

The background of the slide is a photograph of the Federal Reserve Bank of New York building. The building is a large, classical-style structure with a facade of light-colored stone blocks. An American flag is flying from a tall pole in front of the building. In the background, other modern skyscrapers are visible against a clear sky. The lighting suggests it's daytime.

FEDERAL RESERVE BANK *of* NEW YORK

## Regional Economic Conditions & Assessing the Aftermath of Sandy

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The views expressed here are those of the presenters and do not necessarily represent the views of the Federal Reserve Bank of New York or the Federal Reserve System.

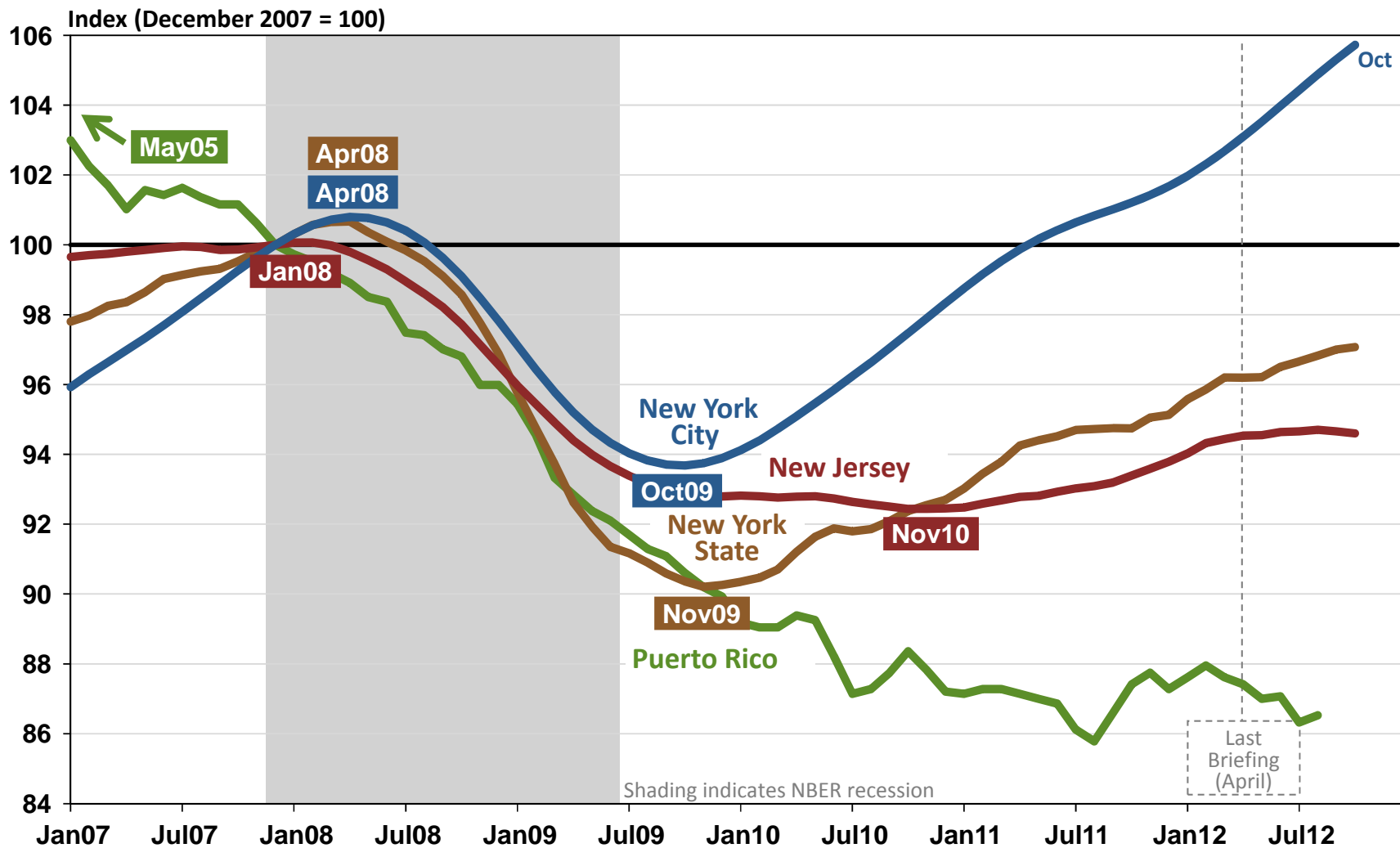
# Overview

- Overview of the regional economy before Sandy
  - New York City on a solid growth trajectory
  - New Jersey still sluggish
  - Long Island & upstate New York flat
  - Puerto Rico still bottoming out, no signs of recovery yet
- Breaking down the costs of Sandy
  - Physical damage (homes, property, infrastructure, etc.)
  - Loss of economic activity (due to power, transportation outages)
  - Welfare costs (pain & suffering, quality of life, lost leisure time, etc.)
- Bottom line
  - Short-run disruptions substantial and widespread across NYC metro region
  - Hard-hit communities, individuals, businesses face long road to recovery
  - Regional economy overall likely to bounce back quickly



# Regional Economic Activity

Index of Coincident Economic Indicators (CEI)

