

# NYC LEADERSHIP IN RESILIENCY

MAGNY: Climate Change and the Muni  
Sectors

March 8, 2019



# HURRICANE SANDY CAUSED UNPRECEDENTED DAMAGE...

**51 square miles** flooded

**88,700 buildings** inundated

**44 lives** lost

**\$19 billion** in damages and lost  
economic activity

**2 million New Yorkers** left without  
power for several weeks

**Thousands** displaced from home

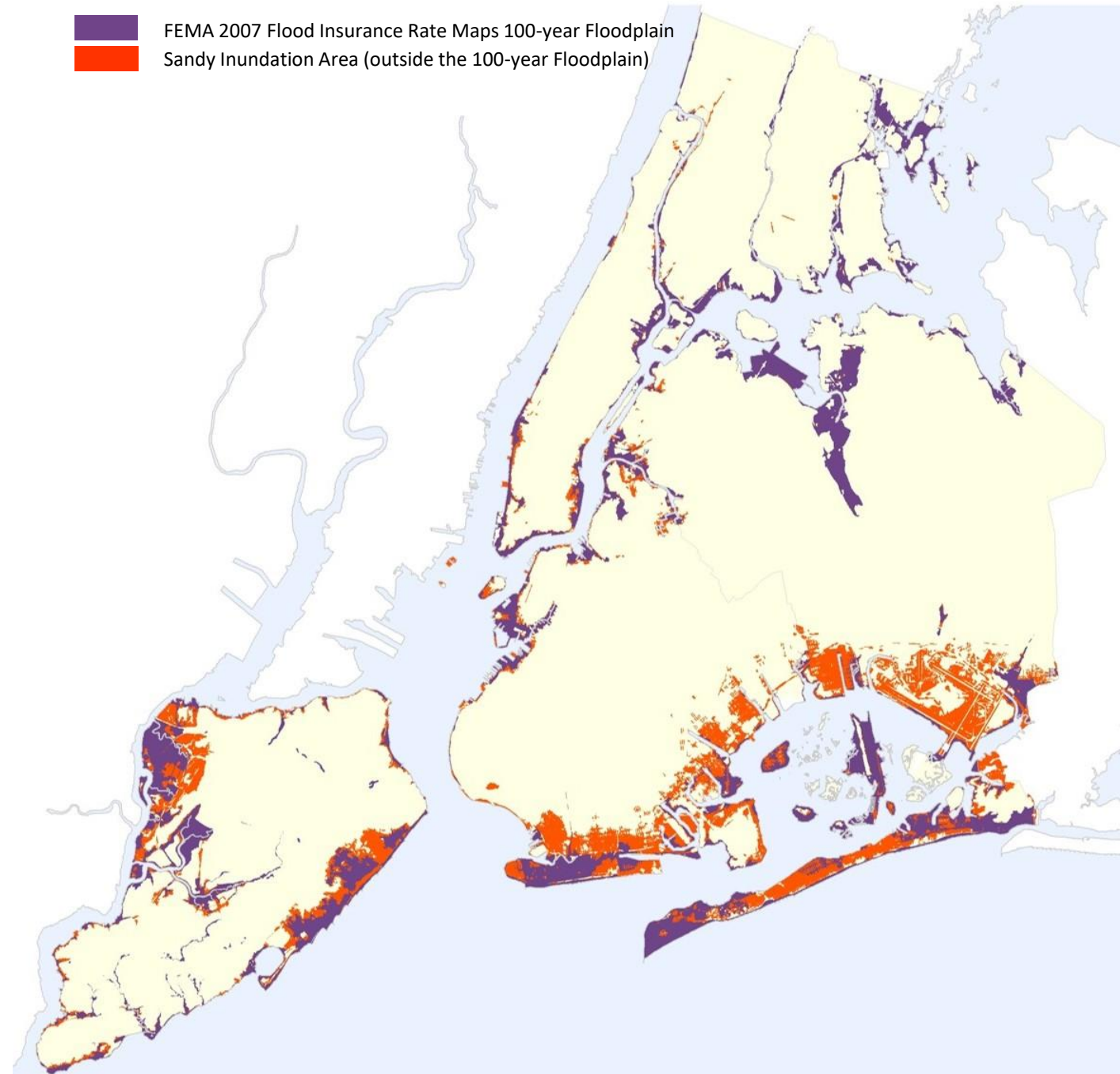




## ...AND EXPOSED A BROADER VULNERABILITY

Prior to Sandy, FEMA's Flood Insurance Rate Maps (FIRMs), which had not been meaningfully updated since 1983, were the best indicator of flood risk in the city.

