A more resilient New York City

A more resilient NYC is one where neighborhoods, buildings and infrastructure can withstand and recover quickly from flooding and climate events.

This requires **multiple lines of defense:**
- infrastructure hardening where feasible,
- emergency preparedness, and
- **utilizing building code and zoning** as tools so buildings are protected from future flooding due to sea level rise.
Flood resilience zoning (DCP)

**Flood Text (2013)** initial, temporary regulations building off EO 230

**SRNR (2015)** provides additional zoning relief to expedite recovery

**Flood Text II (2018)** to be updated and made permanent

---

Executive Order 230 (2012) mayoral override of zoning

PFIRM + Freeboard (2012) DOB requires most restrictive map; additional elevation

SIRR Report (2013) long-term, citywide resiliency framework

Build it Back (2015) lessons learned in rebuilding effort inform zoning changes

One New York (2015) moves from recovery to future resiliency

Neighborhood Studies (2014-17) will inform the text and local rezonings

---

One New York (2015) moves from recovery to future resiliency
Flood resilience zoning (DCP)

**Flood Text (2013)** initial, temporary regulations building off EO 230

**SRNR (2015)** provides additional zoning relief to expedite recovery

**Flood Text II (2018)** to be updated and made permanent

**Flood Resilience Text Amendment II 2018**

**Executive Order 230 (2012)** mayoral override of zoning

**PFIRM + Freeboard (2012)** DOB requires most restrictive map; additional elevation

**SIRR Report (2013)** long-term, citywide resiliency framework

**Build it Back (2015)** lessons learned in rebuilding effort inform zoning changes

**One New York (2015)** moves from recovery to future resiliency

**Neighborhood Studies (2014-17)** will inform the text and local rezonings

**Flood Resilience Text Amendment (2013)**

**SRNR (2015)** provides additional zoning relief to expedite recovery

**Build it Back (2015)** lessons learned in rebuilding effort inform zoning changes

**One New York (2015)** moves from recovery to future resiliency

**Neighborhood Studies (2014-17)** will inform the text and local rezonings
Resilient Neighborhoods Initiative

Reduce flood risks
Develop zoning strategies and other tools to advance short-term, cost-effective investments that can make New York City’s building stock more resilient to severe storms and better protect our coastline.

Plan for adaptation over time
Climate change will increase coastal risks over time, including more tidal flooding in some areas. It is important to take measures to reduce the long-term vulnerabilities that neighborhoods will face over time.

Ensure neighborhoods are both resilient and vibrant
Encourage high-quality development that is both resilient and respects each neighborhood’s built environment, such as by limiting building height and improving public space.
Timeline

- **Spring 2013 – Winter 2014** Canarsie New York Rising Program
- **June 2014** Canarsie Resilient Neighborhoods Initiative Kickoff at CB18
- **Fall 2014 – Spring 2015** Community Advisory Committee Meetings
- **June 2016** Fresh Creek Civic Association
- **November 2016** Councilmember Maisel Briefing
- **March 2017** Canarsie Climate Forum
- **April 2017** Brooklyn Borough Board
FEMA is working in revising the New York City flood maps with more precise flood risk data for current conditions, in addition to creating a new map product for future conditions that account for climate change.
Canarsie’s Building Types

easier to retrofit

harder to retrofit
Canarsie’s Retail Corridors
Resiliency Challenges in Canarsie

- Dense residential area of over 83,000 residents and 17,900 residential units
- 80% of units are in attached or semi-detached buildings
- 86% of homeowners have mortgages
- Many homes in Canarsie have **critical systems such as heaters in cellars and basements that are below the DFE and subject to flooding**
- Some homeowners have converted garages and storage spaces to residential areas such as dens or separate residential units
What We’ve Learned

Based on our work in Canarsie, and other floodplain communities, we’ve learned:

1. **Height**
   - Homeowners may face the loss of subgrade spaces when retrofitting.

2. **Height**
   - Properties owners may want to address future risk by over-elevating.

3. **Ground Floors**
   - Current incentives to keep active ground floors may not be enough.

4. **Homes in M Districts**
   - Existing homes in M. Districts, if damaged, may not be able to rebuild.

5. **Old Homes in Small Lots**
   - Old bungalow homes on small lots may need more flexibility to rebuild in the future.
Attached/Semi-detached Housing
Identify citywide zoning modifications that make it easier to undergo retrofitting and replace ground flood uses in vertical additions.

Detached Housing
Identify citywide zoning modifications that make it easier for detached homes to elevate to a height that allow for use of ground floor for parking and storage.

Retail Corridors
Canarsie’s retail corridors are not in the floodplain. Strategies should be pursued to strengthen existing and future businesses.

Potential for Coastal Protection
Canarsie is surrounded by city and federally owned parkland which could be leveraged to create coastal protection against serious flooding events.
Zoning Strategies

Flood Text II

1. Make the provisions of the current, temporary 2013 Flood Text permanent

2. Fix and improve provisions based on lessons learned from Resilient Neighborhood Studies and other areas in the floodplain

3. Begin to promote new development + proactive retrofitting to high resiliency standards
As part of this outreach process, DCP will:

- **Partner with stakeholders** to educate and promote awareness of flood risk and resiliency issues
- **Explain how zoning tools** relate to resiliency
- **Explore unique neighborhood issues** through in-depth public presentations and workshops
- Develop a proposal through an **iterative process** that is shaped by feedback

* Schedule is tentative and subject to change*
Key Findings/Next Steps

- Many neighborhoods including Canarsie will be especially hard hit when risk increases and rates move toward actuarial rates. Rates could reach up to $4000 a year.

- City is advocating that FEMA explore more cost-effective retrofitting strategies.
Next Steps

- Report release in late April/early May
- 2017-2018 outreach on Flood Text II
- Proposed zoning modifications will be part of Flood Text II
Flood Insurance and Retrofitting Resources

Flood risk information and address lookup
floodhelpny.org
Free Home Resiliency Audit Program (includes professional engineering audit, elevation certificate, and personalized home resiliency plan)
floodhelpny.org/en/rtapp_landing

For more information and updates visit our website:
www.nyc.gov/resilientneighborhoods

or email us:
ResilientNeighborhhoods@planning.nyc.gov