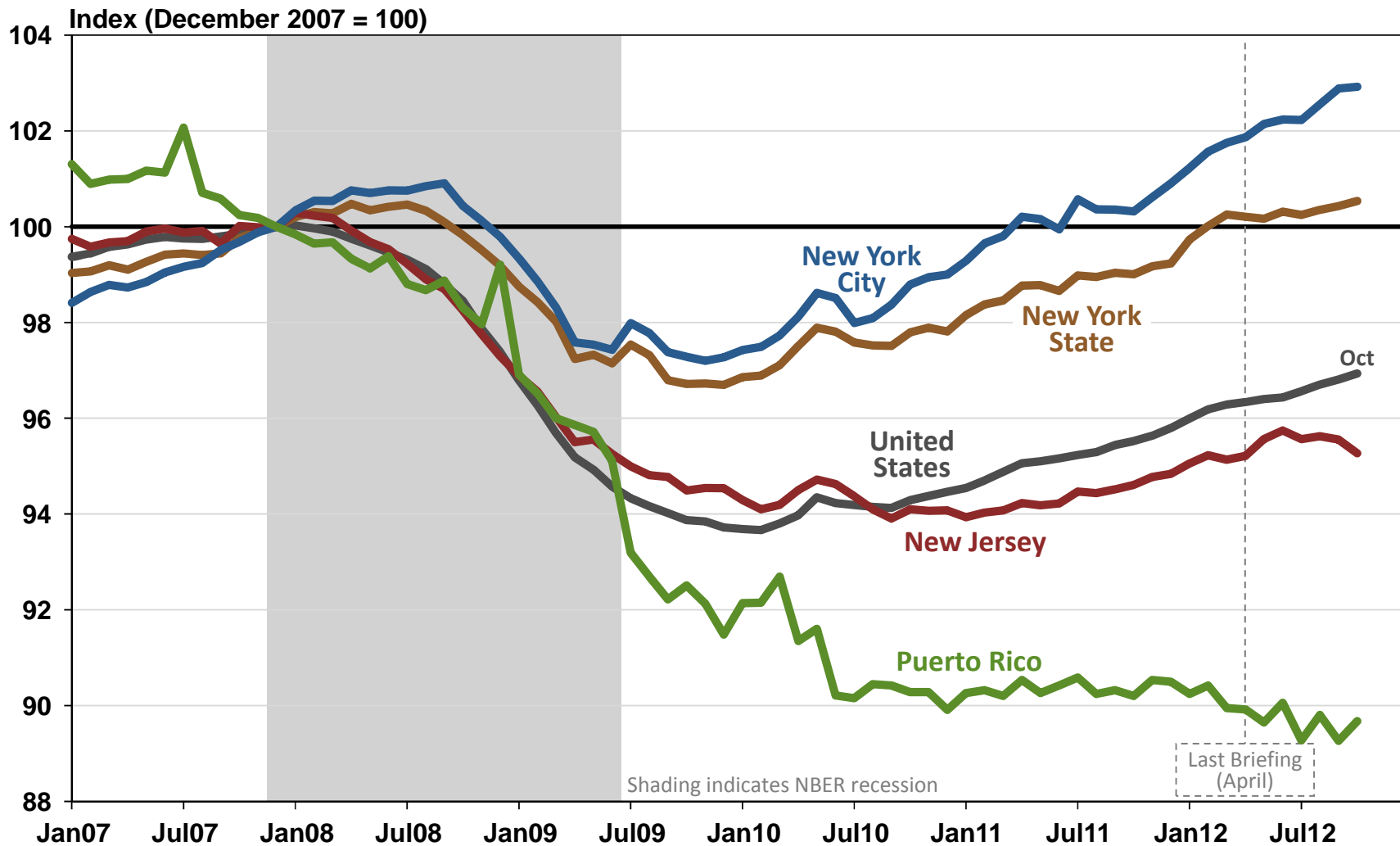


Source: Federal Reserve Bank of New York; Puerto Rico Government Development Bank.

Note: The Puerto Rico composite index is based on a different methodology than the indexes produced by the FRBNY.

