

# One New York

## The Plan for a Strong and Just City

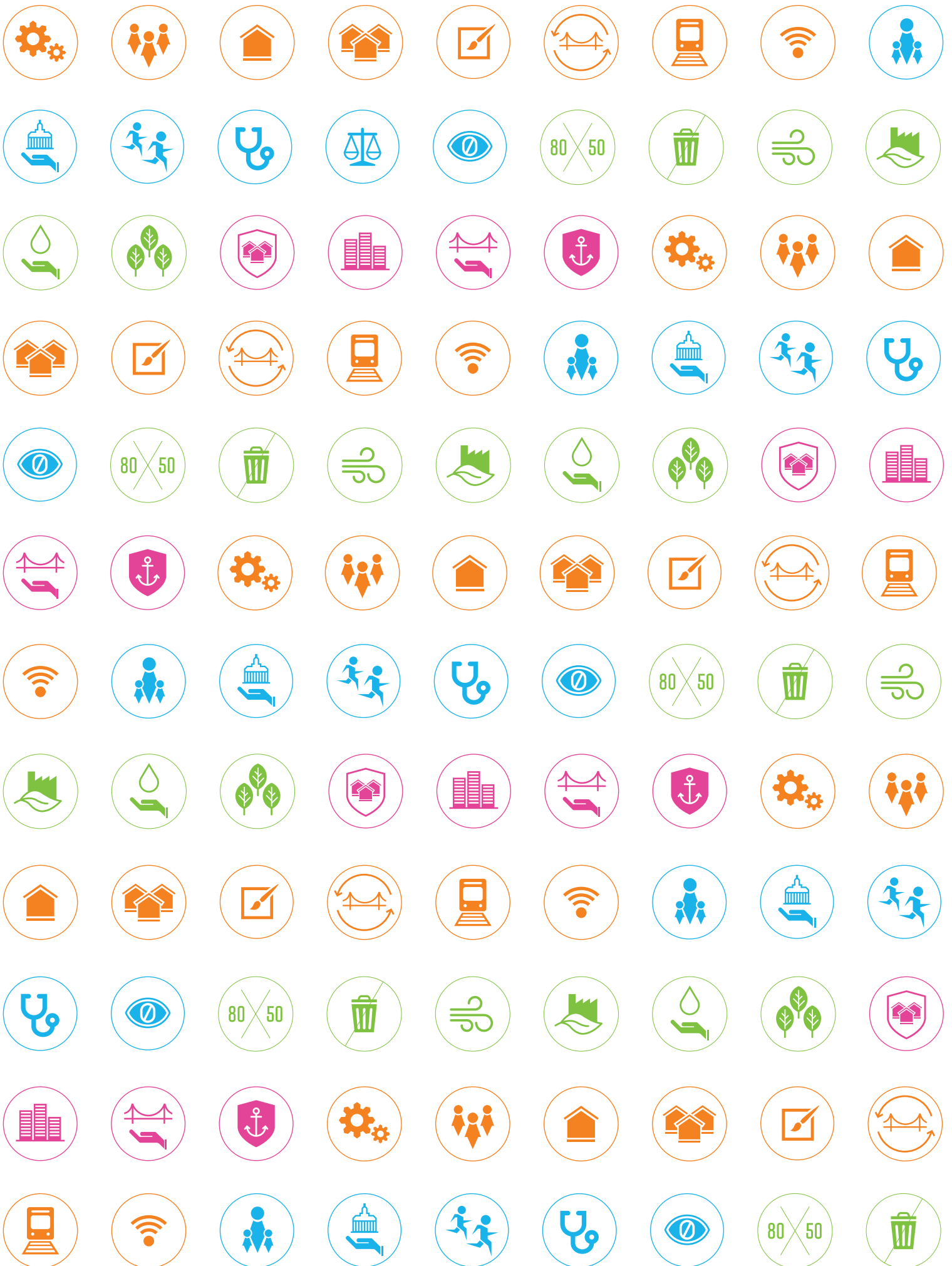


**The City of New York**  
**Mayor Bill de Blasio**

**Anthony Shorris**  
**First Deputy Mayor**

**NYC**







# Table of Contents

**Letter from the Mayor** 2

**Executive Summary** 4

**Introduction and Evolution** 8

**New York City: Today and Tomorrow** 22

**Vision 1: Our Growing, Thriving City** 44

- 50 Industry Expansion & Cultivation
- 58 Workforce Development
- 66 Housing
- 74 Thriving Neighborhoods
- 78 Culture
- 84 Transportation
- 100 Infrastructure Planning & Management
- 108 Broadband

**Vision 2: Our Just and Equitable City** 112

- 120 Early Childhood
- 126 Integrated Government & Social Services
- 132 Healthy Neighborhoods, Active Living
- 142 Healthcare Access
- 150 Criminal Justice Reform
- 156 Vision Zero

**Vision 3: Our Sustainable City** 160

- 166 80 x 50
- 176 Zero Waste
- 188 Air Quality
- 194 Brownfields
- 200 Water Management
- 206 Parks & Natural Resources

**Vision 4: Our Resilient City** 214

- 222 Neighborhoods
- 230 Buildings
- 236 Infrastructure
- 244 Coastal Defense

**Diverse and Inclusive Government** 252

**Appendix** 262

- 262 2011 Sustainability Initiatives
- 298 2013 Resiliency Initiatives
- 326 References
- 329 Glossary
- 331 Acknowledgments



# Letter from the Mayor



Friends,

For generations, New York City has been the place where people from across the globe have come to realize their dreams. However, today, rising inequality makes it difficult for so many New Yorkers to live here and raise their families with dignity.

With the launch of One New York: The Plan for a Strong and Just City, we build on New York City’s global leadership when it comes to growth, sustainability, and resiliency—and embrace equity as central to that work.

We know the challenges facing New York City as we approach the start of our fifth century. OneNYC sets out what we need to do to make our city stronger, our people better prepared for jobs in the 21<sup>st</sup> century economy, our government more responsive, and our communities able to withstand the existential threat posed by climate change.

It is a blueprint of the New York City we want our children to inherit. The actions we take now will ensure we have a dynamic, inclusive economy, a healthier environment, more affordable housing, and more reliable and resilient infrastructure. With this work, we will be prepared for the shocks and stresses ahead, and have the ability to bounce back stronger.

OneNYC is ambitious, setting clear and aggressive goals. Our initiatives address every aspect of life in New York City—how we live, work, learn, and play, raise our children, and enjoy all our city has to offer. Achieving these goals requires nothing less than bold, innovative solutions.

We will meet the challenges we face today and in the future—as New Yorkers have always done—and inspire other cities around the world to do the same.

We are committed to building a stronger, sustainable, resilient, and equitable city—OneNYC.

A handwritten signature in black ink that reads "Bill de Blasio".

Mayor Bill de Blasio



# Executive Summary

Ten years from now, New York City will enter its fifth century.

As we look ahead, we are asking critical questions about New York: what do we want our city to be in ten years, twenty years, and beyond? What kind of city do we want to pass on to our children—and to the generations to come?

This plan is our roadmap that will preserve and enhance New York City’s role as a leading global city. As with past iterations of this report, we focus on economic growth, sustainability, and resiliency. But we also seek to address issues of equity for our residents—because we must serve all New Yorkers.

The bold initiatives we launch in OneNYC will speak to these challenges and articulate the goals and long-term agenda of the de Blasio Administration. They build on previous sustainability plans, as well as on the initiatives we have announced over the past year regarding affordable housing, pre-kindergarten education, the reduction of traffic fatalities, the fight against climate change, bolstering our coastal communities, reducing greenhouse gas emissions, and economic development.

The plan lays down clear markers we will fight for, and sets out a comprehensive blueprint to prepare New York City for the future. We envision a dynamic, thriving economy, a city that is a responsible steward of the environment, and that is resilient against shocks both natural and man-made. We have made equity an explicit guiding principle—a lens through which we view all of our planning, policymaking, and governing. Equity means we ensure that every New Yorker has equal access to opportunities to reach his or her full potential and to succeed.

## Our Vision for New York City

We have organized our vision for New York City’s fifth century around principles of growth, equity, sustainability, and resiliency.

### Our Growing, Thriving City

**New York City will continue to be the world’s most dynamic urban economy where families, businesses, and neighborhoods thrive.**

To meet the needs of a growing population at a time of rising housing costs, the City will implement the nation’s most ambitious program for the creation and preservation of affordable housing. The City will support a first-class, 21<sup>st</sup> century commercial sector. It will foster job growth, and build an inclusive workforce by focusing investment in training in high-growth industries, as well as programs that provide skills to the hardest-to-employ. We will support the burgeoning innovation economy, create new high-speed wireless networks, and invest in transportation infrastructure. As a regional hub, we will work closely with our neighbors on issues including transportation, housing, and jobs.



**Our Just and Equitable City**

**New York City will have an inclusive, equitable economy that offers well-paying jobs and opportunity for all to live with dignity and security.**

With the measures in OneNYC, the City will lift 800,000 New Yorkers out of poverty or near poverty by 2025. We will do this by fighting to raise the minimum wage, and launching high-impact initiatives to support education and job growth. We will seek to reduce premature mortality by 25 percent by ensuring that all New Yorkers have access to physical and mental healthcare services and addressing hazards in our homes. We will expand Family Justice Centers to help victims of domestic violence. We will promote the citywide integration of government services, information, and community data.

**Our Sustainable City**

**New York City will be the most sustainable big city in the world and a global leader in the fight against climate change.**

We will strive to minimize our environmental footprint, reduce dangerous greenhouse gas emissions, and have the cleanest air and water. The City is building on its goal to reduce greenhouse gases by 80 percent by 2050 (80 x 50)—the largest city in the world to make that commitment—by expanding from an initial focus on buildings to including energy supply, transportation, and solid waste as part of a comprehensive action plan to reach our goal. We are committing to a goal of Zero Waste to landfills by 2030. We will keep organics out of the landfill, which will also cut greenhouse gas emissions. The City will make major investments to remediate contaminated land, and ensure that underserved New Yorkers have more access to parks.

**Our Resilient City**

**Our neighborhoods, economy, and public services are ready to withstand and emerge stronger from the impacts of climate change and other 21<sup>st</sup> century threats.**

As a resilient city, New York will be able to respond to adverse events like Hurricane Sandy, deliver basic functions and services to all residents, and emerge stronger as a community—with the goal of eliminating long-term displacement from homes and jobs after shock events by 2050. The City will upgrade private and public buildings to be more energy efficient and resilient to the impacts of climate change; adapt infrastructure like transportation, telecommunications, water, and energy to withstand severe weather events; and strengthen our coastal defenses against flooding and sea level rise. We will strengthen homes, businesses, community-based organizations, and public services to reduce the impacts of disruptive events and promote faster recovery.

**New Challenges**

The challenges of our fifth century will be as profound as those we’ve seen in the past. Despite widespread prosperity, living costs and income inequality in New York City are rising. Poverty and homelessness remain high. The city’s core infrastructure—our roads, subways, sewers, and bridges—is aging. Affordable housing is in short supply. Our air and water have never been cleaner, but our parks and public spaces don’t always serve the needs of all New Yorkers. And, without action, climate change is an existential threat to our future.

OneNYC is based on ideas coming from thousands of New Yorkers. We asked civic, community, and business leaders what they thought we should be doing. We heard from everyday New Yorkers—at town hall meetings and online, in polls and surveys—who told us about what works and what could be better in their lives, and what they imagine for New York’s future. We worked with over 70 City agencies and offices and many regional partners. As we implement this plan, we will continue to engage with New Yorkers. We will seek their opinions and suggestions about how to make our city better.

We will fight for New York to retain and enhance its status as a global leader—in commerce, culture, trade, innovation, sustainability, climate resiliency, and more. We will ensure that New York will always be a place where people can realize their dreams on the world’s biggest stage, as generations have done in the past, and that everyone has the opportunity to succeed.

The initiatives we announce today in OneNYC are far-reaching, but also realistic, and will prepare New York City for the challenges we face today and in the years ahead. By focusing our efforts on growth, equity, sustainability, and resiliency, we will ensure that the city’s fifth century will be our strongest yet.



# Introduction and Evolution

## Introduction and Evolution










New York City is the place where people come to realize their dreams. It’s a city where people are determined to create a new and better life for themselves and their families. Sometimes gritty and in many ways grand, and always pulsing with a mix of symphonies, salsa, Broadway show tunes and street music, New York is both a global city—the preeminent center of commerce and culture—and one of small, vibrant neighborhoods.

Ten years from now, New York City will celebrate its 400<sup>th</sup> anniversary. OneNYC is the first step in creating a living and breathing plan for New York’s fifth century – a vision of our city as a place where New Yorkers of today and tomorrow have the opportunity to thrive and succeed.

When PlaNYC was first released in 2007, the recession had not yet begun, nor had Sandy hit our shores. We are living in a different city today, and different times demand different approaches.

We now face multiple crises that threaten the very fabric of our city: climate change continues to threaten our future in a host of ways, while growing inequality gaps create other challenges. OneNYC lays out our approaches to dealing with income inequality along with our plans for managing climate change, all the while establishing the platform for yet another century of economic growth and vitality for this world capital.

### Throughout our history, we have built a better New York City together

								
<b>1625</b> New Amsterdam established	<b>1821</b> Erie Canal opened	<b>1866</b> Metropolitan Board of Health, now DOHMH, created	<b>1886</b> First settlement house founded	<b>1895</b> NY Public Library established	<b>1903</b> First IRT subway line constructed	<b>1915</b> Catskill System, including the Ashokan Reservoir and Catskill Aqueduct, completed	<b>1964</b> Verrazano-Narrows Bridge opened	<b>2014</b> One World Trade Center opened

These challenges reach beyond the five boroughs.

New York City is the engine of the region’s economy and its population center. It is at the center of the impact of climate change and the need for a responsible environmental policy. And inequality casts a shadow over the entire region, not just New York City itself. For all these reasons, we have the responsibility to fight for solutions to the challenges that we confront as a region.

OneNYC is the first step in bringing together government at every level, neighborhood organizations, and the private sector to tackle these crises.

OneNYC charts a course for a sustainable and resilient city for all its residents, and addresses the profound social, economic, and environmental issues that we face. Through OneNYC, we pledge to keep the promise of opportunity that has made our city such a remarkable place for so many generations.

OneNYC is what New Yorkers need now and for the next century. We recognize that we do not control all the levers and cannot alone eliminate poverty or greenhouse gas emissions. So we will engage the private sector, rally our people, and leverage our strength as a region, while committing the significant tools at our disposal, to meet our goals.

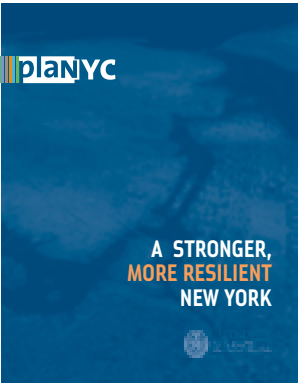
We cannot fix what is before us overnight. But we can lead the way. OneNYC is the first step.



2007



2011



2013

Meeting Past Challenges

We’ve done this before. New Yorkers have a long and proud tradition of confronting tough issues head on, with determination and heart, and having the skills to get the job done. Through it all, we have remained a city of tolerance and diversity, one that has drawn people from around the world since our origins as a Dutch settlement. Our government has a noble history of innovating urban policies that have been adopted across the country and around the world. We created the first fire districts and a Board of Health committed to eradicating cholera and other epidemics. We devised a system of reservoirs to bring water to the city and engaged creative designers to build great public parks. We created a citywide zoning ordinance that became a worldwide model. We pioneered school meals programs, settlement houses for a booming immigrant population, and social programs that became a template for the New Deal and the Great Society. Today, we are leading the way in curbing greenhouse gas emissions and preparing for climate change.

PlaNYC 2007-2013

In 2007, Mayor Michael R. Bloomberg released the first PlaNYC, which focused on responsibly meeting the city’s growing population and infrastructure needs. Titled A Greener, Greater New York, it included the City’s initial sustainability strategy, and became the model for other large global cities. PlaNYC outlined measures to address the city’s aging infrastructure, support parks, improve the quality of life and health for New Yorkers, and for the first time ever, commit to a goal for reducing greenhouse gas emissions. PlaNYC 2011 expanded on these initiatives by strengthening the City’s commitment to environmental stability and livable neighborhoods, launching brownfield cleanups, and improving the quality of our air and water.