The area that flooded during Sandy was 1.5 times larger than the 100-year floodplain defined on FEMA's 1983 FIRMs.

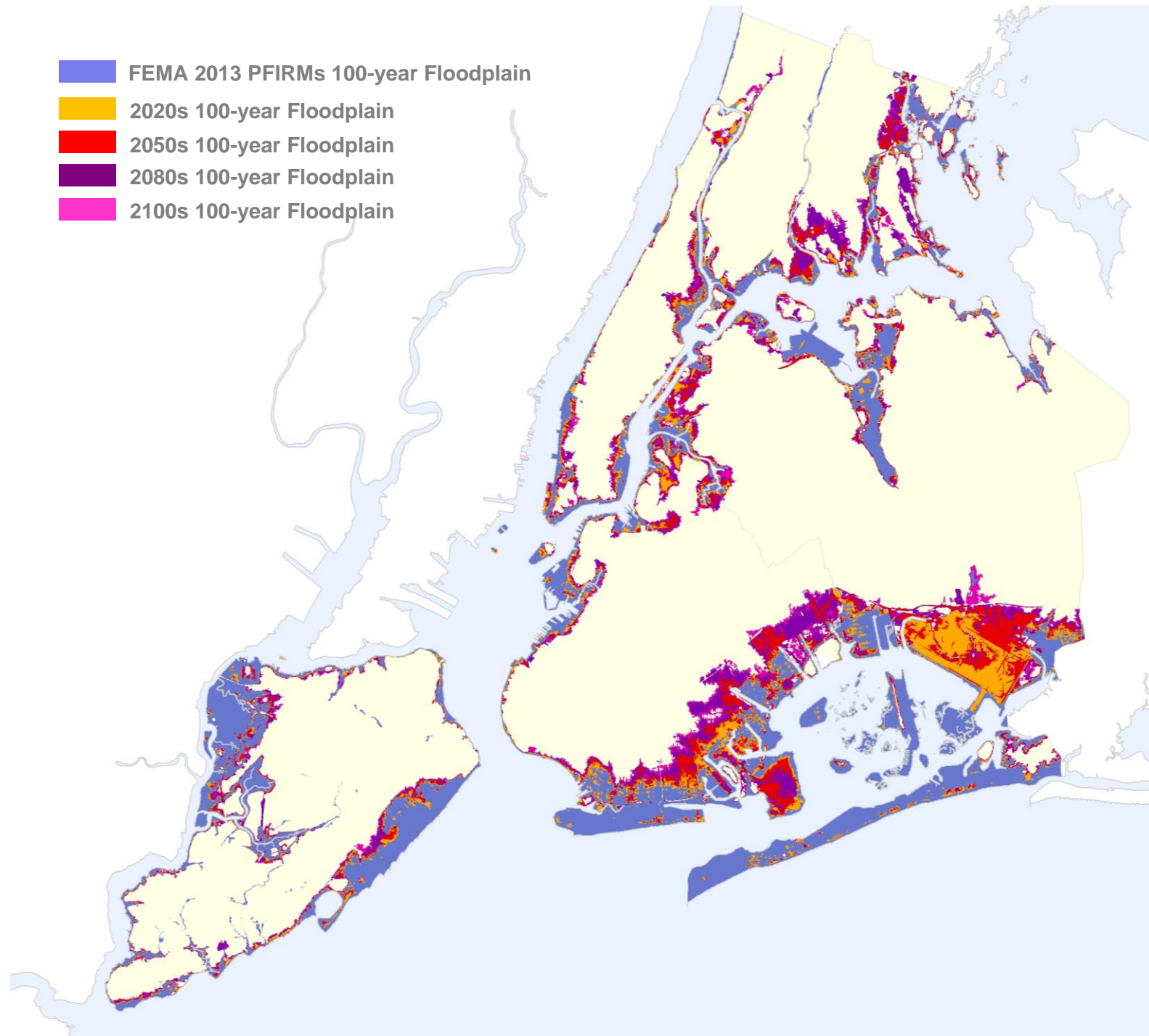


# VULNERABILITY INCREASES AS SEA LEVELS CONTINUE TO RISE

100-year Floodplain*			
	2013 PFIRMs	2050s Projected	Change (%)
Residents	400,000	808,900	102%
Jobs	290,800	555,700	91%
Buildings	71,500	118,000	65%
Area (Sq Ft)	534M	855M	42%