# Total Employment

Seasonally Adjusted Index

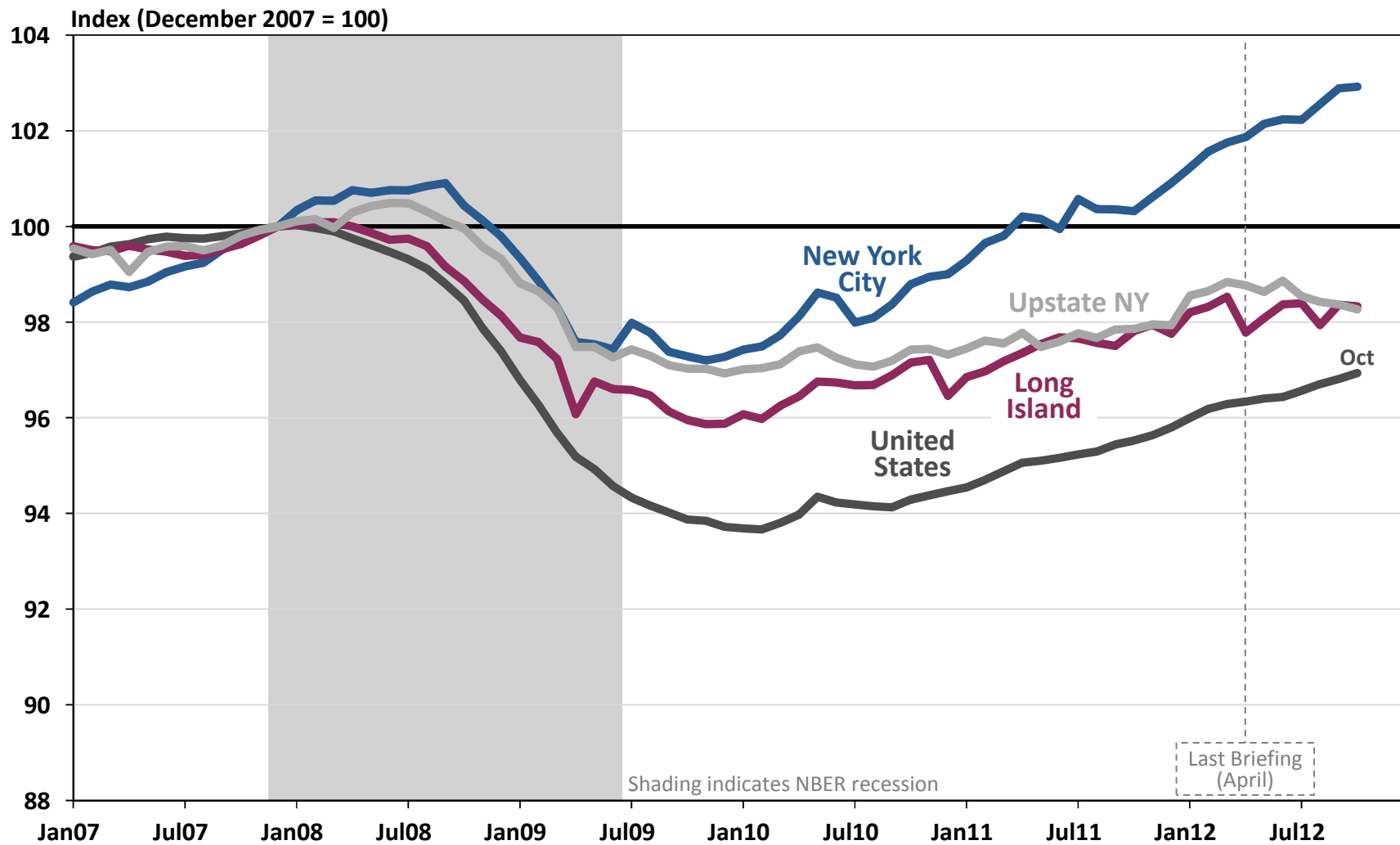


Source: Bureau of Labor Statistics and Moody's Economy.com.