In 2013, after Hurricane Sandy, the City released PlaNYC: A Stronger, More Resilient New York, which documented the lessons learned from Sandy, developed a strategy for the city to build back, and developed recommendations to adapt the city to the projected impacts of climate change, including rising sea levels and extreme weather events.

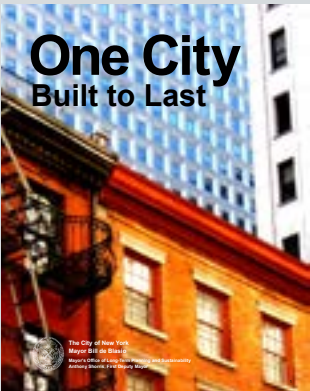
PlaNYC Progress

Since the first PlaNYC in 2007, the City has made considerable progress on reaching its goals. We have reduced greenhouse gas emissions 19 percent since 2005, invested billions of dollars to protect our water supply, planted nearly a million trees, installed 300 miles of bike lanes, and passed regulations and developed programs to phase out polluting heating oils. The City also strengthened coastal defenses, fortified crucial infrastructure such as wastewater treatment facilities, and worked to make buildings and neighborhoods more resilient.

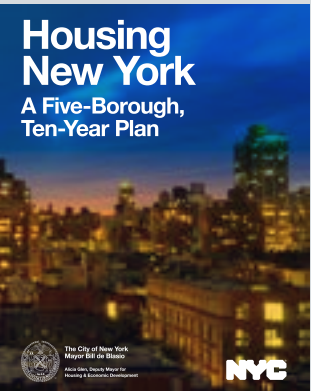


# Building on a Solid Foundation

In its first year, the de Blasio administration presented a series of long-term goals and strategies, and launched comprehensive initiatives across City agencies. These initiatives have already begun to show results. OneNYC builds upon these initiatives as a launching point for the ambitious goals set forth in this plan.



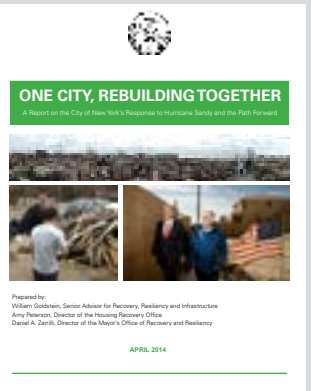
**One City: Built to Last**  
The City's commitment to cut its greenhouse gas emissions 80 percent by 2050 focusing on reductions in buildings, which are responsible for nearly three quarters of the city's contribution to climate change.



**Housing New York**  
An ambitious ten-year plan that addresses New York's housing crisis by building our next generation of affordable housing and supporting the quality of life in our neighborhoods.



**Career Pathways**  
A plan to create a more comprehensive, integrated workforce development system and policy framework focused on skills building and job quality.



**One City, Rebuilding Together**  
A plan to overhaul the Build It Back program to accelerate the Sandy recovery process for homeowners and establish targets for reimbursements and construction starts. Also established a first-ever Mayor's Office of Recovery and Resiliency to lead the City's climate adaptation and resiliency program.

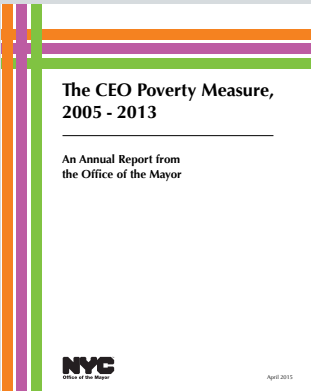
## Initiatives launched in 2015



**IDNYC**  
A program that provides a free identification card to every city resident, including the most vulnerable populations who may have difficulty obtaining other government-issued ID, and provides access to services and programs offered by the City and other businesses.



**New York City Community Schools Strategic Plan**  
Key system-building efforts that will be implemented over the next three years to achieve and surpass the City's initial goal of establishing 100 fully developed Community Schools to improve student achievement through strong partnerships among principals, parents, teachers and Community Based Organizations.



**The CEO Poverty Measure Report**  
This year's annual report by the Center for Economic Opportunity in the Office of the Mayor that measures poverty in New York City and is aligned with OneNYC's focus on anti-poverty goals. The CEO measure improves on the official methodology by considering the cost of living in New York City and the resources available to households after tax and social policy is taken into account.



**Ten-Year Capital Strategy**  
This strategy provides a blueprint for capital spending over the next decade. OneNYC and the Ten-Year Capital Strategy are aligned to ensure funding for OneNYC goals.



## New York City and the 100 Resilient Cities Initiative

100 Resilient Cities (100RC) is an innovative global network pioneered by the Rockefeller Foundation to help cities around the world become more resilient to the physical, social, and economic challenges that are a growing part of the 21<sup>st</sup> century. New York City was in the first wave to join the network in 2013, and through its participation, demonstrates leadership in resiliency and takes advantage of the resources and opportunities it presents.

100RC supports the adoption and incorporation of a view of resilience that includes not just the shocks—superstorms, blackouts, heat waves, and other acute events—but also the stresses that weaken the fabric of a city on a day-to-day or cyclical basis. Examples of these stresses include high unemployment; aging infrastructure; an overtaxed or inefficient public transportation system; endemic violence; and growing inequality. By addressing both the shocks and the stresses in a holistic manner, a city becomes more able to respond to adverse events, and is better able to deliver basic functions in both good times and bad, to all populations.

New York City has a history of innovating in the face of change. This plan adopts the approach of the 100RC initiative, recognizing the need to address acute shocks and chronic stresses in securing the city's growth. Equity, sustainability, and resiliency are incorporated into OneNYC, including through the involvement of agencies across City government and extensive public engagement in creating the plan.

The City will continue to work with 100RC and its partners, to develop and test new systems, tools and methodologies for measuring and improving resiliency.

Learn more about 100RC at [100resilientcities.org](http://100resilientcities.org).



Four principles informed OneNYC goals and initiatives:

Growth

Population growth, real estate development, job creation, and the strength of industry sectors

Equity

Fairness and equal access to assets, services, resources, and opportunities so that all New Yorkers can reach their full potential

Sustainability

Improving the lives of our residents and future generations by cutting greenhouse gas emissions, reducing waste, protecting air and water quality and conditions, cleaning brownfields, and enhancing public open spaces

Resiliency

The capacity of the city to withstand disruptive events, whether physical, economic, or social

OneNYC: New Approaches

Previous PlaNYC reports have focused on the pressing issues of growth, sustainability, and resiliency. All of these goals remain at the core of OneNYC, but there are three significant differences in the approach taken with this plan.

A Focus on Inequality

With the poverty rate remaining high and income inequality continuing to grow, equity has come to the forefront as a guiding principle. In this plan, we envision a city that is growing, sustainable, resilient, and equitable—a place where everyone has a fair shot at success. The explicit addition of equity is critical, because a widening opportunity gap threatens the city’s future. These four pillars together will spur the innovation we will need for the next century. We know that a drive for a sustainable environment leads to innovations that create whole new businesses, while driving out poverty leads to healthier people, and safe neighborhoods spur businesses to grow. They all grow together.

A Regional Perspective

To make the changes we need, OneNYC recognizes that we need to reach out to our neighbors so that our whole region may thrive. The strength of the city is essential for the strength of the region, and strong communities around the city make it more competitive nationally and globally.

Leading the Change We Need

While New York City has a vast and complex government, even one of its scale cannot accomplish all that needs to be done on its own. While City government will take the lead in every single aspect of OneNYC, this plan also calls for action from other levels of the public and even private sector. That means calling for some actions that are not entirely within the control of the City government, but they are all steps that are credible and necessary. We will not stop pushing for the right thing for our people because some of it is out of our control.

OneNYC is a citywide effort. Nearly all City agencies came together in cross-cutting working groups that examined underlying trends and data in order to develop new initiatives. The working groups were tasked with envisioning how the physical city should be shaped to address a range of social, economic, and environmental challenges on the municipal and regional scale. This exercise required deeper consideration of the relationship between physical and human capital, and acknowledgment that the built environment has manifest implications for not just economic growth and development, but public health and the delivery of essential services. This process helped break down agency “silos” and resulted in an ambitious set of visions, realized through supporting goals and initiatives, which crossed the traditional boundaries of City agencies and their focus areas of activity.

Vision 1

New York City will continue to be the world’s most dynamic urban economy, where families, businesses, and neighborhoods thrive

Industry Expansion & Cultivation

Workforce Development

Housing

Thriving Neighborhoods

Culture

Transportation

Infrastructure Planning

Broadband

Vision 2

New York City will have an inclusive, equitable economy that offers well-paying jobs and opportunity for all New Yorkers to live with dignity and security

Early Childhood

Integrated Government & Social Services

Healthy Neighborhoods, Active Living

Healthcare Access

Criminal Justice Reform

Vision Zero

Vision 3

New York City will be the most sustainable big city in the world and a global leader in the fight against climate change

80 x 50

Zero Waste

Air Quality

Brownfields

Water Management

Parks & Natural Resources

Vision 4

Our neighborhoods, economy, and public services will be ready to withstand and emerge stronger from the impacts of climate change and other 21<sup>st</sup> century threats

Neighborhoods

Buildings

Infrastructure

Coastal Defense





# Neighborhood Spotlight Bronx River Corridor

This plan introduces many ambitious initiatives to address the social, economic, and environmental issues facing our city today.

We’re taking the neighborhoods along the Bronx River Corridor—including the West Farms, Crotona Park East, Longwood, Soundview, and Hunts Point neighborhoods—to illustrate how OneNYC will guide future growth, sustainability, and resiliency.

These Bronx neighborhoods—vibrant, diverse, and ever-changing like the city as a whole—represent the opportunities and challenges that drive this plan in a number of ways.

Each vision includes a “Neighborhood Spotlight” section that shows how this plan will impact the Bronx River Corridor.



“We need to think about how we’re addressing high asthma rates in this area. We are seeing lots of new residential development in the neighborhood. When these new units come in, they often include parks and trees. This transition is helping to improve this neighborhood.”

—Donston E.  
Walsingham Construction



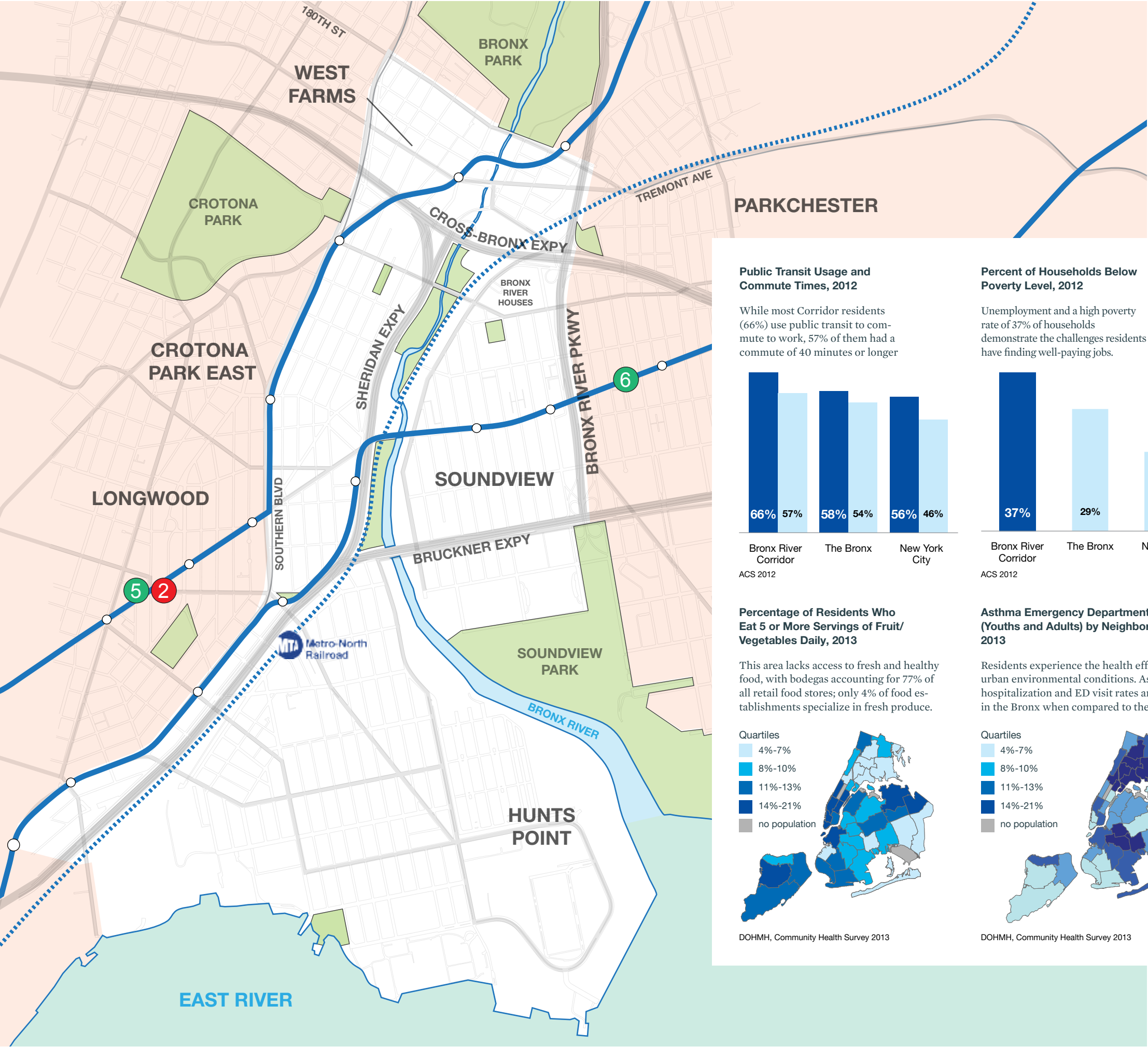
“Our community has long been known as the ‘Toxic Triangle’ between the Sheridan, Bruckner and Cross Bronx Expressways. We see a direct correlation between health issues and access to open space and we’re trying to bring recreation opportunities to the area.”

—Dave S.  
Youth Ministries for Peace and Justice



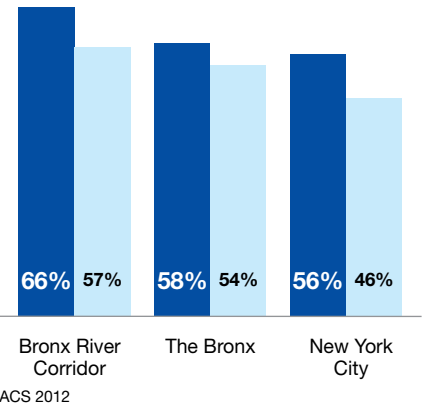
“I’ve lived in the Bronx since 1979 and worked at Hunts Point Market since 1988. Since then, the community has changed dramatically. Everyone feels safer. I think things are improving.”

—Rene C.  
Employee at Mosner Family Brands,  
Hunts Point Cooperative Market



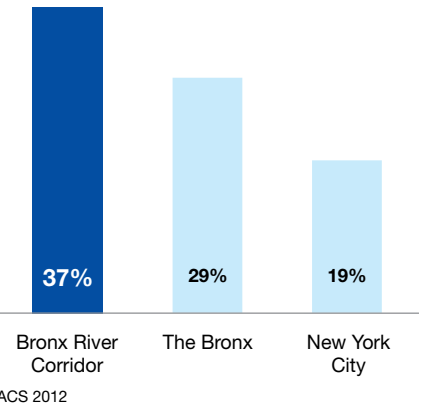
## Public Transit Usage and Commute Times, 2012

While most Corridor residents (66%) use public transit to commute to work, 57% of them had a commute of 40 minutes or longer



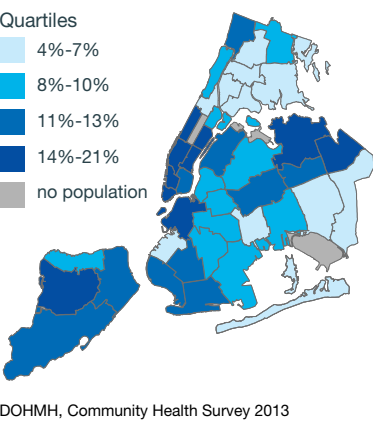
## Percent of Households Below Poverty Level, 2012

Unemployment and a high poverty rate of 37% of households demonstrate the challenges residents have finding well-paying jobs.