\* Numbers are rounded for clarity

**Over 171,000 buildings and 1.2 million New Yorkers projected to live in the floodplain by 2100.**







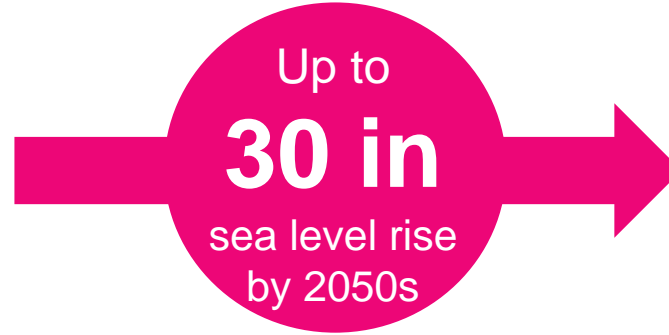
## **AS OUR CLIMATE CHANGES, THE INTENSITY AND IMPACTS OF MAJOR STORMS WILL LIKELY INCREASE**

By the 2050s, a Sandy-like storm could cause \$90 Billion in damage and economic loss – nearly five times Sandy's impact.

This increase is due to projected sea level rise and increasing intensity of Atlantic storms.

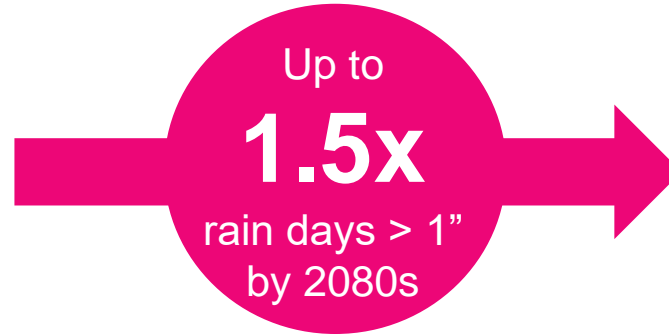
# COASTAL STORMS ARE NOT THE ONLY CLIMATE HAZARD WE MUST PREPARE FOR

**SEA LEVEL RISE**



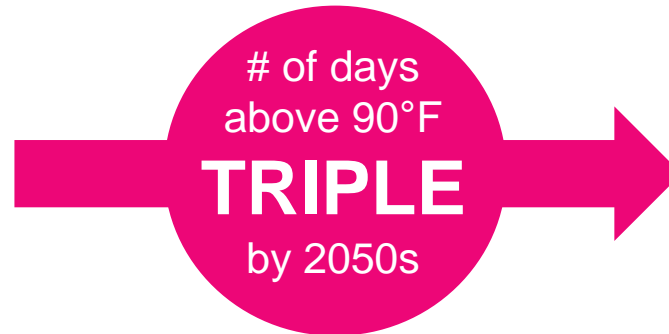
WIDESPREAD  
TIDAL FLOODING +  
GROUNDWATER  
TABLE RISE

**PRECIPITATION**



INLAND FLOODING

**TEMPERATURE**



NYC SUMMERS  
LIKE BIRMINGHAM,  
ALABAMA

# ONENYC STRENGTHENS AND EXPANDS THE CITY'S COMMITMENT TO A MULTILAYERED APPROACH TO RESILIENCY



## NEIGHBORHOODS

EVERY NEIGHBORHOOD WILL BE SAFER BY STRENGTHENING COMMUNITY, SOCIAL AND ECONOMIC RESILIENCY



