

NYC'S RISK LANDSCAPE: A GUIDE TO HAZARD MITIGATION was developed by NYC Emergency Management in partnership with the NYC Department of City Planning and close collaboration with the NYC Mayor's Office of Recovery and Resiliency.

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NYC'S RISK LANDSCAPE:

A GUIDE TO HAZARD MITIGATION



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FOREWORD

Throughout its history, New York City has faced many hazards. From the fire of 1835, to the severe heat waves of 2006, to the devastation of Hurricane Sandy in 2012, our city has endured and recovered from a breadth of hazards - each time stronger, more informed about the risks it faces, and better able to prepare and protect for the future its many residents, buildings, infrastructure networks, and natural resources.

New York City's Risk Landscape: A Guide to Hazard Mitigation builds on that tradition to rebound, and opens a new chapter in the City's efforts to increase public awareness about the risks from a range of hazards that the City faces today and in the future.

Prepared by the New York City Emergency Management Department*, in partnership with Department of City Planning, and in close coordination with the Mayor's Office of Recovery and Resiliency, this Guide serves as a hazards risk reduction resource that:

- Outlines key features of the city's vulnerability to risk
- Assesses a wide-range of hazards, including: flooding, earthquakes, water shortages, strong windstorms, and pandemic flu
- Presents strategies for managing risks from those hazards

The *2014 Hazard Mitigation Plan*, developed in collaboration with multiple government agencies, organizations, and subject matter experts, serves as the foundation for this Guide. However, this Guide updates that information by providing the best available data on hazards in a user-friendly format to enhance public awareness about the risks that the city faces.

This Guide complements other critical efforts by the City to manage its risks, most prominently: *A Stronger, More Resilient New York*, a detailed climate resiliency action plan, and several of its recommended actions, including *Retrofitting for Flood Risk*, a comprehensive guide to retrofitting the city's most vulnerable existing buildings, and the *Resilient Neighborhoods* initiative that supports locally specific strategies, such as land use changes and infrastructure investments, for long-term community resiliency.

New York City will never be free from risk. However, by promoting awareness of hazards and encouraging New Yorkers to be better informed and prepared, we can create a safer city for ourselves and for generations to come.



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• Our duty is to share with citizens knowledge that can help them better understand, prepare for, and avoid or withstand the risks that confront us.



CHAPTER 1

WHY WE WROTE THIS GUIDE AND WHAT IT OFFERS YOU

THE REASON FOR THIS GUIDE

It is our City government's priority to keep our 8.4 million residents safe, as well as our many commuters, tourists, and other daily visitors. This duty is both immediate and long term: we must be prepared to respond to emergencies today while also planning and preparing for future risks.

The City is also responsible for informing its citizens about the work we are doing on their behalf. This means notifying the public about the risks New Yorkers face, and helping residents gain insight into how our global City manages risks and continuously adapts to 21st century changes. This Guide is inspired by those commitments, and by the availability of newly updated and expanded information.

THE SOURCES OF THIS GUIDE

Our primary source is the City's *2014 Hazard Mitigation Plan*, a 551-page Federal Emergency Management Agency (FEMA) compliance document required for access to federal funding for hazard mitigation projects. The Plan, approved by FEMA and adopted by the City, must be updated every 5 years.

The 2014 Plan reflects the lessons learned from Hurricane Sandy, and it expands the scope of the preceding 2009 Plan. But because of its length and the sheer density, it is of limited practical use to busy New Yorkers who want to better understand the risks our city faces and how their government is addressing them. This Guide draws heavily from the 2014 Plan but for the sake of brevity, profiles a shorter set of hazards. It updates information. It adds information. And it is more reader friendly.

It also draws from and points to related sources produced by the City, the State, the federal government, and nongovernmental organizations, some of which are listed in "Resources" at the end of this Guide. These resources hold a tremendous store of information, analysis, and graphics. We hope you will examine them.

WHAT YOU CAN GAIN FROM THIS GUIDE

This Guide is designed to deliver the following:

- Insight into the way risk managers think about risk.
- A sense of the physical realities of the dynamic risk environment we inhabit
- A deeper understanding of specific hazards, some of which are expected to worsen with climate change
- Familiarity with a sampling of the strategies employed to manage our risks

Like the 2014 Plan, the Guide focuses on long-term hazard mitigation and not on short-term emergency response, although that subject informs it.

Hazards addressed in detail in this Guide are:

Coastal Storms
Coastal Erosion
Flooding
Strong Windstorms
Extreme Heat
Winter Weather
Water Shortage
Earthquakes
Pandemic Influenza

While the work of updating the Hazard Mitigation Plan and producing this Guide ended in 2014, the work of managing risk is ongoing, as we continue to implement strategies, assess them, learn, confer, and then adapt and strengthen strategies as need be. The 2014 Plan will be formally updated in 2019.

READERS WE WANT TO SERVE

New York City is a leader on issues related to disaster recovery, resiliency, and sustainability because our City government aggressively pursues those goals and because of the continued efforts of our community partners, researchers, policy makers, advocates, industry stakeholders, and concerned citizens. This Guide is intended for a broad cross-section of New Yorkers, and for residents of other cities who are interested in risk reduction best practices.

We welcome your suggestions for how we can make this Guide more useful to you. Please send them to:

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