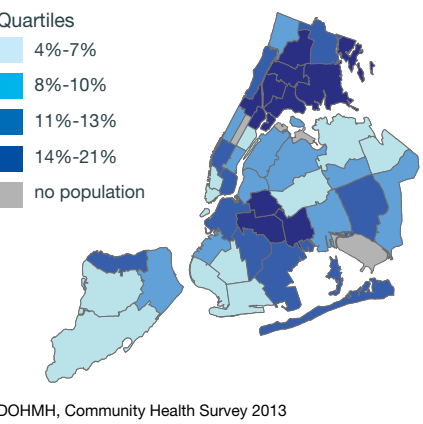
## Percentage of Residents Who Eat 5 or More Servings of Fruit/Vegetables Daily, 2013

This area lacks access to fresh and healthy food, with bodegas accounting for 77% of all retail food stores; only 4% of food establishments specialize in fresh produce.



## Asthma Emergency Department Visits (Youths and Adults) by Neighborhoods, 2013

Residents experience the health effects of urban environmental conditions. Asthma hospitalization and ED visit rates are higher in the Bronx when compared to the citywide







## How New Yorkers Shaped OneNYC

To find out New Yorkers’ priorities and to tap their most creative ideas, we used a variety of methods—from roundtable discussions to an online survey—during the months leading up to the launch of OneNYC. Our residents, and the communities they comprise, represent tremendous diversity of knowledge, culture, interests, skills, and economic resources. Approximately 3 million New Yorkers—37 percent of the City’s total population—were born outside the U.S., and 49 percent of all residents speak a language other than English at home. Some residents are intensely involved in their local community, while others are loosely attached to their neighborhood but still dependent on critical services.

### Resident Outreach

We met face-to-face with over 1,300 New York City residents, advocacy groups and elected officials in one-on-one meetings, roundtable discussions, and town hall-style forums. We talked about issues regarding senior citizens, schools, housing, the environment, parks, and transportation.

### Business Roundtable

Many of the city’s largest and most innovative employers met with us to tell us what they needed to succeed, to retain workers, to hire new ones, and to grow. We heard from them about their real estate needs, transportation for their workforce, broadband infrastructure, childcare services, as well as the importance of our cultural community.



NYCHA residents attend a Town Hall meeting at Johnson Community Center, East Harlem.

More than **7,500** New Yorkers took the online **public survey**  
**800** New Yorkers participated in the **telephone survey**  
**1,300+** residents attended more than **40** **community meetings** in every borough  
**177** **civic organizations** and over **50** **elected officials’** offices met about OneNYC  
**15** **leaders** from **neighboring cities and counties** met at City Hall to discuss the plan  
Led by the Office of Sustainability, over **125** **representatives** from over **70** **City agencies** developed OneNYC



Clergy/Faith Leaders listening session, April 20, 2015.

### Advisory Board

The Mayor’s Sustainability Advisory Board also helped to guide our thinking. The 38-person Board represented all five boroughs and is comprised of civic leaders, policy specialists, and community leaders, representing sectors including sustainability, social services, the business community, academia, real estate, and healthcare.

### Regional Coordination

Fifteen leaders, including Mayors and County Executives, from cities and counties in New York, New Jersey, and Connecticut met with the City to discuss the common challenges affecting the region, such as infrastructure, housing, jobs, and climate change.

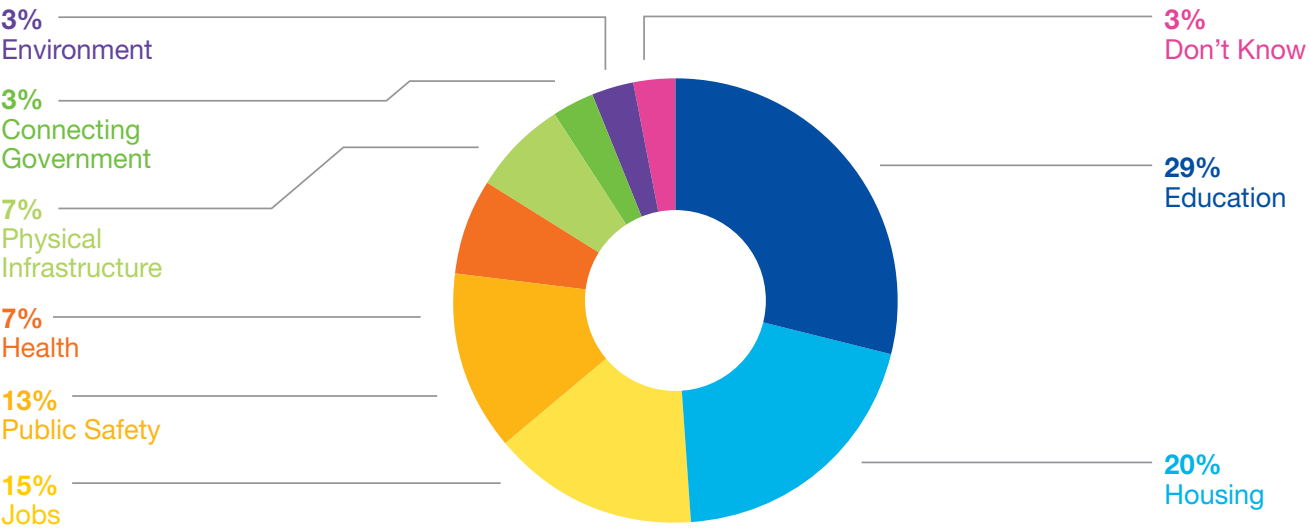
### Online Survey: [nyc.gov/ideas](https://nyc.gov/ideas)

On March 6, 2015, OneNYC launched an online survey – [nyc.gov/ideas](https://nyc.gov/ideas) – to ask New Yorkers for their ideas. Through the survey, over 7,500 people provided thoughtful and candid insights in seven languages. Respondents overwhelmingly mentioned the high cost of living and affordable housing as primary concerns. Comments and suggestions from the survey informed the plan.

### Telephone Survey

We surveyed 800 New Yorkers to identify key issues and concerns. New Yorkers identified education, jobs, and housing as the most important issues facing the city today, and recognized diversity as the city’s top asset.

### Most Important Issues According to New Yorkers



In a telephone survey of 800 people, New Yorkers identified education, housing and jobs as the most important issues facing the city.

## What We Heard from New Yorkers

Extensive pre-launch discussions with New Yorkers directly shaped the goals and initiatives detailed in this plan.

When nearly 3,500 people submitted comments to the online survey about housing and affordability, we affirmed the **affordable housing** commitments in Housing New York, the City’s ten-year housing plan. That plan lays out strategies to create and preserve 200,000 affordable housing units over the next ten years. OneNYC now sets a goal of creating 240,000 new housing units — both market rate and affordable — within the next decade. It also calls on governments across our region to support efforts to create new housing throughout the metro area.

Other feedback focused on providing New Yorkers with **transit access from their homes to good jobs**. Through transit investments, job creation in diverse locations, and transit-accessible housing construction, this plan will ensure that by 2040, the average New

## New York City's Greatest Assets, According to New Yorkers



In a telephone survey of 800 people, New Yorkers identified diversity as the City's greatest asset.



## PAL Playstreet at Morris Houses

## New Yorkers' Ideas for Our City's Future



**“I would like to live within commuting distance from my CUNY job (academic advisor \$47k plus \$16k from my husband’s Social Security) without having to rely on a food bank. We’re a family of three living in East Harlem. We make too much for some lotteries and not enough for others. I have two Master’s degrees, my husband is 71 year old Viet Nam [a] vet and our 25 year old daughter had been sick from mold exposure and cannot help.”**

—Elizabeth W., Manhattan



在都市日常中，  
創造意外的驚喜。  
如公共藝術在城市中。

**“Create unexpected  
surprises in the urban  
daily life, such as public  
art in the city.”**

—Chuan-Wei T., Queens



**“Works towards it becoming a beacon of sustainability, a model city to visit and respect for its Zero Waste, energy efficiency, and environmental justice achievements.”**

—Kristal I., Brooklyn



“Que los jóvenes que trabajamos podamos encontrar la opción de alquilar un apartamento o estudio a bajo costo y así comenzar a tener nuestra vida fuera de nuestra familia y ver la vida con nuevos proyectos y seguir adelante en nuestras vidas. (En lo personal tengo 28 años y vivo con mi familia y no puedo rentar un estudio y ser independiente por que soy inmigrante y no encuentro apartamentos a bajo costo quisiera ya hacer vida independiente).”

—Johnny T., Bronx

**“That we, as young people who work, can find options to rent an apartment or studio at a low cost and thus begin to have our lives outside of our family and envision a life with new projects and move forward in our lives. (Personally, I am 28 years old and live at home. I can’t rent a studio and be independent because I’m an immigrant and can’t find low-cost apartments. I would like to make an independent life already).”**

Through the OneNYC online survey, over 7,500 New Yorkers shared ideas to shape our city's



# New York City: Today and Tomorrow

Challenges and opportunities  
facing New York City as it enters its  
fifth century

## Overview

New York City has been a hub of commerce and culture since 1625. Blessed with deep harbors and rivers running through verdant countryside, later connected by the Erie Canal to important trade routes, New York City grew into a domestic and international center of trade and commerce. Immigrants came and prospered, building new neighborhoods and a better life, far from the poverty and persecution they had fled. Industries were founded and flourished, and over time transformed, evolved, or departed. But thanks to the resourcefulness and ingenuity of New Yorkers, the city remains the global center of finance, research, industry, tourism, and culture. As New York City enters its next century a decade from now, we will leverage the great resources already available and set a path to prosperity for all.



TD Five Boro Bike Tour



## What Works

Among the hallmarks of New York City are tolerance, pluralism, openness, caring for others, innovation, and business acumen. We are truly international: our residents come from every country, and over 180 languages are spoken by students in our public schools. We celebrate our diversity. We have shown the ability to recover from both man-made and natural disasters, including the attacks of 9/11 and the 2008 recession, and will continue to recover from Hurricane Sandy.

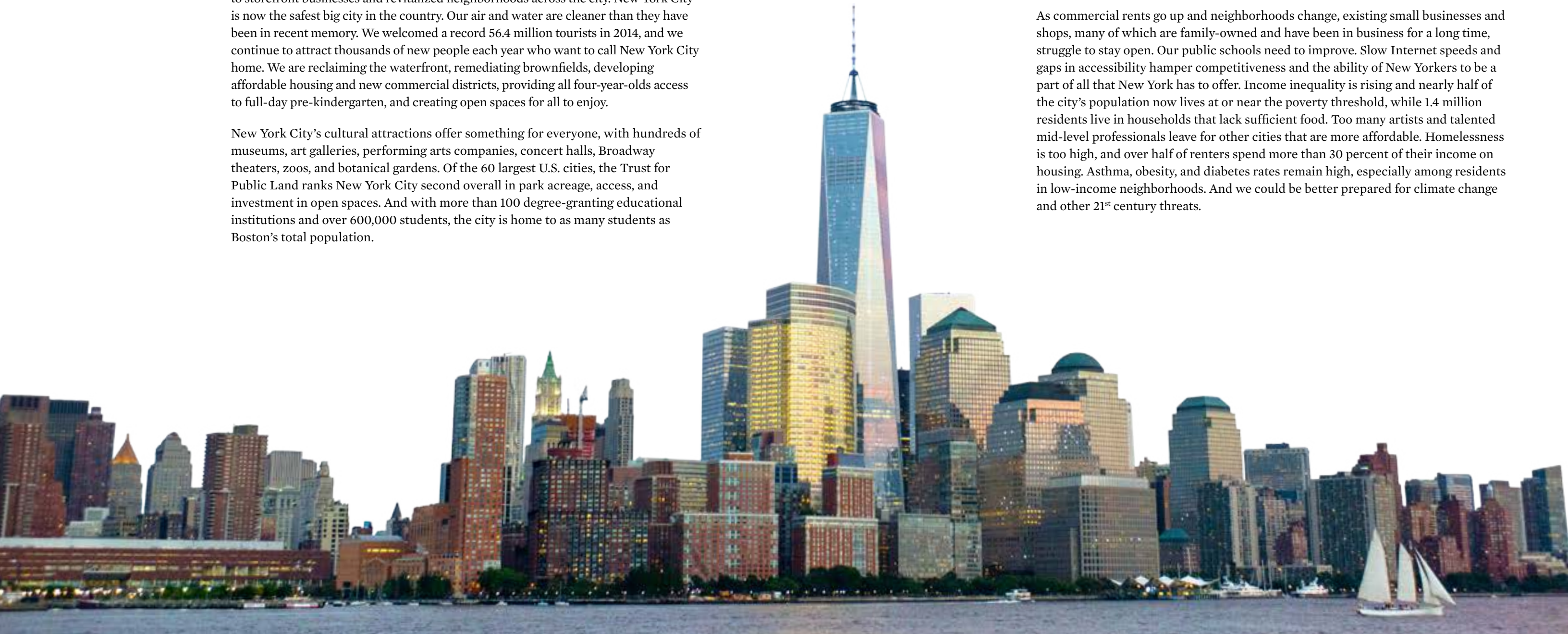
With jobs at an all-time high, our entrepreneurial spirit can be seen from Wall Street to storefront businesses and revitalized neighborhoods across the city. New York City is now the safest big city in the country. Our air and water are cleaner than they have been in recent memory. We welcomed a record 56.4 million tourists in 2014, and we continue to attract thousands of new people each year who want to call New York City home. We are reclaiming the waterfront, remediating brownfields, developing affordable housing and new commercial districts, providing all four-year-olds access to full-day pre-kindergarten, and creating open spaces for all to enjoy.

New York City’s cultural attractions offer something for everyone, with hundreds of museums, art galleries, performing arts companies, concert halls, Broadway theaters, zoos, and botanical gardens. Of the 60 largest U.S. cities, the Trust for Public Land ranks New York City second overall in park acreage, access, and investment in open spaces. And with more than 100 degree-granting educational institutions and over 600,000 students, the city is home to as many students as Boston’s total population.