# Total Employment

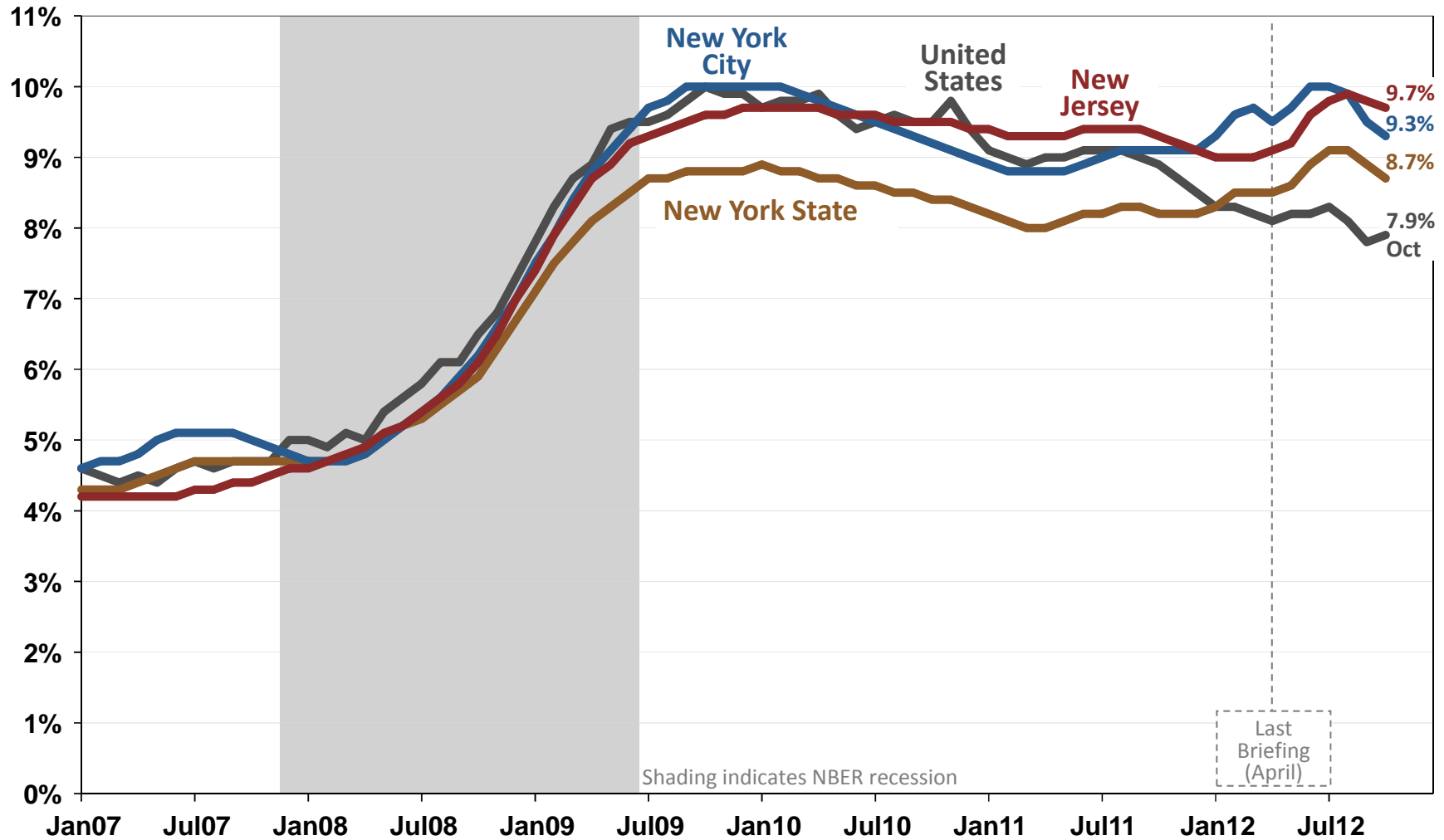
## Seasonally Adjusted Index



Source: Bureau of Labor Statistics and Moody's Economy.com.

# Regional Unemployment Rates

Seasonally Adjusted Rates



Source: Bureau of Labor Statistics and Moody's Economy.com.

# **Assessing the Aftermath of Sandy**

# Scope of Physical Damage

- Residential real estate & property:
  - Largely in flood-prone areas
  - Scattered wind-related damage across the region
- Commercial real estate & property:
  - Flooding of office buildings (NYC) and retailers along coastlines
  - Damaged or destroyed equipment (e.g., computers, vehicles)
- Infrastructure:
  - Mass Transit: subways, PATH, NJ Transit Rail, LIRR, Metro North, Amtrak
  - Power Infrastructure: power lines, transformers & other equipment
  - Other Public Infrastructure: roads, bridges, tunnels, water & sewer systems, beaches, boardwalks, airports, seaport, schools, hospitals, etc.





# Impact on Economic Activity

- Short-term effects:
  - + Pre-storm increase in activity: consumers stocking up
  - - Disruptions: transportation, power, water, schools, etc.
  - + Offsets to activity decline: postponed or shifted within region
  - + Recovery of activity: rebuilding, repair, replacement
- Each full-day equivalent of lost regional output → \$3.8 billion
  - Represents roughly 1.1% of quarterly regional GDP
  - Knocks roughly 0.4% off quarterly U.S. GDP growth (annual rate)
- Long-term effects:
  - Research suggests little long-run effect on GDP
  - However, local consequences (population and activity relocations) may be persistent



