

# Zoning for Coastal Flood Resiliency

## Chapter 16: Greenhouse Gas Emissions & Climate Change

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### A. INTRODUCTION

As discussed in the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, increased greenhouse gas (GHG) emissions are changing the global climate, resulting in wide-ranging effects on the environment such as sea level rise, increased temperature, and changes in precipitation levels. Although climate change is occurring on a global scale, its environmental effects are also likely to be felt locally. New York City's sustainable development policy, starting with *PlaNYC* and continued and enhanced in *OneNYC*, establishes sustainability initiatives and goals for reducing GHG emissions and adapting to climate change. The goal to reduce citywide GHG emissions to 30 percent below 2005 levels by 2030 was developed for the purpose of planning for a population increase of almost one million residents while achieving significant GHG reductions. This goal has been codified by Local Law 22 of 2008, known as the New York City Climate Protection Act (the GHG reduction goal). This goal was expanded in 2014 via the adoption of Local Law 66, which commits the City to reduce citywide GHG emissions by 80 percent by 2050.

As detailed in **Chapter 1, "Project Description,"** the New York City Department of City Planning (DCP) is proposing a zoning text amendment to update the Special Regulations Applying in Flood Hazard Areas (Article VI, Chapter 4) of the New York City Zoning Resolution (ZR), which includes the "[Flood Resilience Zoning Text](#)" (the "2013 Flood Text") and "[Special Regulations for Neighborhood Recovery](#)" (the "2015 Recovery Text"). These temporary zoning rules were adopted on an emergency basis to remove zoning barriers that were hindering the reconstruction and retrofitting of buildings affected by Hurricane Sandy and to help ensure that new construction there would be more resilient. The 2013 Flood Text provisions are set to expire with the adoption of new and final Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs), which is anticipated to occur within the next few years. Applicability of the 2015 Recovery Text expired in July 2020. Therefore, DCP is proposing a citywide zoning text amendment, "[Zoning for Coastal Flood Resiliency](#)" (the "Proposed Action"), to improve upon and make permanent the relevant provisions of the existing temporary zoning rules of the 2013 Flood Text and 2015 Recovery Text. In addition, the Proposed Action includes special provisions to help facilitate the city's long-term recovery from the COVID-19 pandemic and its associated economic effects by providing more time for existing non-conforming uses to reopen and builders to undertake certain construction projects. The Proposed Action also includes updates to other sections of the ZR, including the Special Regulations Applying in the Waterfront Area (Article VI, Chapter 2) and provisions within various Special Purpose Districts. The Proposed Action would mostly affect New York City's current 1% annual and 0.2% annual chance floodplains. However, select provisions of the Proposed Action would be applicable citywide. To help the City prepare for or respond to other disasters, select provisions in the Proposed Action regarding power systems and other mechanical equipment, ramps and lifts, vulnerable populations, and disaster recovery rules, would be applicable citywide.

Due to the broad applicability of the Proposed Action, it is difficult to predict the sites where development would be facilitated. In addition, the Proposed Action is not in-and-of-itself expected to induce development where it would not otherwise have occurred absent the Proposed Action. Although the Proposed Action may allow developments and existing buildings to retrofit to resilient standards, the overall amount, type, and location of construction within the affected area is not anticipated to change. Owing to the generic nature of this action, there are no known or projected as-of-right development sites identified as part of the Proposed Action's Reasonable Worst-Case Development Scenario (RWCDs). To produce a reasonable

analysis of the likely effects of the Proposed Action, 14 representative Prototypical Analysis Sites containing either new developments, infill, reconstructions, or retrofits of existing buildings in the city's 1% and 0.2% annual chance floodplains were identified to demonstrate the wide range of proposed regulations for sites that would be able to develop as-of-right in the future with the Proposed Action, as detailed further in **Chapter 1**.

## **B. PRINCIPAL CONCLUSIONS**

The Proposed Action would not result in significant adverse impacts related to GHG emissions or climate change, but rather, is expected to promote climate change resiliency in the City. A screening analysis for GHG emissions and climate change was conducted for the Proposed Action by comparing the development of Prototypical Analysis Sites in the No-Action and With-Action scenarios. The Proposed Action would not involve other energy-intensive projects or result in incremental development greater than 350,000 square feet (sf) on any of the Prototypical Analysis Sites.