## BUILDINGS

THE CITY'S BUILDINGS WILL BE UPGRADED AGAINST CHANGING CLIMATE IMPACTS



## INFRASTRUCTURE + ENERGY

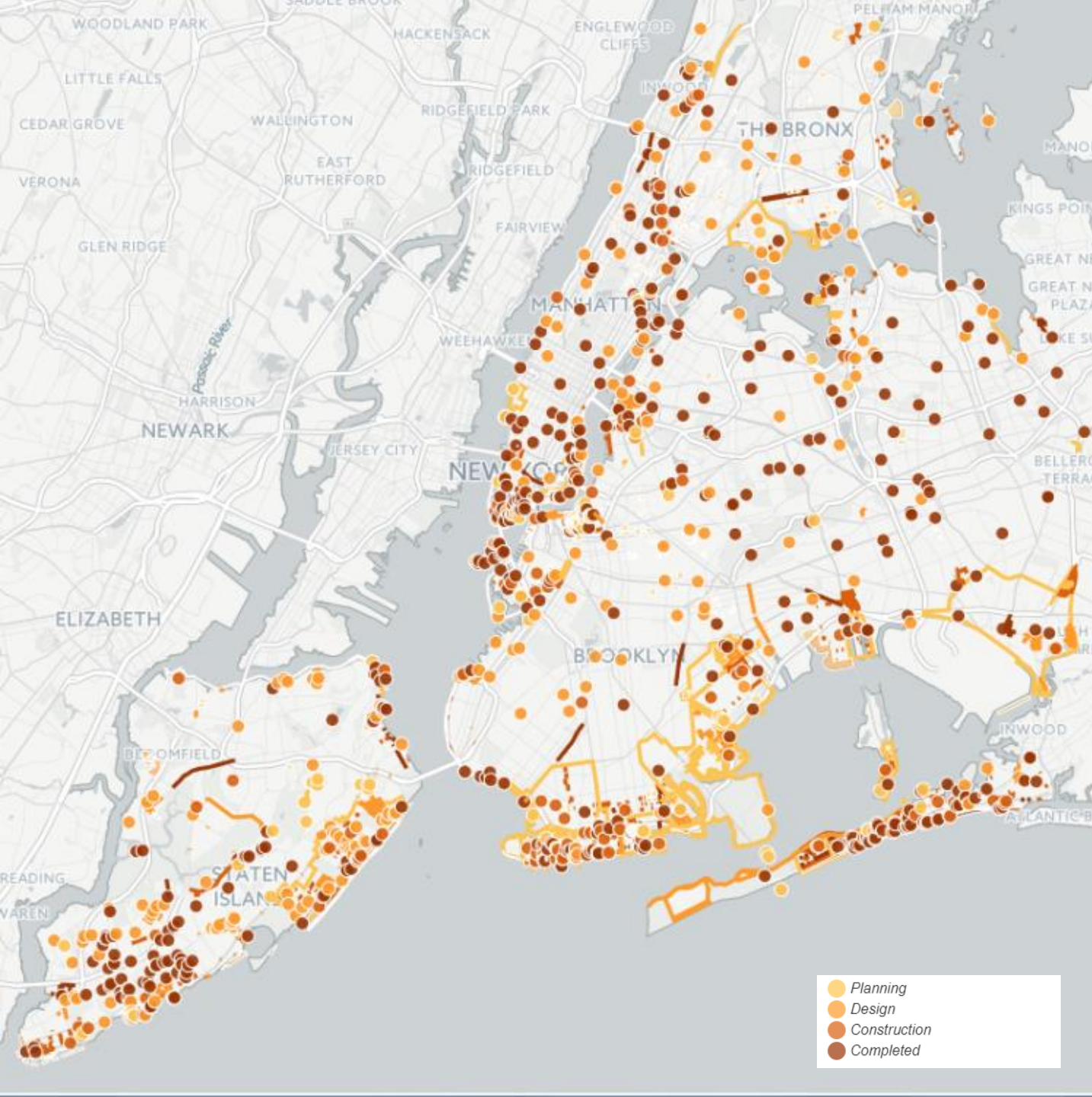
INFRASTRUCTURE SYSTEMS WILL ADAPT TO ENABLE CONTINUED SERVICES



## COASTAL DEFENSE

THE CITY'S COASTAL DEFENSES WILL BE STRENGTHENED AGAINST STORM SURGE AND SEA LEVEL RISE





# ONENYC RESILIENCY AND RECOVERY PROJECTS CITYWIDE

Investing over \$20 billion in climate change adaptation citywide

The majority of resources for resiliency implementation comes from public sources, specifically Federal funding streams





Mayor's Office of  
Recovery and Resiliency

#ONENYC

April 2018  
Version 2.0

# CLIMATE RESILIENCY DESIGN GUIDELINES

**TODAY, WE'RE FOCUSED ON  
LAUNCHING THE NEXT  
GENERATION OF RESILIENCE  
POLICY INITIATIVES**

Climate Resiliency Design Guidelines are a first-of-its-kind policy to mainstream resilient design across all capital projects