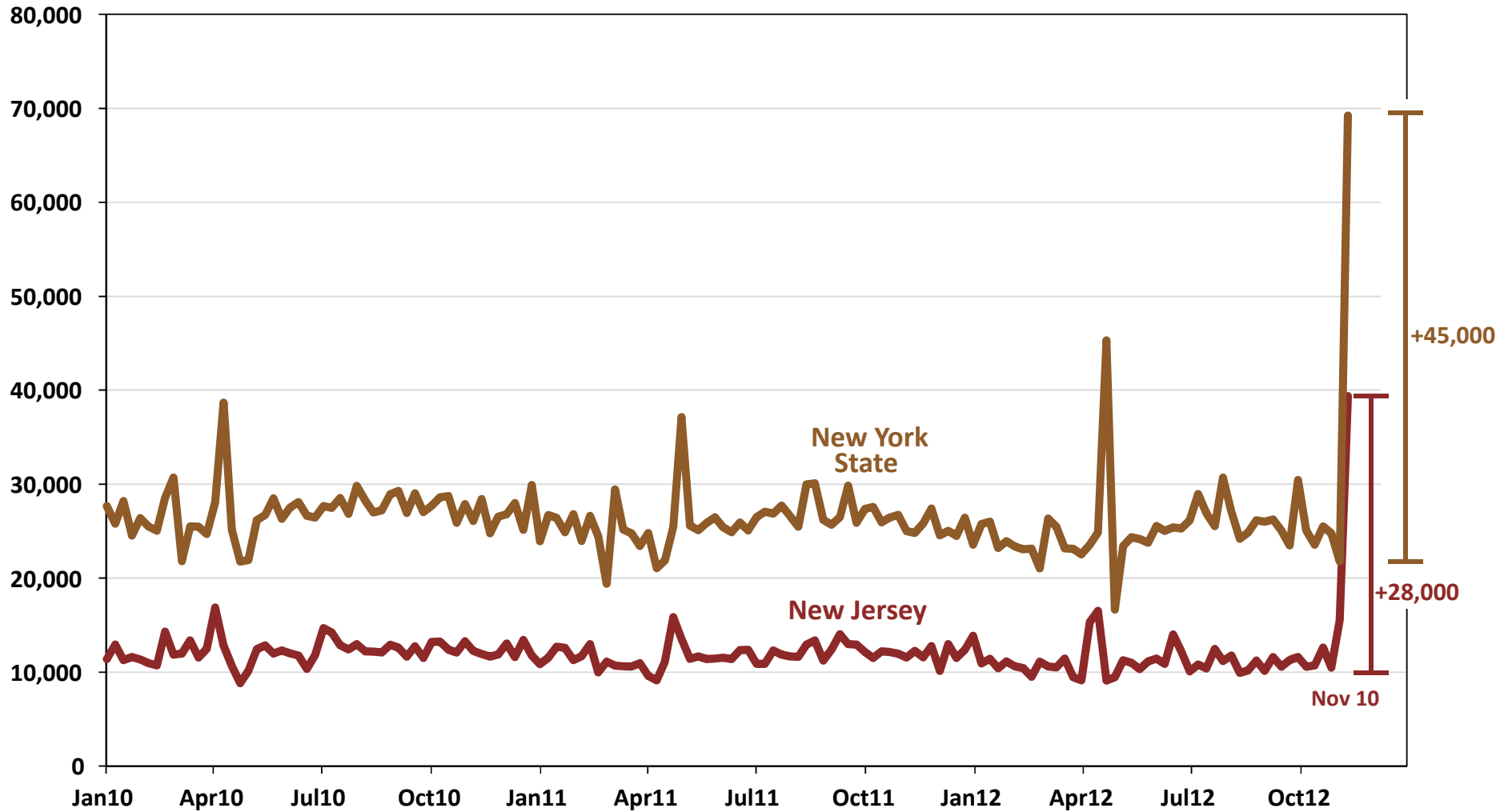
# Empire State Manufacturing Survey

- Headline index little changed in November; employment index down
  - Roughly 70% of respondent pool is in upstate NY
  - Response patterns were not much different for upstate vs. downstate firms
- Supplemental questions on Sandy: major disruptions to downstate NY firms
  - Most upstate manufacturers saw no reduction in business activity
  - Every downstate respondent reported some reduction in activity
  - Over 90% of downstate firms shut down or severely crippled for at least a day
    - 40% reported shut down or severely crippled for at least 5 days
  - Biggest contributing factors to reduced business
    - Downstate: Loss of power, loss of communications, workers unable to get in
    - Upstate: Customers affected, supply chain disruptions
- Making up for lost output is harder for service firms than for manufacturers