## What Could Be Better

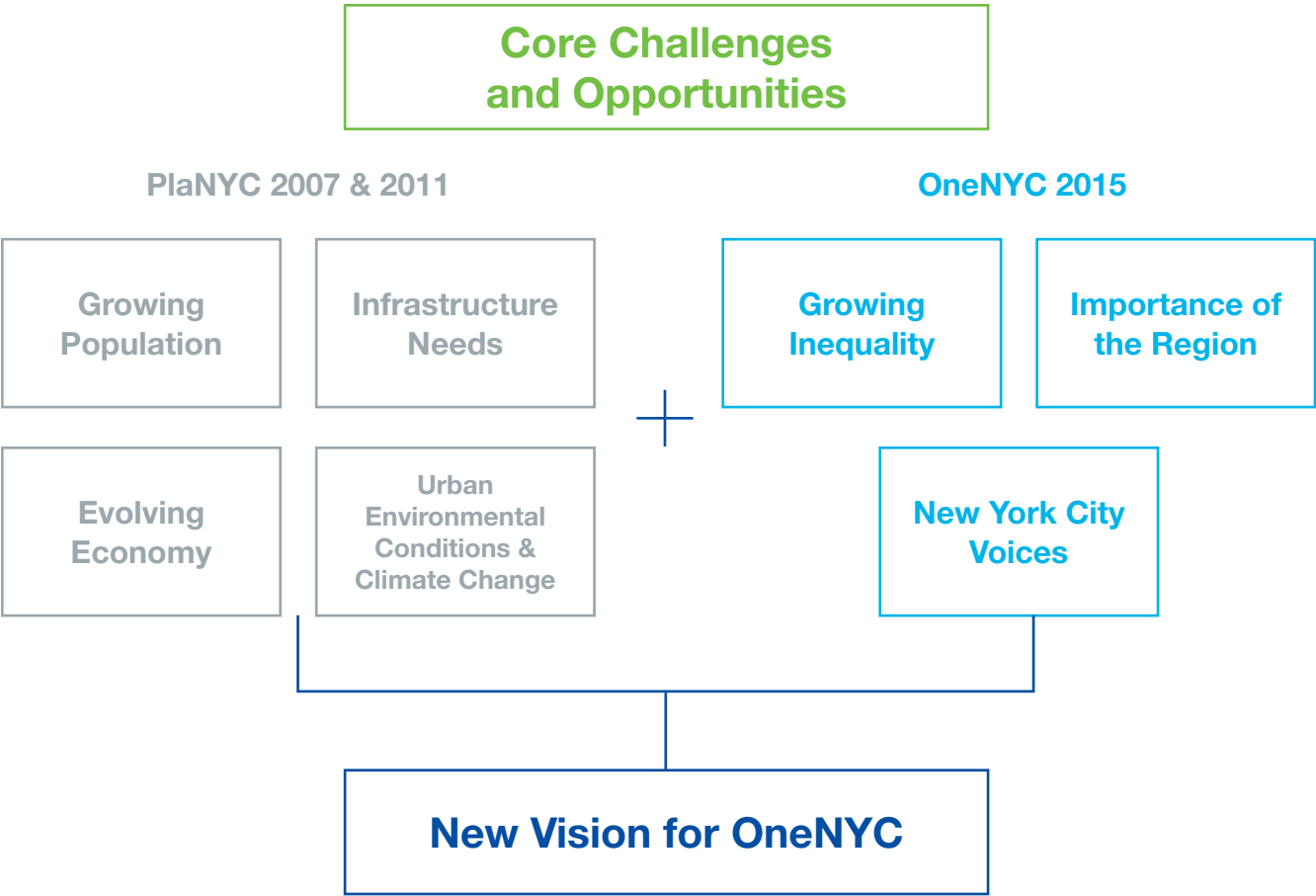
New York City’s success has brought many benefits, but the city also faces significant challenges. Because so many people want to live here and many are doing well financially, affordable housing is scarce. A growing population—expected to reach 9 million by 2040—will test our infrastructure systems. Mass transit, roads, and other infrastructure are heavily used, but they have not been fully maintained over the years. For some New Yorkers, public transit is not easily accessible, or the system can’t get them across their own borough because it was designed to take people into Manhattan, and commute times are too long from many areas.

As commercial rents go up and neighborhoods change, existing small businesses and shops, many of which are family-owned and have been in business for a long time, struggle to stay open. Our public schools need to improve. Slow Internet speeds and gaps in accessibility hamper competitiveness and the ability of New Yorkers to be a part of all that New York has to offer. Income inequality is rising and nearly half of the city’s population now lives at or near the poverty threshold, while 1.4 million residents live in households that lack sufficient food. Too many artists and talented mid-level professionals leave for other cities that are more affordable. Homelessness is too high, and over half of renters spend more than 30 percent of their income on housing. Asthma, obesity, and diabetes rates remain high, especially among residents in low-income neighborhoods. And we could be better prepared for climate change and other 21<sup>st</sup> century threats.



# Addressing Core Challenges and Opportunities

It is time to build on our strengths and address these challenges and opportunities. We are all at risk when so many New Yorkers struggle to find living-wage jobs, good schools for their children, affordable housing, and neighborhoods and communities they can proudly call their home for years to come. We run the risk of becoming two New Yorks: one for the affluent and one for those who are left out of the city’s success and lack access to good schools or good wages for hard work. What we do now to confront these challenges will define the future of New York City and what kind of city we leave to our children.



OneNYC builds upon the four core challenges addressed in past PlaNYC reports, and now includes growing inequality, the importance of the region, and New York City voices.

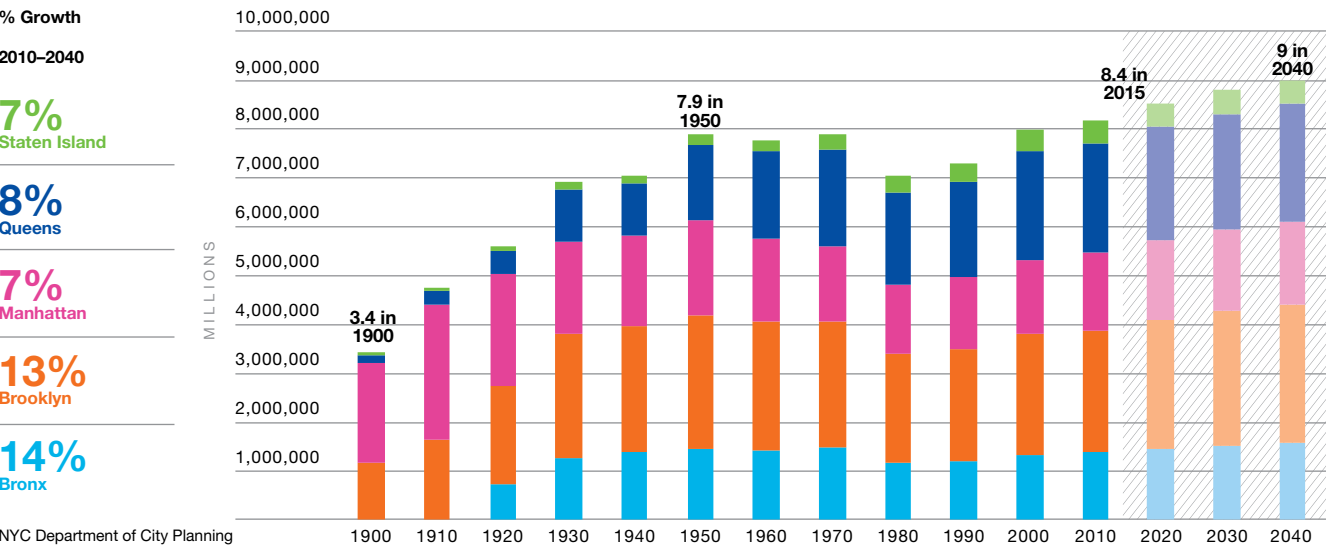
# A Growing Population

New York City continues to grow at a rapid rate, in large part through immigration. With nearly 8.4 million people, the city’s population is at an all-time high, and is expected to reach 9 million by 2040. Growth is projected to be greatest outside Manhattan—with the largest increases in Brooklyn and the Bronx. This increased population will strain the city’s infrastructure and test the reliability of services. New York City’s population is also aging; by 2040, the number of New Yorkers over 65 will surpass school-age children. These changes will create new challenges in everything from the delivery of services to urban design. We must improve social and physical infrastructure to provide equitable access to services and employment for a changing population.

Throughout its history, people have flocked to New York City, drawn by its economic opportunities and ethnic networks. Foreign-born residents comprise almost 40 percent of the total population. At the same time, many young, educated Americans are also moving to New York City.

With a growing population comes the critical need for additional affordable housing for all New Yorkers. In order to accommodate projected growth and the natural loss of some housing over time, and to reduce pressure on housing prices, the City intends to create 240,000 new housing units—including market rate and affordable—in the next decade.

New York City population, 1900–2040 (projected)





# An Evolving Economy

The city has an all-time high of 4.2 million wage and salary jobs, adding 113,000 private sector jobs in 2014 alone. Our economic activity, measured by Gross City Product (GCP), is \$647 billion, and the city’s economic recovery since the last recession outpaced the nation’s, with an 11.5 percent increase in jobs between 2009 and 2014, compared to only 6.1 percent nationally.

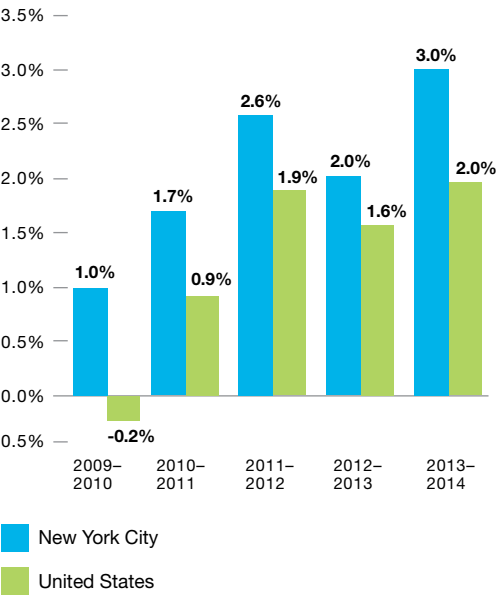
Sustainable economic growth and stability depend on the continued strength of our core sectors, as well as economic diversification across both boroughs and sectors. The rate of job growth in the boroughs has been higher recently, outpacing Manhattan in the past ten years. While employment is becoming geographically diversified, it continues to remain highly concentrated in Manhattan.

The traditional core sectors of the city’s economy—finance, insurance, and real estate—remain the foundation of our economic strength. While they represent 11.7 percent of our jobs, they comprise 38.4 percent of GCP. They also provide a substantial tax base that supports investment in infrastructure and services to ensure our long-term ability to accommodate continued growth.

Jobs in sectors such as retail, food services, and home care are increasing due to growth in the overall population, tourism, and senior residents. These sectors provide opportunities for people who lack the skills to compete for high-wage jobs, and provide access to the job ladder to advance their careers. New York City has many people in this position, and these jobs are vital. One of the reasons less-skilled people stay in New York City, despite the high cost of living, is that jobs of this kind are available and generally accessible without a car. Expanding skills training and workforce development programs, as well as access to higher education, will enable low-skilled entry level workers to gain the skills needed to move into higher paying jobs.

While New York City is home to 52 Fortune 500 companies, small businesses with fewer than 100 employees are a critical part of the city’s economy. These businesses account for more than half of New York’s private sector employment. Small business owners in New York often face regulatory hurdles to starting and growing their businesses, while the high cost of living makes it difficult to attract and retain talented young people.

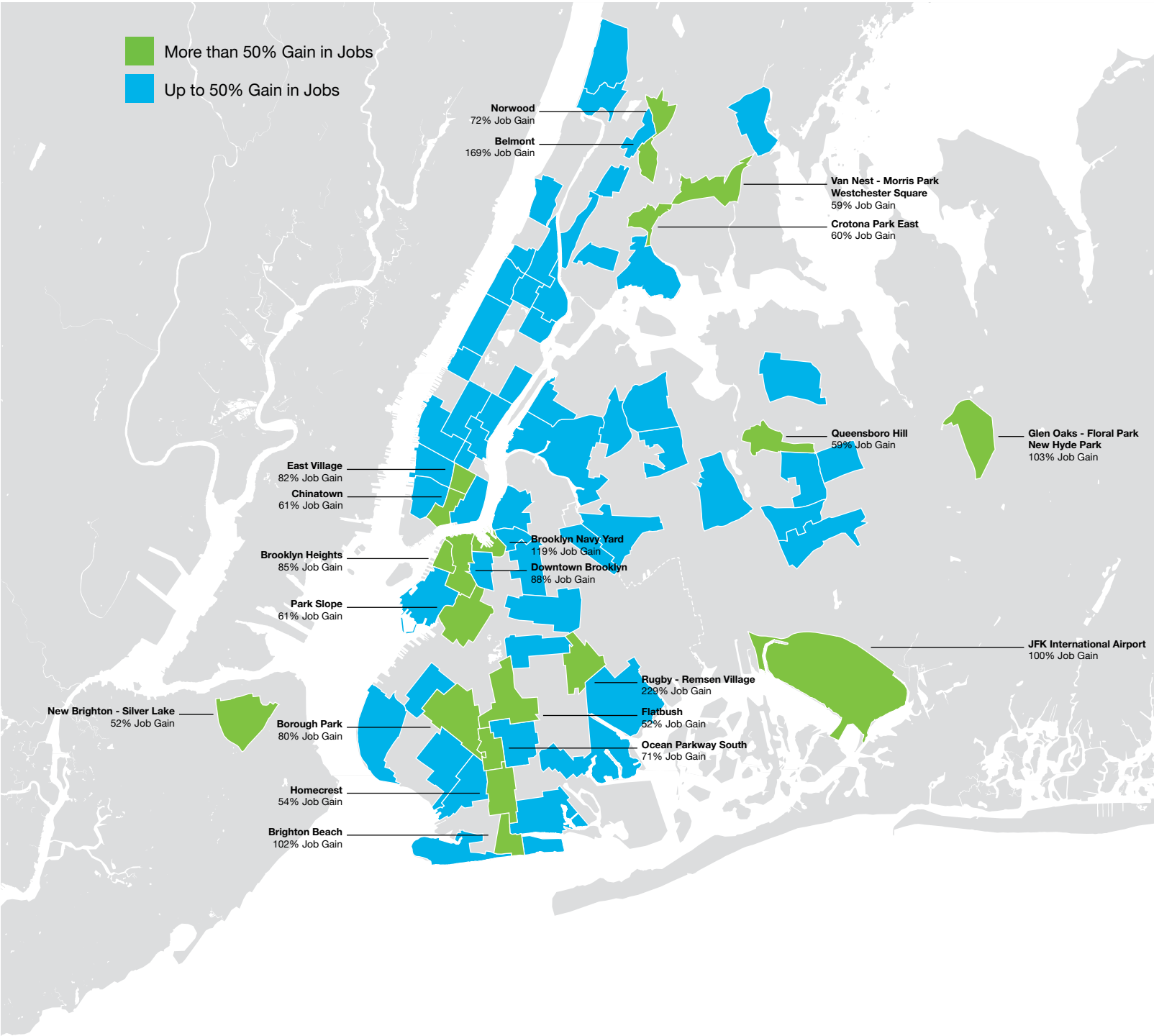
Employment growth 2009-2014: New York City vs. United States



U.S. Bureau of Labor Statistics

The city’s economic recovery since the last recession outpaced the nation’s.

# Employment change in total jobs 2001–2011



U.S. Census Bureau, LEHD Origin-Destination Employment Statistics, v. 7  
Geography: Neighborhood Tabulation Area (NTA)



## Growing Inequality

Despite its overall prosperity, New York City continues to struggle with high rates of poverty and growing income inequality. The crumbling of the middle class is not just a local problem, it is one that requires a national solution, and is a crisis of our time. Over the past decade, income inequality has increased in the city, surpassing the national average—and in recent years, it has continued to rise.