In fact, the Proposed Action would promote sustainability and resiliency in the city's floodplains. As detailed in **Chapter 1, "Project Description,"** the Proposed Action would provide homeowners, business owners, and practitioners living and working in the City's floodplain the option to design or otherwise retrofit buildings to: (a) reduce damage from future flood events, (b) be resilient in the long-term by accounting for climate change, and (c) potentially save on long-term flood insurance costs. In addition, it would allow resiliency improvements to be more easily incorporated on waterfront sites at the water's edge and in public spaces, as well as provide zoning regulations to help facilitate the city's long-term recovery from the COVID-19 pandemic and other future disasters. Overall, implementation of the Proposed Action would improve the ability of the city to withstand and recover quickly from future storms or other disaster events.

## **C. PRELIMINARY SCREENING**

As mentioned above, the City established sustainability initiatives and goals for reducing GHG emissions and adapting to climate change in the city. In general, GHG emissions assessments are conducted only for energy-intensive and other larger actions where GHG emissions that may be significantly inconsistent with the City's GHG reduction goal could be produced. More specifically, a GHG consistency assessment is typically warranted for City capital projects subject to environmental review, or projects that propose either power generation (not including emergency backup power, renewable power, or small-scale cogeneration) or regulations and other actions that fundamentally alter the City's solid waste management system by changing solid waste transport mode, distances, or disposal technologies. In addition, a GHG assessment is warranted for actions that would result in the development of 350,000 sf or more.

As noted earlier, the Proposed Action is not expected to induce growth and would not facilitate incremental development greater than 350,000 sf on a single Prototypical Analysis Site. The Proposed Action is also not expected to induce growth and would not facilitate cumulative new development greater than 350,000 sf. In addition, the Prototypical Analysis Sites do not include energy-intensive uses or power generation. Therefore, a GHG consistency assessment is not warranted for the Proposed Action. The Proposed Action would not be inconsistent with the City's emissions reduction goals or fundamentally change the City's solid waste management system (refer to **Chapter 12, "Solid Waste & Sanitation Services"**). Furthermore, as described in **Chapter 13, "Energy,"** the Proposed Action would not result in significant adverse impacts on the generation or transmission of energy.

## Resilience of the Proposed Action to Climate Change

Standards for analysis of the effects of climate change are still being developed and have not yet been defined in CEQR. However, climate change and sea level rise are addressed in the City's Waterfront Revitalization Program (WRP). The WRP requires consideration of climate change and sea-level rise in the planning and design of development within the defined Coastal Zone Boundary. As detailed in the 2012~~04~~<sup>04</sup> *CEQR Technical Manual*, the provisions of the WRP are applied by DCP and other City agencies when conducting environmental review. The Proposed Action will promote various actions in New York City coastal areas including; supporting commercial and residential redevelopment in appropriate areas; supporting water-dependent and industrial uses, minimizing loss of life, structures, infrastructure, and natural resources caused by flooding and erosion and increase resilience of future conditions created by climate change, and protect scenic resources that contribute to the visual quality of the New York City coastal area.

Additionally, as detailed in **Chapter 1, "Project Description,"** the Proposed Action would promote sustainability and resiliency in the city's floodplain by providing homeowners, business owners, and practitioners living and working in the floodplain the option to design or otherwise retrofit buildings. This would help to (a) reduce damage from future flood events, (b) be resilient in the long-term by accounting for climate change, and (c) potentially save on long-term flood insurance costs. In addition, it would allow resiliency improvements to be more easily incorporated on waterfront sites at the water's edge and in public spaces, as well as provide zoning regulations to help facilitate the city's long-term recovery from the COVID-19 pandemic and other future disasters. Overall, implementation of the Proposed Action would improve the ability of the city to withstand and recover quickly from future storms or other disaster events.

## D. CONCLUSIONS

The Proposed Action would not result in significant adverse impacts related to GHG emissions or climate change, but rather, is expected to promote climate change resiliency in the city. The Proposed Action would not involve other energy-intense projects or result in incremental development greater than 350,000 sf on any of the Prototypical Analysis Sites. Additionally, the Proposed Action would promote sustainability and resiliency in the city's floodplains, providing homeowners, business owners, and practitioners living and working in the city's floodplain the option to design or otherwise retrofit buildings in order to adequately prepare for future storms.