# Weekly Initial Jobless Claims

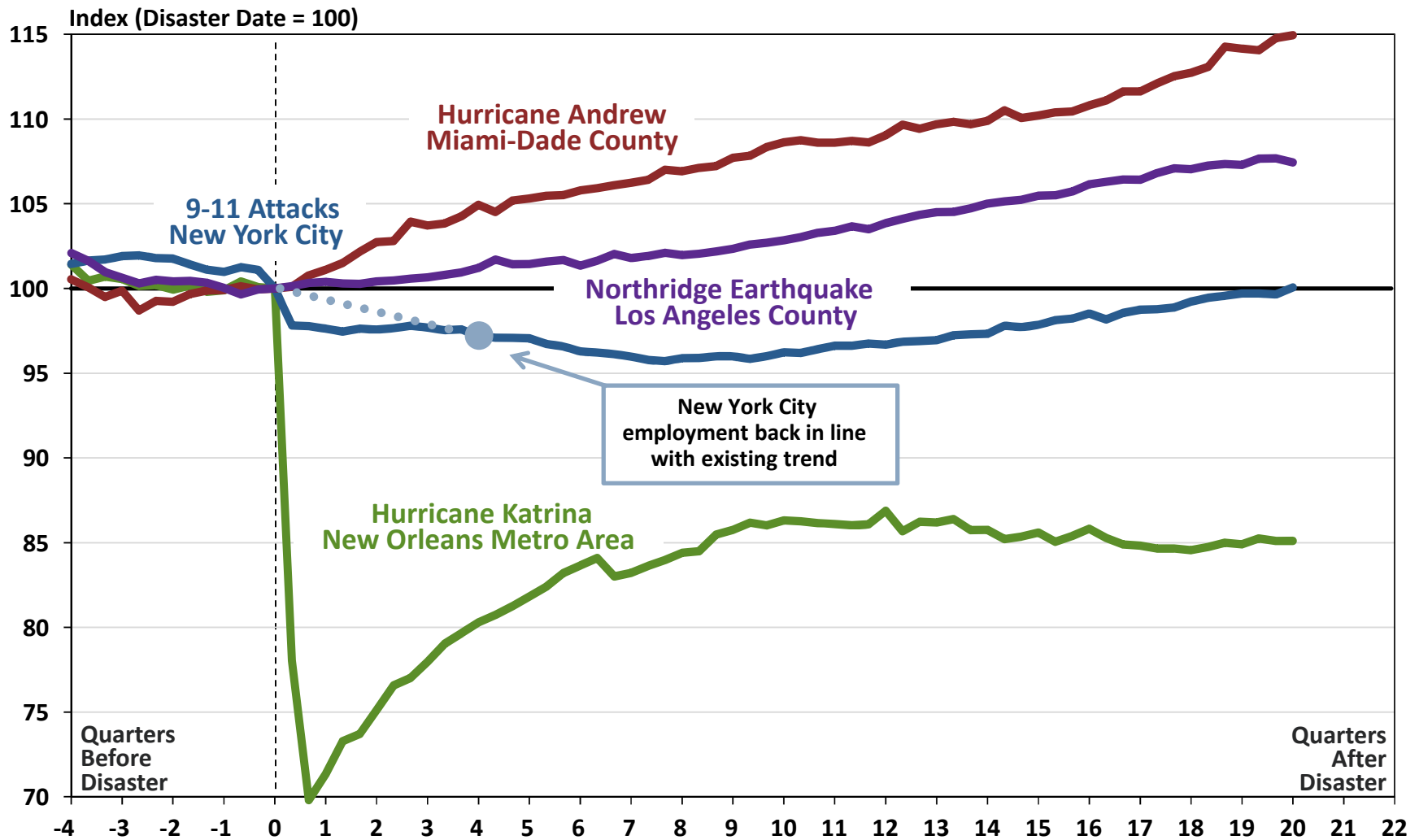
Seasonally Adjusted



Source: Bureau of Labor Statistics and Haver Analytics.

# Employment Trends

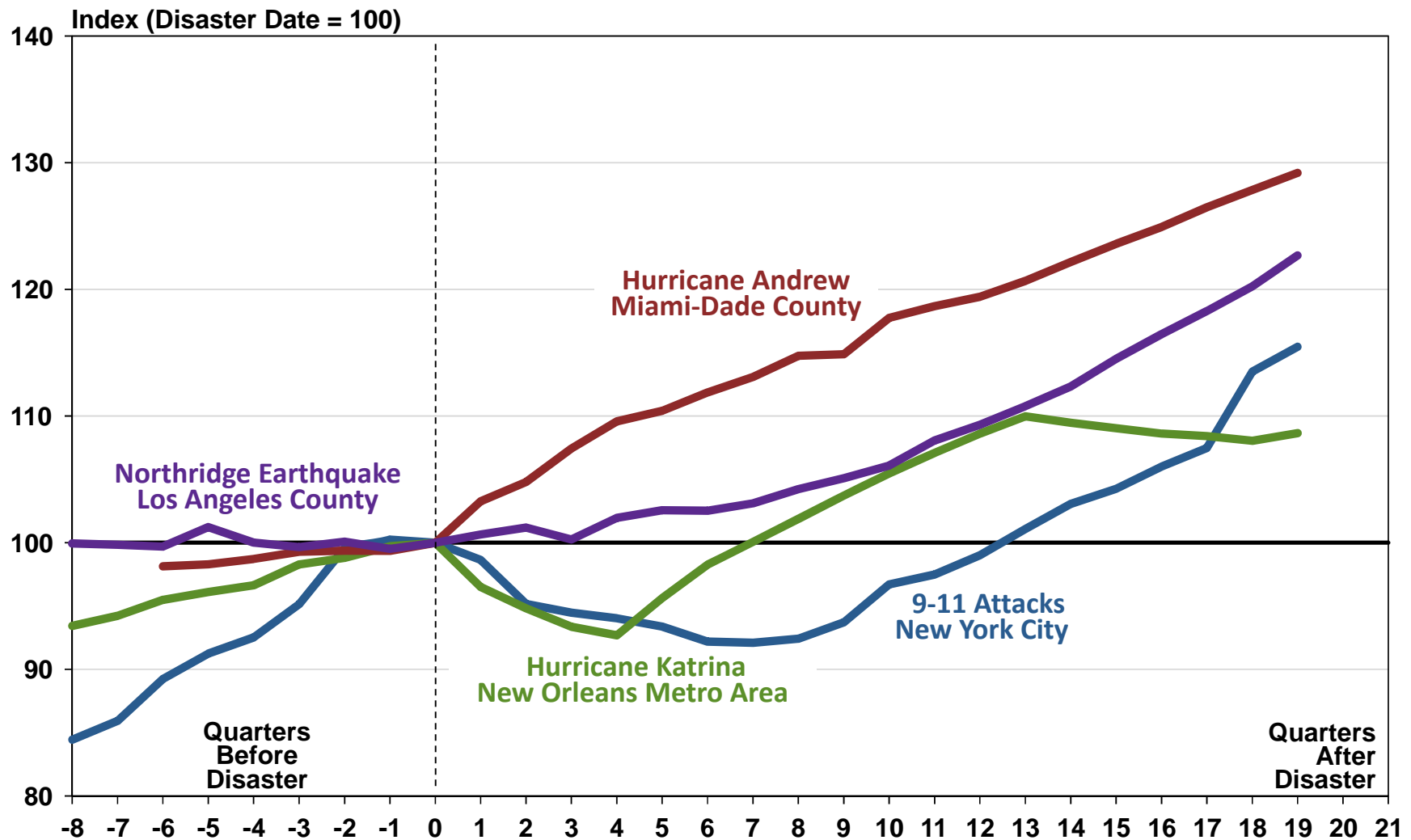
## Before and After Previous Disasters



Source: Bureau of Labor Statistics and Moody's Economy.com.

