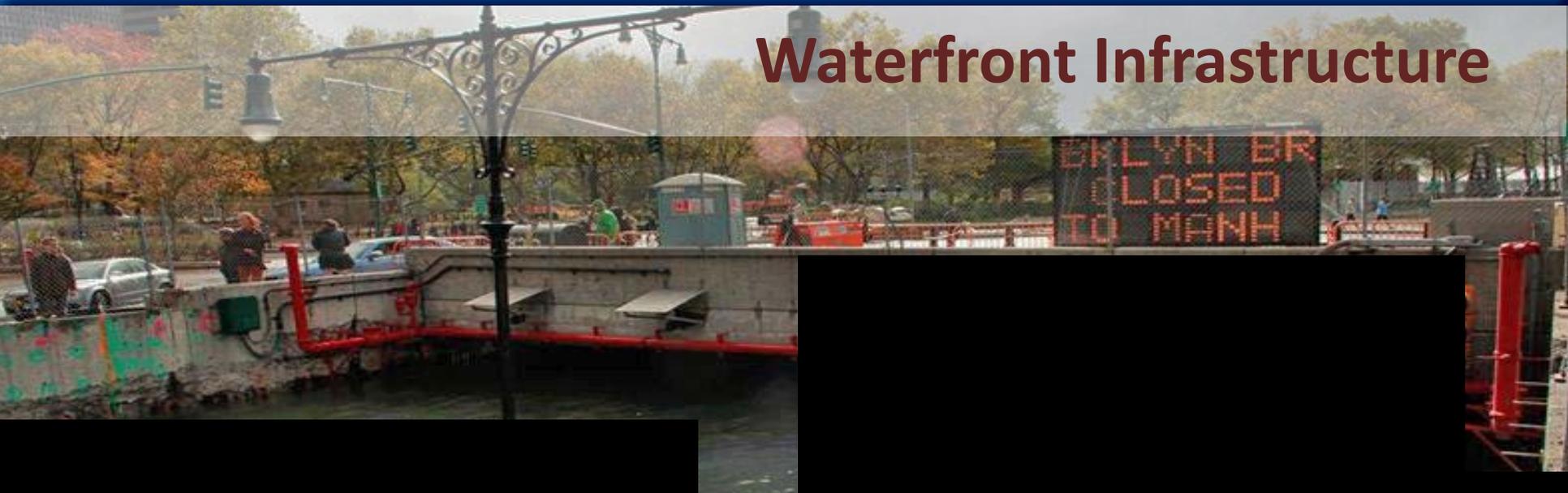


Flooding damaged traffic signals

at **700** intersections



Waterfront Infrastructure



60 Lane miles of roadways were severely damaged

500 lane miles of roadways sustaining minor damage



Critical Transportation Networks

8.6 million daily public transit riders

4.2 million drivers

and **1** million airport passengers



Proactive Planning





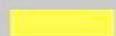
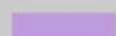
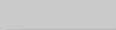
COORDINATION and TALENT

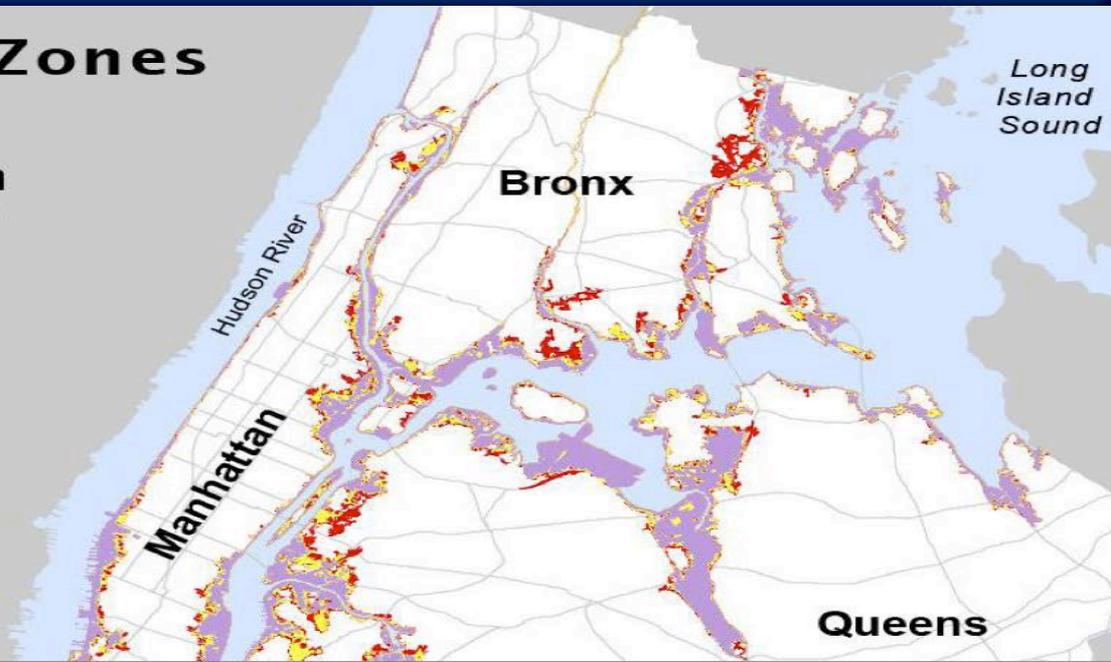




Future 100-Yr Flood Zones for New York City

using high-estimate 90th percentile projections of sea-level rise

-  2020s 100-Year Flood Zone (11" Sea Level Rise)
-  2050s 100-Year Flood Zone (31" Sea Level Rise)
-  FEMA 100-Year Flood Zone (June 2013)
-  Major Roads and Highways



USE DATA and RESEARCH to inform design





PREMIUM AT 4 FEET BELOW
BASE FLOOD ELEVATION

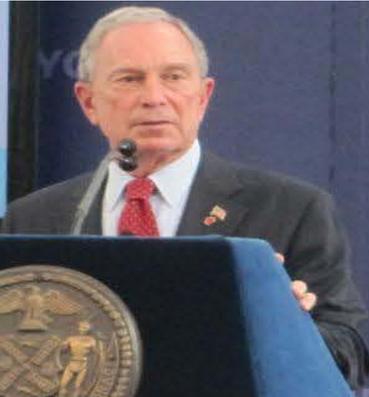
PREMIUM AT
BASE FLOOD ELEVATION

\$9,500/year

\$1,410/year

PLANS, PROGRAMS, REPORTS

A STRONGER, MORE RESILIENT NEW YORK



NYC GREEN INFRASTRUCTURE

A GUIDANCE MANUAL FOR CLEAN WATERWAYS





Green Infrastructure





Green Infrastructure





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