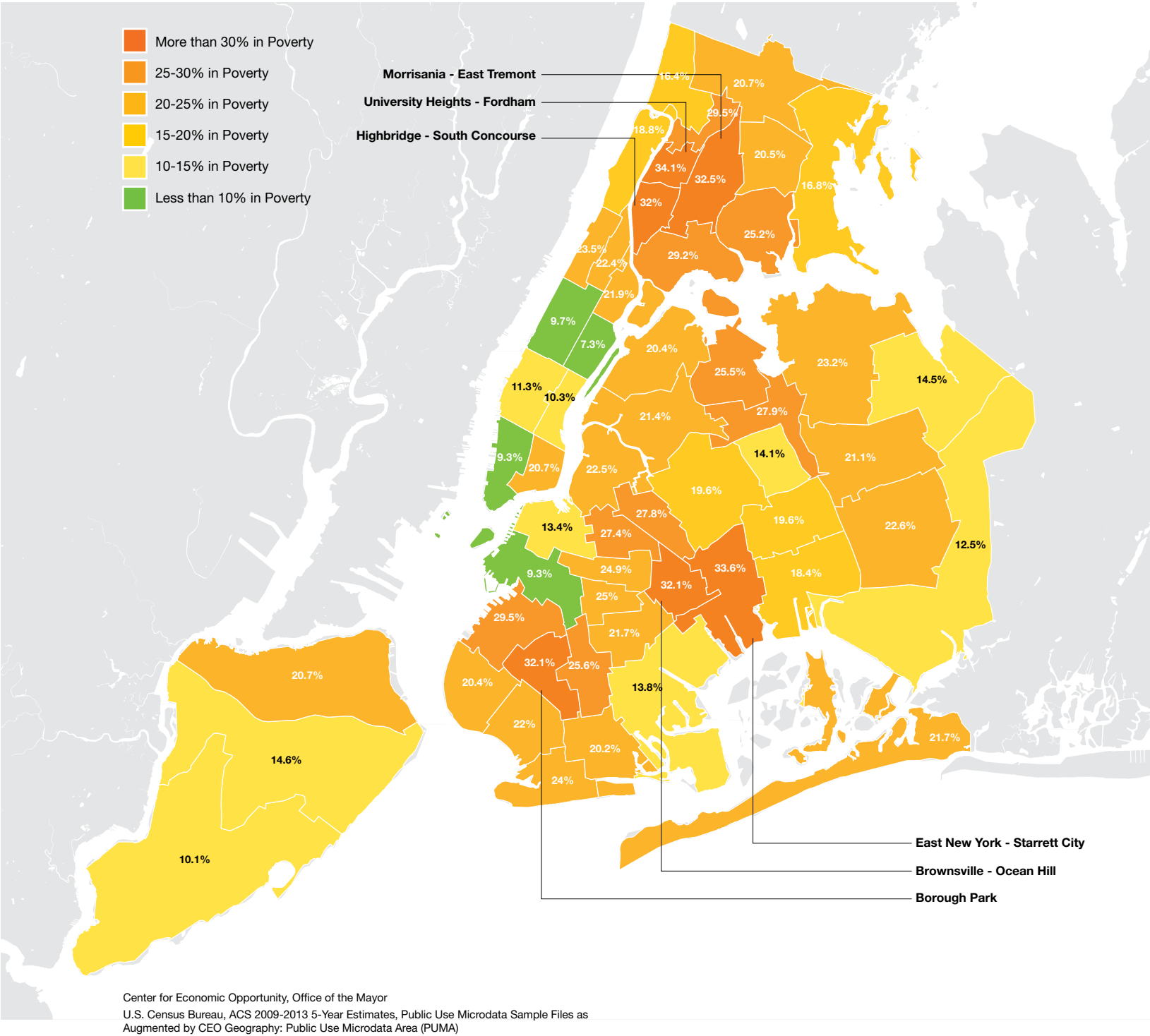
During the 2008 recession, workers experienced flat or declining wages, except for those in select high-wage sectors. The city has experienced an impressive recovery, gaining 422,000 private jobs between 2009 and 2014. While job growth has occurred across a range of sectors, it has been particularly strong in lower-paying sectors, such as accommodation, food service and retail trade. Since 2014, more workers have started to see wage gains due to declining unemployment and increasing demand for labor. Nonetheless, these gains have not fully offset the wage stagnation that occurred during the recession. As a result, low-income New Yorkers continue to struggle with the city’s high costs of living. Without training to support career development, these individuals and their families are likely to remain in poverty. Recognizing that high-, mid-, and low-skill jobs are all part of a diverse, healthy economy, the City is committed to supporting job quality across all sectors—higher wages for low-wage jobs and expanded opportunities for skills training.

These employment and wage trends are occurring against a backdrop of other significant economic challenges. Nearly half of the city’s population still lives in or near poverty, including a disproportionate number of African-American, Latino, and Asian New Yorkers. The city’s already-high cost of living is still increasing. The supply of housing has not kept pace with the increase in population, leading to a severe lack of affordable housing, especially for those who are least well off. Homelessness is at a record high.

As it continues to grow, the City must invest strategically to create new economic opportunities for the most vulnerable and lowest-income New Yorkers. We must provide increased support to the economic sectors that drive middle-income job growth. The city’s rapid employment growth offers a real opportunity to improve the incomes of low-wage workers. To ensure that this happens, we must do all we can to continue to raise the minimum wage. We must also work with employers and labor unions to improve employee training, provide a path for advancement, and emphasize employee retention.

## Percentage of population below poverty threshold, 2009–2013

21.5 percent of New Yorkers are below the poverty, and 45.1 percent are at or near the poverty level.





Aging infrastructure strains to meet both manmade and natural challenges.

## Infrastructure Needs

While New York City is a 21<sup>st</sup> century global city, its aging infrastructure is straining to meet the demands of a modern and dynamic urban center. Infrastructure connects people, neighborhoods, and businesses, and provides essential services—the water we drink, the gas we need to cook, the electricity that lights homes and businesses, and the Internet access to communicate and learn.

Despite a mountain of evidence emphasizing the link between modern infrastructure and economic growth, public investment across the region has not kept pace with capital investment needs. New York City’s transit system is in need of improvement and expansion to provide the best possible service to New Yorkers. Our subway system, the nation’s largest, had a record 1.7 billion total riders total in 2013 and is near or at full capacity. Every day, New Yorkers crowd onto subways and buses, with an average commute time of 47 minutes—the highest of any major American city. Investing directly in transit systems, including expanded Select Bus Service routes and a citywide ferry system, as well as coordination with regional entities, is key to supporting continued growth and will support competitiveness. Significant expansion of our existing rail transit system is extremely expensive and federal resources are dwindling. Yet without investments to maintain a state of good repair, aging infrastructure incurs higher costs down the road and imperils our long-term prosperity.

Many of the city’s gas, steam, sewer, and water lines are not only aging, but are made of materials not in use today, and prone to leaks and breaks. Much of the city’s underground infrastructure is not mapped, making it hard to pinpoint issues to make efficient repairs or improvements. Our highways and bridges are also old and at risk. The Brooklyn Bridge, for instance, opened in 1883.

The Internet is rapidly becoming as central to our daily lives as electricity, gas, and water. However, currently 22 percent of New York City households lack broadband Internet at home. Affordability of Internet services is cited as the main barrier to broadband adoption in New York City. Increased affordability and public availability of broadband service will help to close the adoption gap and increase access to online tools that support individuals, families, and businesses.

Identifying adequate funding resources to maintain and upgrade critically aging infrastructure and ensure a consistent state of good repair across the city is a major challenge.

## Urban Environmental Conditions and Climate Change

In recent years, New York has made substantial headway in protecting the environment through improved air quality and reduced greenhouse gas emissions, which have decreased by 19 percent since 2005. We have reduced energy use in buildings and switched to less carbon intensive electricity generation. New York City’s air quality is the cleanest it has been in over fifty years, and among U.S. cities, it has moved from having the 7<sup>th</sup> to the 4<sup>th</sup> cleanest air over the past several years.

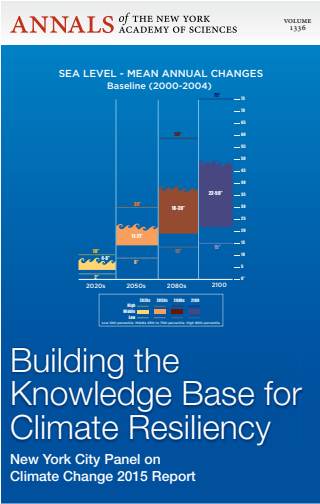
More than 100 brownfields encompassing over one million square feet have been cleaned up and redeveloped. The 23 sites completed this year alone will generate more than 420 new jobs, 550 units of affordable housing, and \$162 million in new tax revenue. Green infrastructure initiatives such as bioswales help to mitigate stormwater flooding and prevent the discharge of pollutants into the city’s waterways.

At the same time, longstanding environmental conditions continue to have chronic impacts on the health and livelihoods of New Yorkers, with four out of every 1,000 children aged 5-17 years hospitalized for asthma in 2012. As the city’s population continues to grow, additional strain will be placed on the environment from basic infrastructure needs, including a projected 14 percent increase in heating fuel demand by 2030 and a 44 percent increase in energy consumption by 2030. The city generates about 25,000 tons of residential, business, and institutional garbage every day, but only about 15.4 percent of waste collected by City workers is diverted for recycling.



Kayaking on the Bronx River





NPCC 2015 Report

Climate Change

The city also faces increasing risks from the impacts of global climate change. While we have made significant strides in reducing our contributions to climate change, we still expect to face local impacts that could threaten the city. In partnership with the New York City Panel on Climate Change (NPCC), the City has continued its work to understand these risks and make sure that the best available science continues to inform the City’s climate policy.

Earlier this year, the NPCC released Building the Knowledge Base for Climate Resiliency, which included updated projections for the region. Among them, we can expect to see, by the 2050s, increased average temperatures (4.1 to 5.7° F), increased average precipitation (4 to 11 percent), and rising sea levels (11 to 21 inches). The average number of days per year above 90° F is expected to at least double. Due to sea level rise alone, coastal flood events will increase in both frequency and intensity. The number of the most intense hurricanes across the North Atlantic Basin is also expected to increase.

Each of these changes will increase the exposure of the city’s neighborhoods, businesses, and infrastructure. Health impacts on New Yorkers will continue to increase. Fortunately, the City continues to reduce these risks. We are reducing our greenhouse gas emissions and adapting our neighborhoods, with critical investments now underway on our coastline, in our buildings, and for our infrastructure. Much more remains to be done, and the City is committed to leading the globe in this fight, to the benefit of future generations.

NPCC mid-range projections on climate change

Chronic Hazards	Baseline (1971-2000)	2050s
		Middle Range
Average Temperature	54°F	+4.1 to 5.7 °F
Precipitation	50.1 in.	+4 to 11%
	Baseline (2000-2004)	2050s
		Middle Range
Sea Level Rise	0	+11 to 21 in.

Extreme Events	Baseline (1971-2000)	2050s
		Middle Range
Number of days per year with maximum temperature at or above 90° F	18	39 to 52
	Baseline (2000-2004)	2050s
		Middle Range
Future annual frequency of today's 100-year flood at the battery	1%	1.6 to 2.4%

New York City Voices

New York City works best when New Yorkers are involved with their city and have a say in their government, and when government listens to their voices to make better decisions. We need to create new processes for communication and dialogue. The result will be more informed policymaking and better-designed programs, and New Yorkers with the tools and resources to help shape the future of their city. Engaged New Yorkers are empowered residents who interact with their government, and can effectively help set priorities and shape policy.

There are a number of fundamental challenges to increasing civic engagement and democratic participation. More than one-third of the lowest-income New Yorkers, for example, lack broadband Internet access, which hinders their communications and access to City services. Only 18 percent of New Yorkers do volunteer work, below the national average of 25 percent, and 49 percent are dissatisfied with the level of cultural services in their neighborhood. Only 66 percent of eligible New York City voters are registered, and the voter turnout rate was 21 percent in the 2014 election.

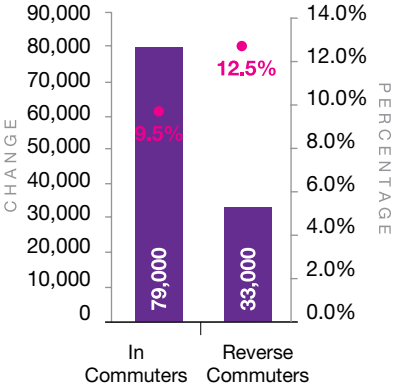
Decisions about City policies and initiatives should be informed by broad public engagement with a wide range of stakeholders, including residents whose voices are not heard because of barriers such as language and time. Recognizing the importance of this dialogue in shaping policy, OneNYC sought and continues to seek input from a broad range of residents.



Mayor Bill de Blasio, NYCHA Chair Shola Olatoye, and Public Advocate Letitia James with residents of the Wagner Houses in Manhattan



Change in commuting trends



In Commuters grew by **9.5%**

Reverse Commuters grew by **12.5%**

U.S. Census Transportation Planning Package

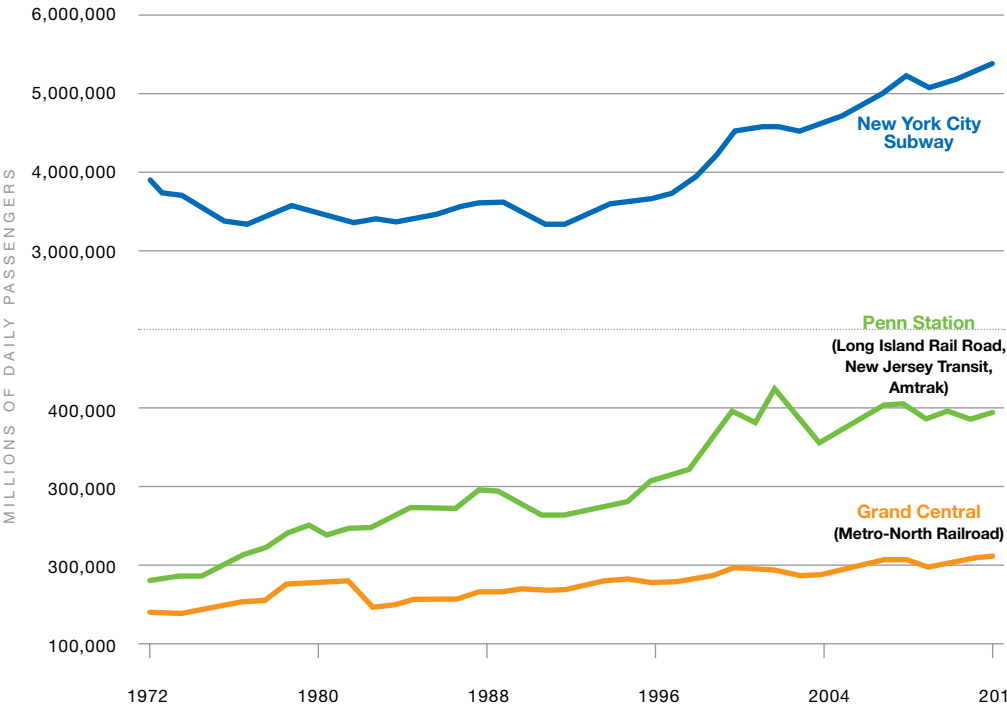
Importance of the Region

New York City’s future is intertwined with its metropolitan region. The city’s economy drives the region’s prosperity, while benefiting from the region’s transportation, skilled workforce, cultural resources, and extensive infrastructure. Our suburbs and our city face many of the same issues, including increased income disparity, the need for affordable housing to keep pace with our growth, and a shared harbor. Between 1990 and 2010, the region grew by 10.9 percent, with the greatest percentage changes in population in Northern New Jersey (14.3 percent). At the same time, New York City’s job growth constituted 80 percent of the region’s growth since 2000.

Every year, residents in the region take more than four billion trips, or 184 per person, on buses, subways, commuter railroads, and ferries. No other U.S. metropolitan area comes close. Regional travel is not only about coming into Manhattan. Between 2000 and 2010, the number of reverse commuters increased by 12.5 percent, compared to 9.5 percent arriving at our city’s regional transportation hubs. The ability to access a broad range of employment opportunities and workers within the region enhances the city’s competitiveness as a place to live and to locate businesses.

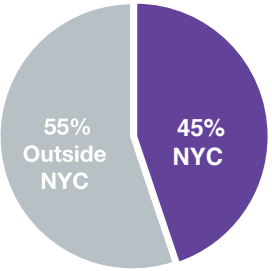
However, we are not keeping pace with this growth in regional travel, and must coordinate with our regional partners to advocate for the critical transportation connections across the Hudson in New Jersey, as well as with Long Island, Connecticut, and beyond. The fragmenting effects of a multitude of jurisdictions have hindered regional planning in our broader region, including in

Transit ridership, 1972-2012

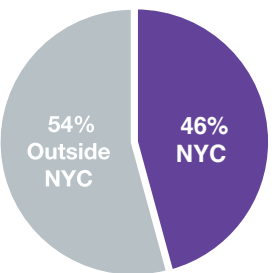


Regional Planning Association—Fragile Success

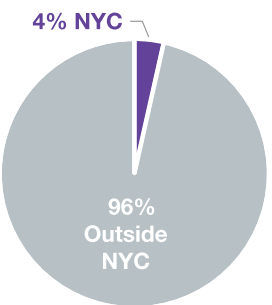
Percentage of total jobs



Percentage of gross regional product



Percentage of total geographic area

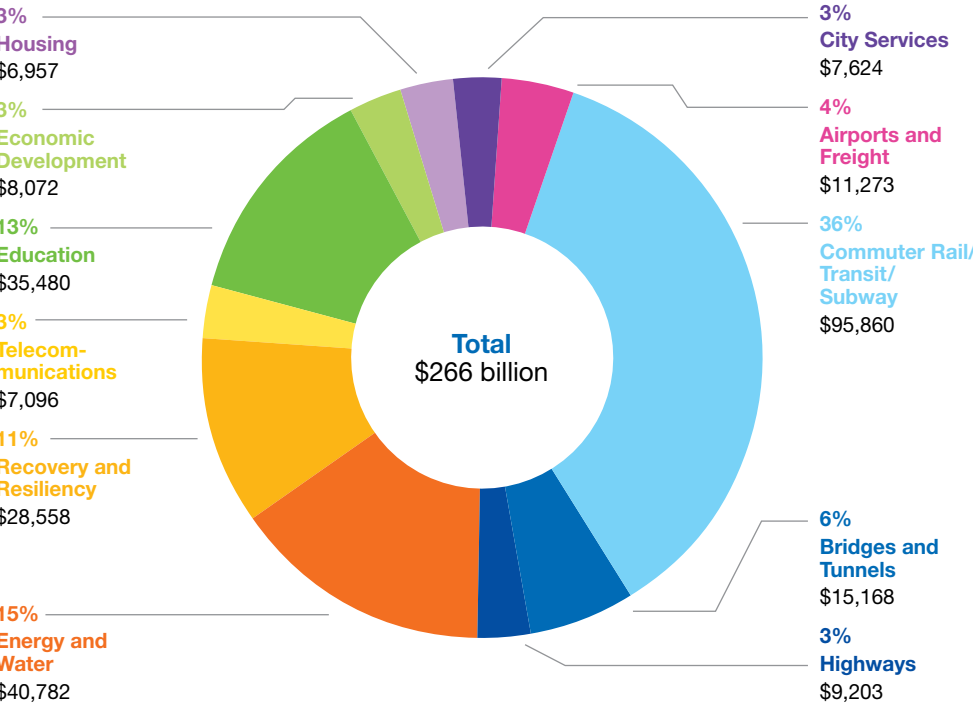


Despite comprising only 4 percent of the physical area, New York City is a powerful economic engine for the entire metropolitan region.

transportation, energy, telecommunications, and a number of other crucial areas. The siloed delivery of infrastructure and services does not produce optimal outcomes. New York City must be a leader in working with regional governments. This will ensure regional cooperation and coordination and that funds are wisely invested.