# Wage and Salary Income Trends

## Before and After Previous Disasters



Source: Bureau of Labor Statistics (QCEW) and Moody's Economy.com.

Note: Income data was smoothed using a four-quarter moving average.

# Welfare Costs

- Impact on quality of life often not included in loss estimates
- Loss of life
- Pain & suffering, quality of life, lost leisure time, etc.
  - Grief and stress associated with loss of homes, personal valuables
  - Days/weeks spent without power, heat, water
  - School children relocated to other schools
  - Additional time spent commuting, traveling
- Often difficult to quantify—total cost likely in the billions
  - Examples:
    - 3 million commuters x 10 extra hours x \$20/hour = \$600 M
    - 3 million homes without power x \$500 value to avoid power loss = \$1.5 B
    - Waiting in gas lines, inability to communicate, etc.



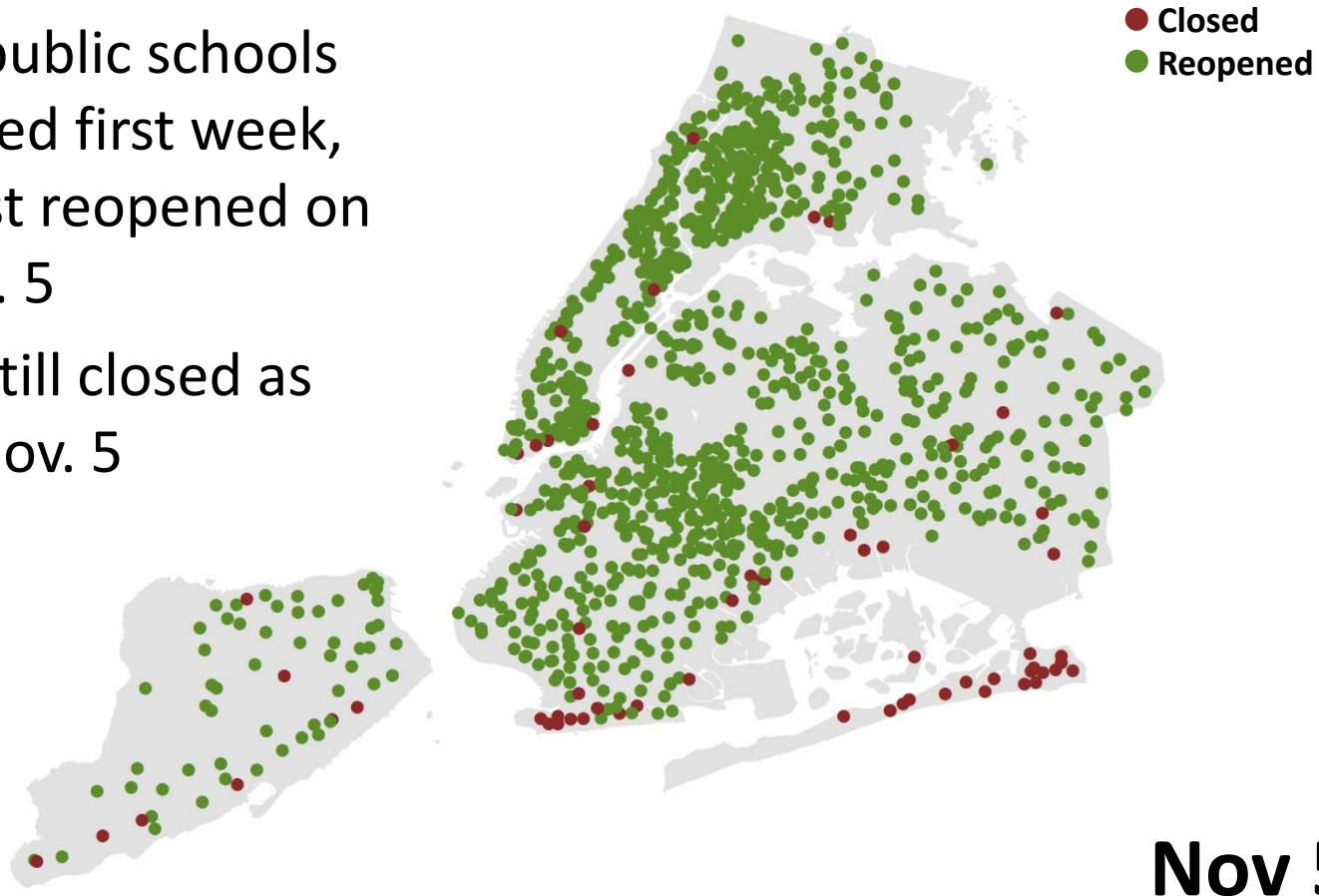


# **Impacts of Hurricane Sandy on Schools and Students**

# New York City Schools

Public School Closures: Nov. 5

- All public schools closed first week, most reopened on Nov. 5
- 87 still closed as of Nov. 5