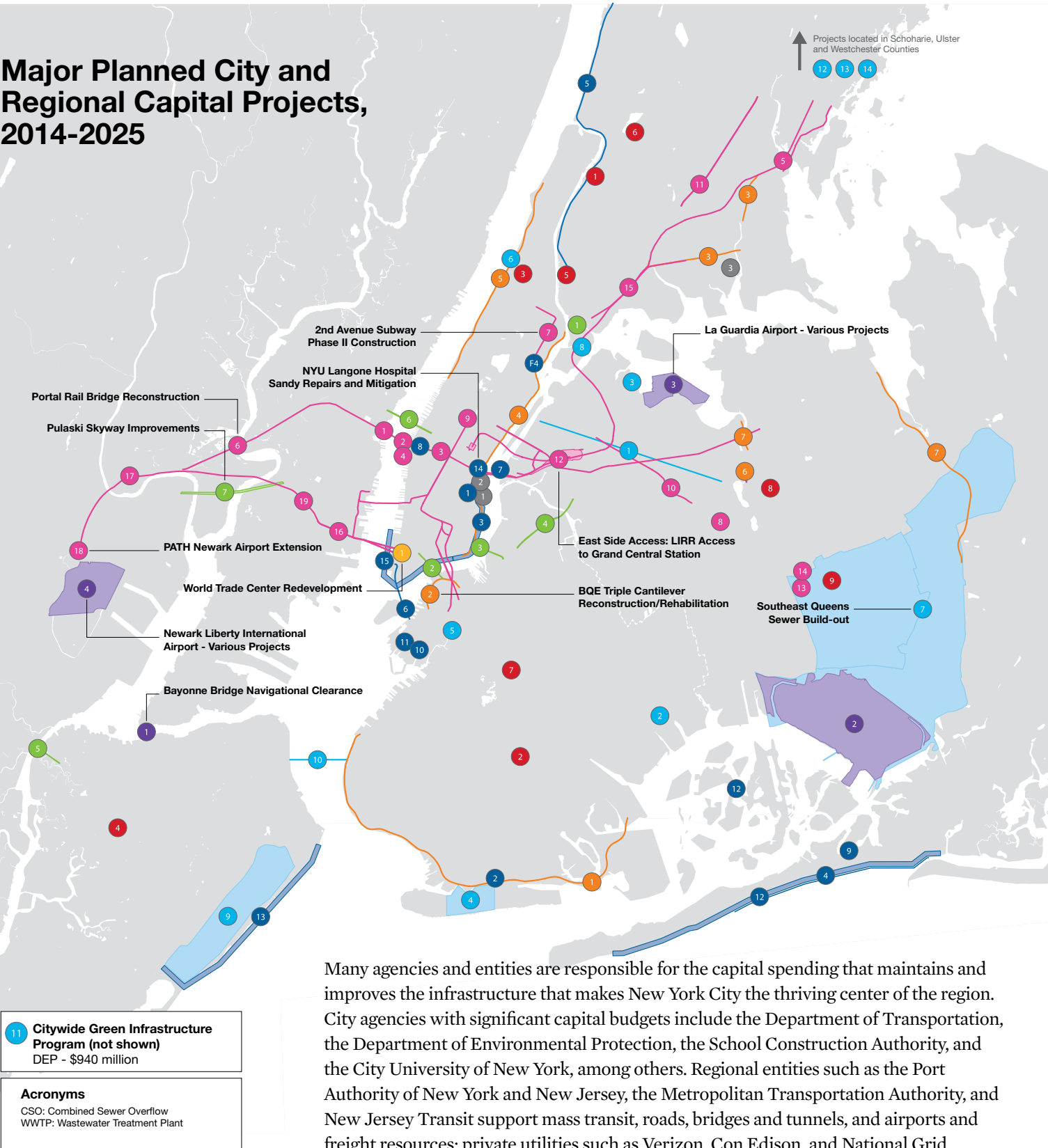
A powerful illustration of this shared responsibility is that over \$266 billion will be spent in the region over the next ten years by the City as well as regional agencies, such as the Metropolitan Transportation Authority (MTA) and Port Authority of New York and New Jersey (PANYNJ), and private utilities. The City’s preliminary ten-year capital budget makes up nearly 25 percent of this anticipated spending. This spending has a direct impact on New York City’s capacity to thrive and meet its goals for equity, sustainability, and resiliency. Looking ahead to the next ten years and beyond, the City is committed to taking a leadership role in directing these investments and incorporating them into our own strategic process, so that regional spending can be leveraged for the city’s maximum benefit.

Anticipated capital spending by City of New York and regional agencies, ten-year estimate\*



\*Since regional agencies and private utilities have varied capital budget years and timeframes, this analysis consists of a “rough justice” extrapolation where shorter-term capital budgets were extrapolated to a ten-year timeframe by assuming they would match projected annual spending in the future, escalated by inflation. For instance, the City assumes the MTA’s proposed 2015-2019 budget of \$32 billion will be funded and subsequently repeated from 2020-2024, escalating to \$37 billion based on inflation adjustment. The analysis is intended to be illustrative of the magnitude and use of future capital expenditures based on reasonable assumptions.

Major Planned City and Regional Capital Projects, 2014-2025



- Category
- Airports and Freight

Commuter Rail, Transit, Subway

Bridges and Tunnels

Roads and Highways

Energy and Water

Recovery and Resiliency

Education

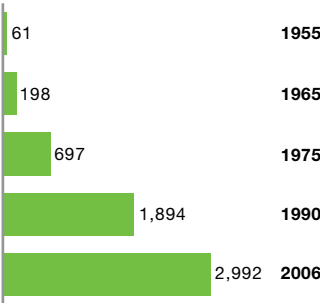
Economic Development

City Facilities

Key	Project Name	Lead Agency
1	Bayonne Bridge Navigational Clearance	PANYNJ
2	JFK Airport - Various Projects	PANYNJ
3	La Guardia Airport - Various Projects	PANYNJ
4	Newark Liberty International Airport - Various Projects	PANYNJ
1	Gateway Program: New Hudson River Rail Tunnel Design/Construction	Amtrak
2	Gateway Program: Hudson Yards Tunnel Right-of-Way Preservation	Amtrak
3	Moynihan Station Construction Phase II	Amtrak
4	North River Tunnels Reconstruction	Amtrak
5	Pelham Bay Rail Bridge Replacement	Amtrak
6	Portal Rail Bridge Reconstruction	Amtrak
7	2nd Avenue Subway Phase II Construction	MTA
8	Subway Signal Upgrades - 71st Avenue-Union Turnpike Capacity Improvements	MTA
9	Subway Signal Upgrades - 6th Ave Line Capacity Improvements	MTA
10	Subway Signal Upgrades - Queens Blvd Line Capacity Improvements	MTA
11	Subway Signal Upgrades - Dyre Avenue Line Capacity Improvements	MTA
12	East Side Access to Grand Central Station	MTA
13	Jamaica Station - East Side Access Capacity Improvements	MTA
14	Jamaica Station Bus Depot Renovations	MTA
15	Penn Station Access and Bronx Metro North Stations	MTA
16	PATH Grove Street Capacity Expansion	PANYNJ
17	PATH Harrison Station Replacement/Upgrade	PANYNJ
18	PATH Newark Airport Extension	PANYNJ
19	PATH Systemwide - Various Projects	PANYNJ
1	RFK Bridge Toll Plaza and Ramps Reconstruction	MTA
2	Brooklyn Bridge Rehabilitation	DOT
3	Williamsburg Bridge Reconstruction/Rehabilitation	DOT
4	Kosciuszko Bridge Replacement	NYSDOT
5	Goethals Bridge Modernization/Improvements	PANYNJ
6	Lincoln Tunnel Helix Replacement	PANYNJ
7	Pulaski Skyway Improvements	PANYNJ
1	Belt Parkway Bridges Reconstruction/Rehabilitation	DOT
2	BQE Triple Cantilever Reconstruction/Rehabilitation	DOT
3	Bronx Highways and Parkways Bridges Reconstruction/Rehabilitation	DOT
4	FDR Drive Bridges Reconstruction/Rehabilitation	DOT
5	Henry Hudson Parkway Bridges Reconstruction/Rehabilitation	DOT
6	Van Wyck Expwy - Kew Gardens Interchange Replacement	NYSDOT
7	Major Queens Highways and Parkways Bridges Reconstruction/Rehabilitation	DOT
1	Rainey-Corona Transmission Capacity Improvements	ConEd
2	26th Ward WWTP - Various Projects	DEP
3	Bowery Bay WWTP - Various Projects	DEP
4	Coney Island Sewer Upgrades	DEP
5	Gowanus Canal CSO Facility Construction	DEP
6	North River WWTP Cogeneration Upgrades	DEP
7	Southeast Queens Sewer Build-out	DEP
8	Wards Island WWTP Upgrades	DEP
9	Mid-Island Bluebelt Stormwater Improvements	DEP
10	Water Siphons Replacement for Channel Deepening	DEP/EDC & PANYNJ
11	Citywide Green Infrastructure Program	DEP
12	Delaware Aqueduct Repair	DEP
13	Gilboa Dam Resiliency	DEP
14	Kensico Eastview Connection Tunnel Resiliency	DEP
1	Bellevue Hospital Facility Recovery and Resiliency	HHC
2	Coney Island Hospital Facility Recovery and Resiliency	HHC
3	East Side Coastal Resiliency	ORR, DPR
4	Rockaway Boardwalk Reconstruction	ORR, DPR
5	Hudson Line Restoration	MTA
6	Hugh L Carey Tunnel Restoration	MTA
7	Queens-Midtown Tunnel Restoration	MTA
8	LIRR East River Tunnel & West Side Yards Resiliency Upgrades	MTA
9	Ocean Bay Apartments Bayside	NYCHA
10	Red Hook East Restoration	NYCHA
11	Red Hook West Restoration	NYCHA
12	Rockaway Reformulation (Jamaica Bay and Atlantic beaches)	USACE
13	East Shore of Staten Island	USACE
14	NYU Langone Resiliency Improvements	—
15	Lower Manhattan Comprehensive Coastal Protection	ORR, EDC
1	Bronx Community College Upgrades	CUNY
2	Brooklyn College Expansion	CUNY
3	City College Upgrades	CUNY
4	College of Staten Island Expansion and Upgrade	CUNY
5	Hostos Community College Expansion	CUNY
6	Lehman College Expansion	CUNY
7	Medgar Evers College Expansion	CUNY
8	Queens College Upgrades	CUNY
9	York College Expansion	CUNY
1	World Trade Center Redevelopment	PANYNJ
1	Bellevue Hospital Facility - Various Projects	HHC
2	Manhattan Districts Garage Replacement	DSNY
3	Bronx Districts Garage Replacement	DSNY

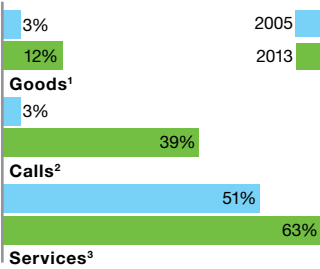


Total world air travel



Distance passengers traveled (billion kilometers)  
Hofstra University; International Civil Aviation Organization; McKinsey Global Institute analysis

Share of selected cross-border flows that are digital



1 Based on China data.  
2 Excludes other VOIP minutes.  
3 Based on US data.  
Research; Telegeography; OECD; U.S. Bureau of Economic Analysis; McKinsey Global Institute analysis

Global Trends

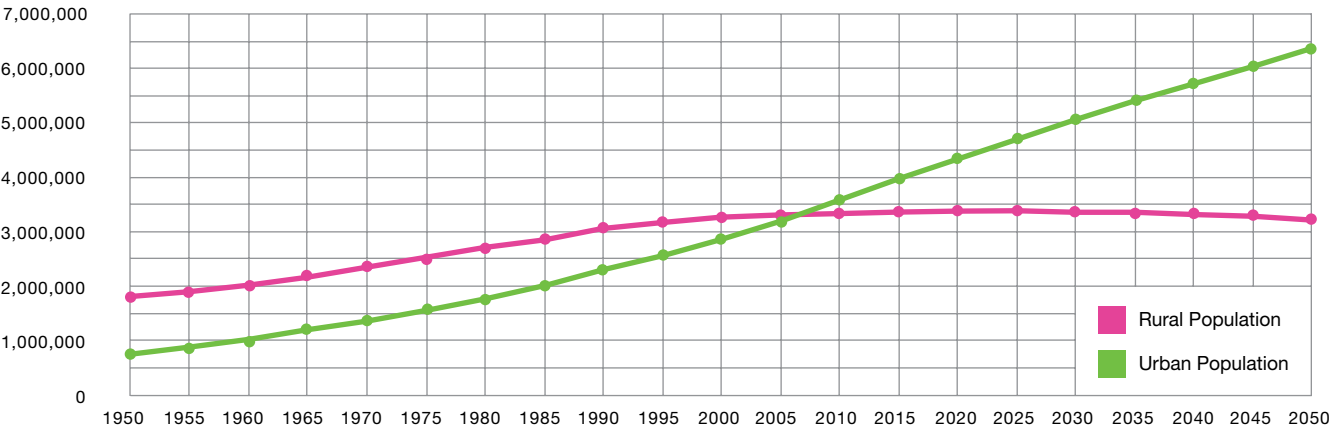
More than half of the world’s population now lives in cities, and the percentage continues to rise. By 2050, 66 percent of the world’s population is projected to be urban dwellers, dramatically reversing the global urban-rural population distribution of 1950. Cities must take the lead in solving the key challenges of our time. Growing populations and economies have the potential to open new markets for New York businesses, though there may also be greater competition from low-wage nations.

Growth worldwide makes it increasingly important to address air and water quality, food systems, and our natural resources. Global growth is also tied to rising greenhouse gas emissions, climate change, and its associated sea level rise and global temperature changes.

Connectivity worldwide fosters interaction and collaboration between distant populations on a scale never seen before. Yet a world with increased technological, physical, economic, and telecommunications connections also makes us more vulnerable to global shocks. These include the risk of terrorism (cyber or physical) as well as vulnerability to epidemics and economic upheavals taking place in other parts of the world.

While New York City has little control over these global trends, we can anticipate them and act now to ensure that we are better prepared and more resilient to their potential threats. In 2015, the world’s governments are set to establish the United Nations Sustainable Development Goals for 2015-2030, focusing not only on ending extreme poverty and hunger, but also adding the challenges of ensuring more equitable economic growth and environmental sustainability. OneNYC follows the same path, recognizing the critical link between sustainable and inclusive growth moving forward, not only for our city, but for the world.

World urban and rural population, 1950–2050



United Nations Department of Economic and Social Affairs–Population Division







## Technology Spotlight

Digital technology and the exponential growth of data are transforming every aspect of the economy, communications, politics, and individual and family life. The implications are profound for every sector of society—including government. The City must respond to these changes and use new digital tools to improve services and create more opportunities for all New Yorkers.

This plan acknowledges the importance of technology and data to each of our visions and points to new ways the City will engage with residents, develop our policies, and manage our work.

### A Growing, Thriving City

The tech ecosystem is among the fastest growing and highest paying sectors in New York City, representing 291,000 jobs and \$30 billion in wages annually. Supporting this sector is a critical part of the Administration's approach to tackling inequality, expanding our economy, and creating good jobs for all New Yorkers. The key to doing this is ensuring employers have the workers they need to innovate and grow. We will advance our competitiveness as the city of choice for tech firms, and we will prepare New Yorkers for 21<sup>st</sup> century jobs.

- Support expanded access to affordable, reliable, high-speed broadband for businesses across New York City
- Enable access to flexible, affordable commercial space for technology companies and the broader innovation economy, ensuring that the city's emerging sectors have the physical space to start and scale
- Support the creation of an advanced manufacturing network which would include research and development facilities, workspace for start-ups, fabrication labs, workforce programs, and community engagement opportunities
- Significantly continue to expand access to computer science/technology education across New York City public schools by 2020
- Support workforce training programs such as the Tech Talent Pipeline—an industry partnership designed to deliver quality jobs for New Yorkers and quality talent for New York City's tech businesses

### A Just and Equitable City

As the world becomes more digital and technology-dependent, there is a growing gap between technology haves and have-nots. The City must narrow this digital divide and ensure all New Yorkers can participate fully. We will improve access and support innovation.

- Continue to evolve 311's digital capabilities, more easily connecting residents to services and information
- Ensure roll-out of LinkNYC, offering free wireless locations throughout every New York City neighborhood
- Invest in innovative ways to provide high-speed Internet to homes, business, and the public
- Expand the City's internal data integration
- Optimize nyc.gov web content for mobile devices
- Review every step of the City's procurement process for opportunities to reduce delivery time, reduce costs, and make it easier for small businesses to help solve complex urban policy challenges

### A Sustainable City

Technology can help people and institutions operate more efficiently and reduce energy needs and emissions. It will help us stake our claim as both the most sustainable big city in the world and a leader in the global fight against climate change.

- Implement an Information & Communication Technology-based civic engagement campaign using real-time open data tools to encourage voluntary changes in household energy consumption
- Launch a series of mobile applications that will empower and engage residents to support brownfield cleanup efforts
- Install modern lighting and sensors, which will help cut down lighting in empty buildings at night. This will help our city make a serious dent in our greenhouse gas emissions

### A Resilient City

Digital tools can help solve some of the City's most urgent resiliency challenges, bolster neighborhood resiliency and social cohesion, and improve our ability to withstand disruptive events.

- Leverage digital strategies to develop a comprehensive and interactive platform to map and aggregate the activities of community-based organizations and government agencies in local communities across New York City
- Through the Neighborhoods.nyc initiative, provide a baseline set of digital tools that connect residents to government services and each other, and leverage open-data for information about neighborhood-specific events

### Effective Government

The technology sector has been a leading innovator in service delivery. Government can apply these principles to improve service delivery and increase civic engagement.

- Encourage adoption of the tech sector's service design principles, such as human-centered design, to guide the development of City policies and service delivery practices
- Adopt two-way digital communication, which must play a major role in all aspects of civic engagement, from government-owned online properties like nyc.gov to strategic use of non-government platforms and products



Vision 1

# Our Growing, Thriving City

New York City will continue to be the world’s most dynamic urban economy, where families, businesses, and neighborhoods thrive

New York City will...

- ✔ Be home to 9 million people by 2040
- ✔ Increase median household income
- ✔ Continue to outperform the national economy
- ✔ Spur more than 4.9 million jobs by 2040
- ✔ Ensure the average New Yorker can reach 1.8 million jobs by transit within 45 minutes by 2040, a 25 percent increase from today
- ✔ Ensure 90 percent of New Yorkers can reach at least 200,000 jobs by transit within 45 minutes by 2040
- ✔ Create and preserve 200,000 affordable housing units and support creation of 160,000 additional new housing units by 2024
- ✔ Support creation of at least 250,000 to 300,000 additional housing units by 2040

Goals



Industry Expansion & Cultivation

New York City will have the space and assets to be a global economic leader and grow quality jobs across a diverse range of sectors



Workforce Development

New York City will have a workforce equipped with the skills needed to participate in the 21<sup>st</sup> century economy



Housing

New Yorkers will have access to affordable, high-quality housing coupled with robust infrastructure and neighborhood services



Thriving Neighborhoods

New York City’s neighborhoods will continue to thrive and be well-served



Culture

All New Yorkers will have easy access to cultural resources and activities



Transportation

New York City’s transportation network will be reliable, safe, sustainable, and accessible, meeting the needs of all New Yorkers and supporting the city’s growing economy



Infrastructure Planning & Management

New York City’s infrastructure and built environment will exemplify global economic, environmental, and social leadership



Broadband

Every resident and business will have access to affordable, reliable, high-speed broadband service everywhere by 2025

Introduction

**Today, New York City is a global leader with an increasing number of jobs and growing economic activity that supports families, businesses, and neighborhoods.** As detailed in New York City Today and Tomorrow, our population and economy are growing, with 8.4 million residents who speak an estimated 200 languages, and a record 4.2 million salary and wage jobs. Within the past year, we have had the highest twelve months of job growth in over two decades. We see evidence of our economic strength in the expansion of firms new to New York, such as Google, Makerbot, and Etsy, and we remain home to more Fortune 500 companies than any other city in the world. Visitors continue to flock to New York City and support a vibrant economy, with a record 56 million tourists in 2014.

**Our economy also faces challenges. Growing income inequality, obstacles to job mobility, a crisis of housing affordability, and aging infrastructure could all hamper long-term growth.** More than half of New Yorkers are rent-burdened, which means that they spend more than 30 percent of their income on rent. And 21.5 percent live below the poverty line—as defined by the New York City Center for Economic Opportunity. In today’s evolving economy, we must compete with global and local peers to attract and retain talent by providing diverse opportunities for employment; training for individuals to prepare them to enter the workforce; enhancing our rich cultural life and recreation opportunities; and investing in infrastructure systems that support the city across all boroughs.

**OneNYC is a plan to address these challenges head-on and foster long-term, inclusive, and sustainable economic growth that benefits all New Yorkers.** Our city’s economic success requires that we create access to opportunity, foster innovation, and train, retain, and attract talent. We have already started this important work. The City has enacted Paid Sick Leave so more New Yorkers can care for themselves or a family member without incurring financial burdens; increased and significantly expanded the living wage to support our residents in making ends meet; released Career Pathways, a plan to streamline and expand workforce development programs; and launched Housing New York, a vision to provide affordable housing to more New Yorkers.

We will build a stronger, more just New York by:

- Maintaining New York City as the global capital for innovation. We will support our core industries and nurture the innovation economy by investing in new, specialized space for creative firms; increasing capacity for Class A office space in central business districts (CBDs); expanding state-of-the-art infrastructure; and recruiting and building a strong talent base.
- Making it easier for businesses to start, grow, and thrive in New York. Small businesses represent 98 percent of all firms in New York City and provide a pathway to economic mobility for New Yorkers from all walks of life. To help these busi-

“Build more housing and make sure there is an affordable rental component throughout. Build it near [public] transit where possible and as green as [is] economically feasible. Invest, where possible, in additional local and regional [public] transit to create more areas where housing can be linked to jobs.”

—Mark S., Brooklyn

nesses thrive, we will simplify and reduce the regulatory landscape through the Small Business First initiative.

- Unlocking our human capital potential by providing access to skills development and the opportunity for all New Yorkers to ensure that our businesses have the workforce they need—not just today, but in the future. We will build on the strategies laid out in Career Pathways for refocusing the City’s workforce development resources. These initiatives will include establishing a “First Look” process for City hiring; targeting training programs to traditionally underrepresented New Yorkers; and ensuring young New Yorkers are prepared to participate in higher education and enter the workforce.
- Investing in infrastructure that connects our neighborhoods to jobs, and our city to the world. The City is committed to expanding transportation and broadband access, and strengthening the systems that connect New Yorkers to economic opportunities. These improvements will better match the geography of our job growth and housing across the boroughs, providing 90 percent of New Yorkers with access to at least 200,000 jobs within a 45 minute commute by public transit.
- Positioning New York City as a leader in achieving triple bottom line results through investments in infrastructure and City-owned assets. We will begin to implement this strategy in our capital planning process, evaluating major investments on the basis of their economic, social, and environmental impacts. This process will not only support job growth, but also advance our agenda for a more sustainable, equitable, and productive economy.

Five key pillars drive the City’s economic development strategy:



Maintain New York City as the global capital for innovation.



Make it easier for businesses to start, grow, and thrive in New York City.



Unlock the full potential of our human capital by providing access to skills development to prepare our workforce for jobs today and in the future.

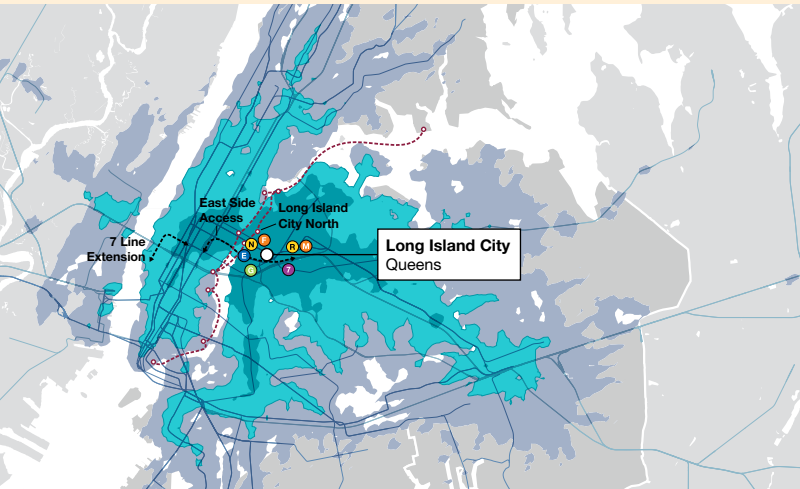
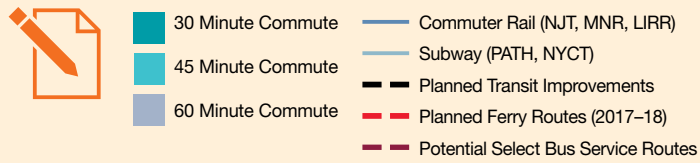


Invest in infrastructure to connect our neighborhoods to jobs and our city to the world.



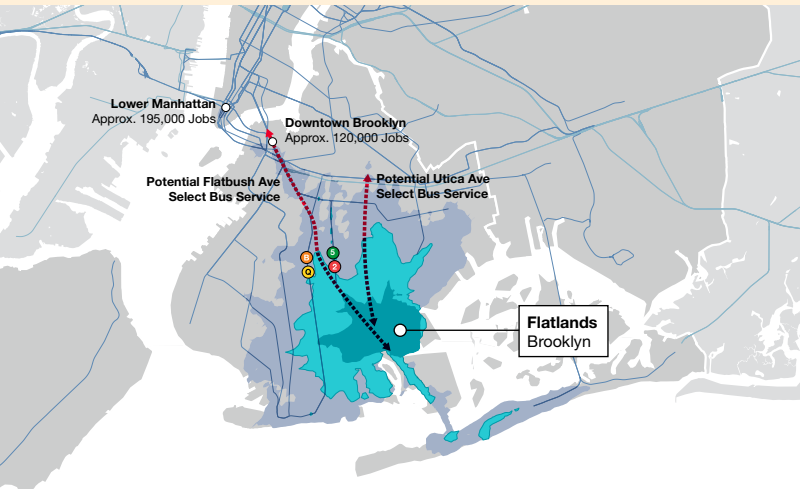
Position New York City as a leader in achieving triple bottom line results—producing the highest economic, social, and environmental returns—from investment in infrastructure and City-owned assets.





Long Island City, Queens

Today, the average resident of Long Island City can reach 2.3 million jobs within 45 minutes by transit. The City, working with the MTA, will propose transit improvements, housing, and employment centers to leverage transit connectivity.



Flatlands, Brooklyn

The average resident of Flatlands can only access 70,000 jobs within 45 minutes by transit. The City, working with the MTA, will propose improvements to transit service to better connect residents to employment centers in Downtown Brooklyn, Lower Manhattan, and elsewhere.

Note: Commute time analysis based on 2015 MTA (NYCT, LIRR, MNR, SIR), Port Authority (PATH), New Jersey Transit (Commuter Rail and Bus), and Westchester County (Bee-Line Bus) transit services.

LEHD 2011, MTA, PANYNJ, NJT

Transit Access to Jobs

Mass transit is a vital part of most New Yorkers’ everyday lives. New Yorkers rely on public transportation more than residents of any other U.S. city—56 percent of our trips to work are via public transit, while the next ten largest U.S. cities average only 11 percent. This reality fuels inclusive economic growth, supports healthy activity, and avoids many harmful environmental impacts. While New Yorkers have a longer average commute time than residents of other large cities, the average New Yorker can reach over 1.4 million jobs, or nearly 40 percent of payroll jobs, using public transit in 45 minutes.

While average access to jobs by public transit is high, differences among neighborhoods are significant, as illustrated in the maps at left. As the city grows, higher housing prices can push low-income New Yorkers to neighborhoods far from job centers, which only worsens these differences. More than half of the city’s neighborhoods with lower-than-average household income—representing 2.3 million residents—have a lower-than-average number of jobs accessible by transit.

Improving public transit access to jobs is one of the key approaches to growth and greater equality featured in this plan. **The City will target a 25 percent increase in transit access to jobs for all New Yorkers, and will focus on neighborhoods where jobs access is particularly low by ensuring 90 percent of New Yorkers can access at least 200,000 jobs within 45 minutes.** Residents of neighborhoods such as Far Rockaway in Queens and Co-Op City in the Bronx cannot reach 200,000 jobs within 45 minutes. New public transit and growing jobs in the outer boroughs will help close this gap.

This plan features initiatives to improve jobs access for New Yorkers by:

- Supporting growth of jobs closer to housing through investments in current and future job centers throughout the boroughs, from the Brooklyn-Queens Waterfront to Hunts Point
- Preparing New Yorkers to access more jobs in our economy and advance their careers through workforce development opportunities across the five boroughs
- Creating and preserving housing close to jobs and transit through the implementation of Housing New York
- Improving transit connectivity by expanding the City’s Select Bus Service (SBS) network, creating a city wide ferry network, and supporting other system-wide investments





# Industry Expansion & Cultivation

**Goal: New York City will have the space and assets to be a global economic leader and grow quality jobs across a diverse range of sectors**

INDICATORS + TARGETS

- ✔ Spur more than 4.9 million jobs by 2040
- ✔ Increase the share of private sector jobs in innovation industries from 15 percent today to 20 percent in 2040
- ✔ Increase median household income
- ✔ Continue to outperform the national economy, measured by growth in NYC GCP versus US GDP

Overview

New York City has seen very strong economic growth over the past five years. We have gained 422,000 jobs and demonstrated an employment growth rate of 11.5 percent—compared to 6.1 percent across the U.S., with 113,000 private sector jobs added in 2014 alone. Yet, there is an opportunity to catalyze future growth through a more diversified economy with increased employment across a broader set of industries.

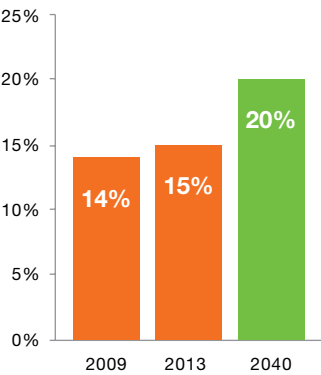
New York City has benefited from, and will continue to grow, sectors in which it is a global leader, such as finance, insurance, and real estate (FIRE). Diversification will add to this growth and reduce economic risk for the city as a whole. For example, finance and insurance account for 30 percent of the city’s total payroll and 27 percent of the base, but only 9 percent of employment. There are increasing signs that this diversification is already occurring. While lower-skill jobs in food services, retail, and accommodation have increased, so too have high-wage, high-growth sectors driven by the tech ecosystem, which now accounts for over 291,000 jobs and \$30 billion in wages annually. Furthermore, advances in technology will continue to drive job growth in the high-skilled innovation industries.