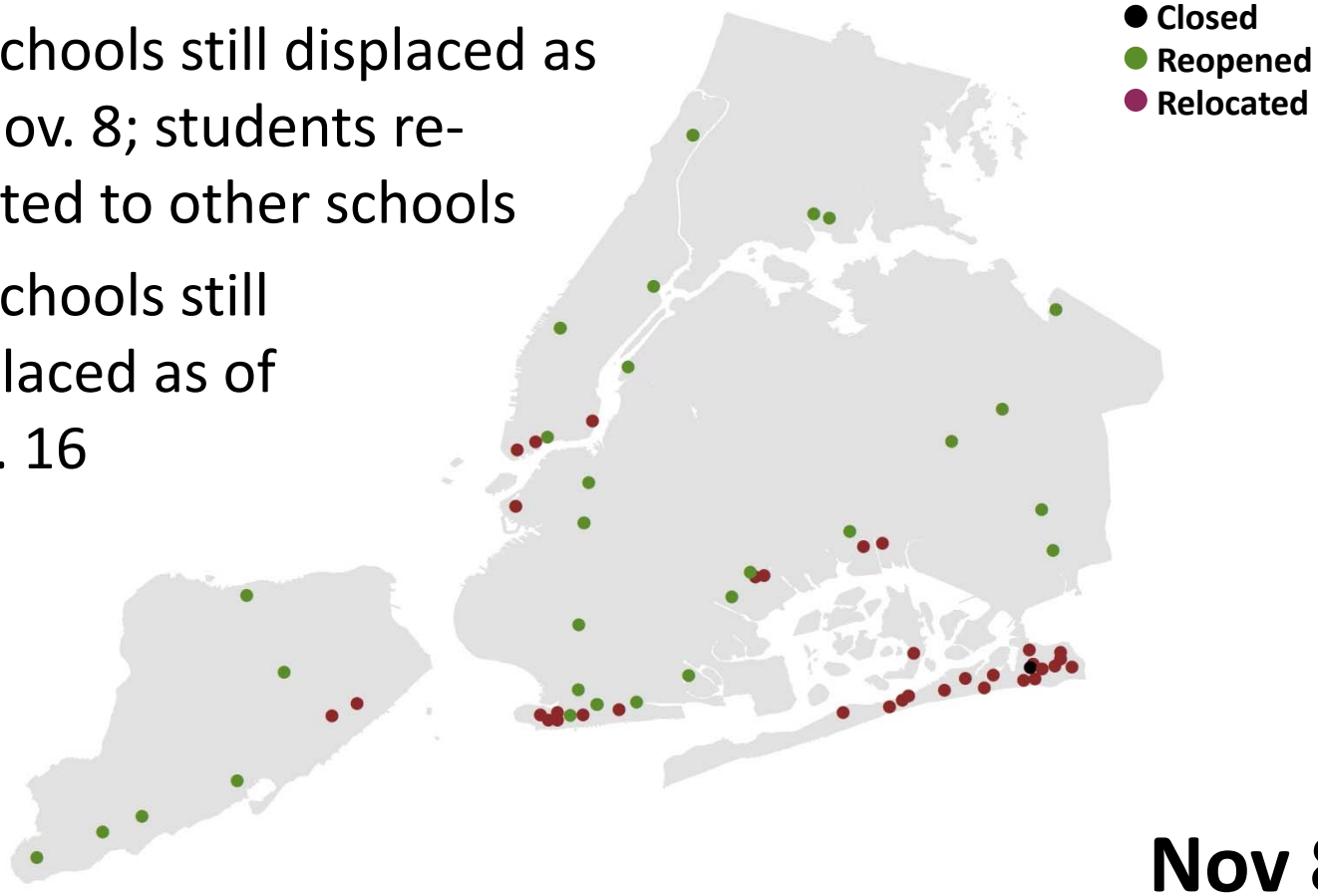


**Nov 5**

# New York City Schools

Public School Relocated and Reopened: Nov. 8

- 44 schools still displaced as of Nov. 8; students re-located to other schools
- 23 schools still displaced as of Nov. 16



# New York City Schools

Public School Attendance: Nov 8



Source: New York City Department of Education

## School Closures Outside NYC

- New Jersey: Roughly 60% of 2,400 schools still closed on November 7
  - 700 still without power on November 7
  - NJ relatively slow in coming back—18% still closed on November 9
- Long Island: Most schools closed for full week, and more than 100 schools require repairs due to Sandy damage



# Potential Educational Impacts

- Research shows loss of school days leads to adverse effects on student learning
  - Of particular importance, an agreement allows students to make up three and a half days of lost time
- Psychological effects
- Relocations of families disrupt education
- Closed schools can substantially disrupt parents' work and other schedules





# Summary

- Breaking down the costs of Sandy
  - Physical damage (homes, property, infrastructure, etc.)
  - Loss of economic activity (due to power, transportation outages)
  - Welfare costs (pain & suffering, quality of life, lost leisure time, etc.)
    - Most schools shut down for days; some for substantially longer
- Bottom line
  - Short-run disruptions substantial and widespread across tri-state region
  - Hard-hit communities, individuals, businesses face long road to recovery
  - Regional economy overall expected to be back on track by early 2013
- Looking ahead
  - It takes time, but devastated communities typically recover from disasters
  - How can we mitigate impacts of future disasters?