Private jobs in innovation industries grew 15.8 percent from 2009 to 2013. Many of these jobs provide quality wages and have spurred growth outside the core Manhattan office markets. Moreover, some innovation industry firms have helped increase opportunities in traditional industries, such as manufacturing, which are leveraging new technologies to transform their businesses and create quality jobs. Although New York City is already a major hub for innovation industries, such as advertising, media, and technology, we have the opportunity to catalyze growth in others, such as the life sciences and advanced manufacturing sectors. To achieve this we must deliver a talented workforce, maintain a strong infrastructure, and ensure space and access for the specialized facilities these companies require.

To grow a diversified economy that offers quality jobs to all New Yorkers, the City must unlock the potential for businesses—in traditional industries, the innovation economy, and small businesses—to grow and innovate.



NYC Innovation Economy Employment Growth



Source: Moody's

Initiative 1

**Maintain New York as the global capital for innovation by supporting high-growth and high-value industries**

A growing population, coupled with changes in the way we live and work, requires both the expansion of commercial space as well as the development of new models for the commercial business districts (CBDs) of the future. Today’s high-growth industries are knowledge-economy industries that invest heavily in research and development (R&D) and intellectual capital, thereby benefiting from opportunities to cluster and share information. To prepare for future economic growth, the City can support the activation of space within existing clusters (such as media and finance) as well as future innovation clusters, which will be dynamic, mixed-use urban business districts that benefit from sharing knowledge and resources, across the five boroughs.

This report defines innovation industries as those that:

- Derive their primary value from intellectual capital and creativity, and thereby place a strong premium on talent
- Invest heavily in R&D of new business models, harness new technologies, or leverage old technologies in new ways
- Disrupt the status quo to create new markets, often by collaborating across disciplines or with public or academic partners

These industries include:



Advanced Manufacturing (including Clean Tech)



Advertising, Media, and Arts



Biotech/Life Sciences



Design



E-Commerce



Tech and Information





Supporting Initiatives

A. Maintain and grow New York City’s traditional economic sectors

New York City’s traditional sectors are key engines of economic growth, job creation, tax revenue, and foreign investment. These sectors, which include finance, entertainment, fashion, and higher education, face a number of challenges as they seek to expand or maintain their footprints within their existing geographic areas. To ease these challenges, the City will examine strategies to support office development in central business districts (CBDs) throughout New York City, including both traditional and growing CBDs. Strategies for preserving and growing these commercial districts include zoning mechanisms for supporting new development and activating existing commercial corridors.

For example, the entertainment industry in New York is critical to maintaining our economic competitiveness and ability to attract residents, tourists, and businesses. It is also a key source of direct economic activity and jobs, and is one of the city’s strongest and most unique traditional sectors. Broadway ticket sales alone were \$1.4 billion in 2014. During the 2012-2013 season, the Broadway industry contributed \$11.9 billion to the city’s economy and supported 87,000 jobs. Film and television production in the city are also at an all-time high, currently generating a direct annual spend of \$7.1 billion, \$400 million in tax revenue, and 130,000 jobs. With this activity, the need for commercial spaces for these industries is also at an all-time high. The City will leverage its assets and strategic partnerships to activate the types of spaces required to maintain and grow the entertainment industry.

New York City’s fashion industry employs more than 183,000 people, accounting for 5.5 percent of the city’s workforce and generating \$11 billion in total wages, with tax revenues of \$1.35 billion. An estimated 900 fashion companies are headquartered in the city, and in 2013, there were approximately 13,800 fashion firms with a presence. New York City is home to more than 75 major-fashion trade shows, plus thousands of showrooms. We can help maintain the city’s status as a fashion-industry leader by supporting the sector and fostering new businesses across the spectrum from design to manufacturing.

B. Ensure that businesses in emerging sectors are able to find and fit out the space they need to start, grow, and scale their companies

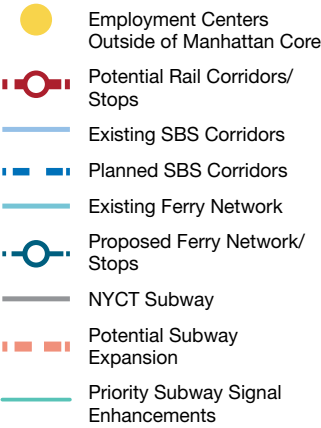
In addition to support for traditional sectors, the City is studying ways to respond to changing patterns in the way we live and work. For instance, a hallmark of the innovation economy is the number of self-employed and freelance workers, with nearly 834,000 freelancers in 2012. These jobs require workspace, which can be found through high-cost co-working facilities or by working at home. Approximately 52,000 individuals or 21 percent of self-employed workers in New York City worked from home in 2013. With a focus on alleviating barriers to entrepreneurship and business-to-business or business-to-customer interaction,



we are completing a study to identify new real estate development concepts that allow for live-work arrangements such as live-work apartments, live-work buildings, or live-work districts.

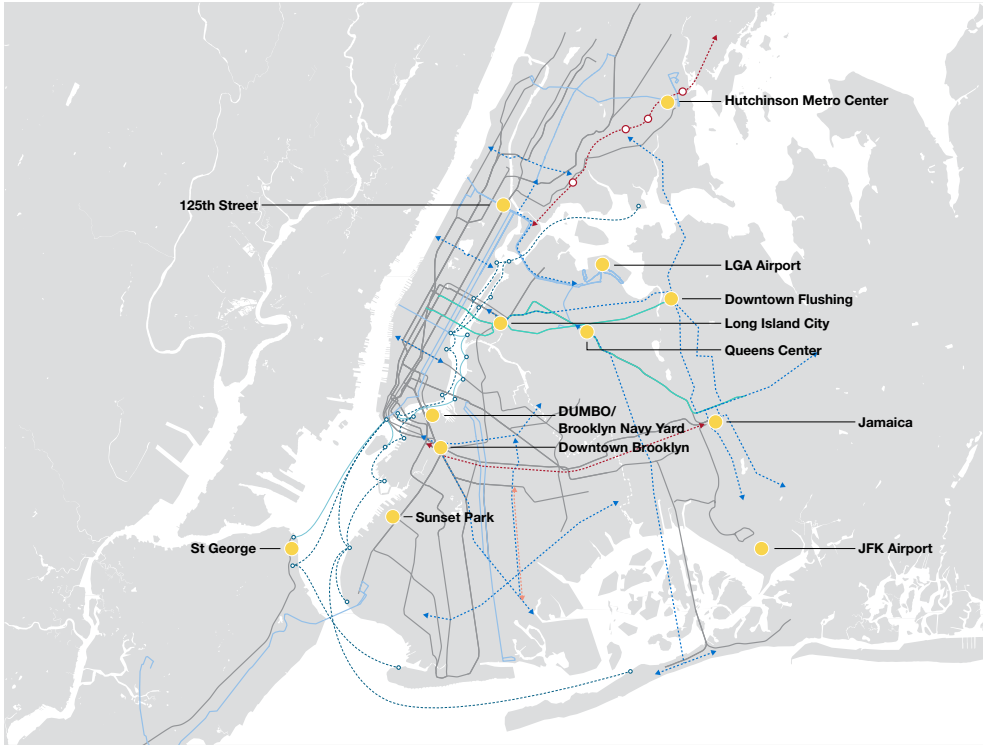
The mechanisms for increasing availability of affordable, flexible commercial space might include providing a loan guarantee for upgrades to underutilized or underinvested commercial and/or industrial loft space; strategically activating City-owned property for targeted commercial uses; designing new zoning approaches; creating financing vehicles for development; and considering ways to complement existing incentives.

Employment Centers Outside of Manhattan Core



The continued growth of employment centers across the city is one way in which the city’s economy, strong and robust in its core and in its traditional sectors, continues to diversify across the city and into new innovative sectors. While NYC has seen overall employment growth of nearly 8% since 2009, employment has grown even faster outside the Manhattan core, with growth of 13% in Brooklyn and over 9% in Queens. The areas outside Manhattan now make up a larger share of the city’s employment than they did before the recession.

Some of the city’s more dense employment centers that are the focus of targeted investment and planning are pictured in the



Source: 2011 US Census LEHD  
Note: Based on analysis of 2011 LEHD data for census tracts outside of Manhattan core with job density greater than 50,000 workers per square mile. Highest employment density census tract in Staten Island included.

Initiative 2  
Make triple bottom line investments in infrastructure and City-owned assets to capture economic, environmental, and social returns

The City will identify opportunities to maximize economic, environmental, and social returns (the triple bottom line) in capital planning and investments in City-owned assets. The initiatives below detail the City’s intent to invest in City-owned assets, while initiatives related to infrastructure planning are detailed in the Infrastructure Planning and Management goal.



### East Midtown



East Midtown has long been the global capital of commerce, but the quality and capacity of its office space does not meet the demands of modern tenants. Modern tenants seek new buildings with open floor plans and high floor-to-ceiling heights, but the average age of buildings in the East Midtown area is over 75 years.

In May 2014, the City announced a two-track approach to protecting and strengthening East Midtown’s role as the world’s premiere business district. The first step was a focused proposal for the Vanderbilt Corridor between 42<sup>nd</sup> and 47<sup>th</sup> Streets. In exchange for permitting additional square feet for development, the City will provide an option for developers to make specific improvements in the area’s transit-oriented pedestrian circulation and public realm.

This proposal has since been approved by the City Planning Commission and is currently before the City Council. The first building seeking approval pursuant to this approach is One Vanderbilt. The developer will provide more than \$200 million in public space and transit improvements for the Grand Central Terminal subway station in return for increased development rights. The second stage for a broader proposal for the entire East Midtown district is being examined through a longer-term, stakeholder-driven process. A task force led by Manhattan Borough President Gale Brewer and Council Member Dan Garodnick will provide recommendations to the Department of City Planning later this year.

### Applied Sciences

Applied Sciences New York City is the ambitious initiative to build and expand world-class applied sciences and engineering campuses in New York City. The campuses will more than double the number of full-time applied science graduate students and faculty members and create a projected 48,000 jobs over the next 30 years. In addition, the campuses will not only create jobs and enrich the City’s existing research capabilities, but also lead to innovative ideas that can be commercialized, catalyzing the establishment of an anticipated 1,000+ spin-off companies over the next thirty years. This increases the probability that the next high growth company—a Google, Amazon, or Facebook—will emerge right here in Silicon Alley.

### Laboratory Space for Early State Life Sciences and Research and Development Companies

With \$1.4 billion in annual National Institutes of Health funding across nine academic medical centers, New York City is positioned to play a transformative role in early-stage life sciences R&D. In fact, there has been a 15 percent total increase in life sciences jobs since 2009, bringing the total to more than 13,000 jobs and one million square feet of life sciences R&D laboratory space. However, this is significantly less than the 50,000 jobs and 10 million square feet in life science hubs such as Boston and Cambridge, Massachusetts. To achieve a critical mass of life sciences activity and to support roughly 10,000 new commercial life science jobs, we need an additional four to five million square feet of laboratory space. We will maximize the potential of City-owned assets to catalyze the development of critically needed wet-lab space in proximity to key anchor institutions and hubs for the sector. Additionally, the City will consider zoning and other non-capital intensive measures to spur the development of this type of space.



### Supporting an Advanced Manufacturing Network



New York City is well-positioned to become a center for innovation in advanced manufacturing. Our traditional industrial businesses are adopting new technologies and practices to increase production efficiency and overall competitiveness, while the startups driving these advancements are benefiting from New York City’s entrepreneurial talent pool, academic research, and access to markets. The City will support the creation of an Advanced Manufacturing Network, which will link traditional and emerging firms to resources across the tech ecosystem. The City will also invest in state-of-the-art facilities that will house high-tech equipment, affordable workspaces, business support services, and workforce training programs. The centers will help businesses reduce their upfront costs by sharing high-cost technologies needed for innovation in today’s manufacturing sector, such as 3D printers and robotics equipment. Such investments will ensure New York City’s manufacturing firms and workforce remain competitive in the 21<sup>st</sup> century economy.

### Invest in Fashion Manufacturing and Innovation Hub



The City will help the fashion manufacturing industry, especially the garment production business, transition to a more sustainable cluster model, which will offer access to more affordable real estate and workforce training opportunities to enhance skills. For example, the City invested \$3.5 million to support Manufacture New York to fit-out and modernize a 160,000 square foot space in Sunset Park, Brooklyn. This hub will include:

- A workforce development center to help train workers to develop fashion production skills and receive placements in on-site, high quality jobs
- A research and development center to help create new materials and wearable technologies
- A small-batch factory specializing in print-making and sample productions
- A design accelerator to create an educated pipeline of fashion and manufacturing talent
- Incubator space containing 12 private studios, classroom space, conference rooms, a computer lab, an industrial sewing room, storage, and work areas for 50 designers

The creation of this hub represents the City’s commitment to encourage innovation and partnership between the public and private sectors. Such investments ensure that companies at the cutting edge of the fashion industry can grow and innovate right here in New York City.





Supporting Initiatives

A. Support a state-of-the-art food production and distribution industry

Hunts Point Food Distribution Center (HPFDC) is one of the largest food-distribution centers in the world, occupying 329 acres and housing more than 115 firms. We will support the modernization and upgrade of Hunts Point to create space for food retailers and wholesalers serving the city. Currently, 60 percent of the city’s produce and 50 percent of meat and fish pass through the HPFDC, which directly employs 8,000 people and is responsible for many other indirect jobs and positive economic spillover effects in the Hunts Point Peninsula and throughout the South Bronx. By investing in modernizing and improving resiliency for the public markets and other HPFDC properties, Hunts Point will be better prepared for power outages, coastal flooding, job losses, and other disruptions that could come from extreme storm events to the citywide food distribution system. Moreover, at the adjacent Hunts Point Wastewater Treatment Plant, the New York City Department of Environmental Protection (DEP) is working to replace sludge digesters with a new design that could potentially take the food waste from HPFDC and use it as a source of energy for a local microgrid. Additionally, the City will work with the New York State Department of Transportation (NYSDOT) to make efforts to reconfigure the Bruckner-Sheridan Interchange and Sheridan Expressway to improve truck access to the HPFDC. HPFDC will anchor a world-class food cluster in Hunts Point Peninsula—with economic benefits for the South Bronx as well—thus strengthening the entire citywide food-distribution system.

B. Activate the City’s industrial assets to support the creation of quality jobs

The City will renovate and redevelop City-owned industrial assets to maximize their economic development potential as well as their positive outcomes. The City will prioritize the creation of high-quality jobs as well as the activation of job-intensive uses within its industrial properties.

Initiative 3

Foster an environment in which small businesses can succeed

Small businesses are critical to the city’s growth, providing entrepreneurial and employment opportunities to New Yorkers; delivering important local services; and attracting residents and visitors by adding to the urban fabric that makes New York City so compelling. Recognizing the importance of small businesses to the City’s economy and character, New York City will seek to address the challenges they experience in starting and expanding. In recent years, small businesses (with fewer than 100 employees) and very small businesses (with fewer than 20 employees) have grown more rapidly than large businesses, in terms of percentage change in number of establishments. Small businesses, especially neighborhood retailers, support economic mobility for a diverse range of New Yorkers, from immigrant families to low-income entrepreneurs looking for a pathway to the middle class.



Supporting Initiative

A. Reduce the regulatory burden on small businesses through the Small Business First plan

Small Business First is a comprehensive plan to reduce the regulatory burden on small businesses in New York City. It will leverage a \$27 million investment over the next five years to simplify the regulatory hurdles many small businesses face in opening and operating. It will improve communication between business owners and City government; streamline licensing, permitting and tribunal processes; provide support and resources to help businesses understand and comply with City regulations; and ensure assistance is accessible to all communities across the five boroughs.

Small Business First includes thirty initiatives developed as a direct result of conversations with stakeholders, advocates, small business owners, community leaders, and elected officials representing a diverse slate of city neighborhoods. In total, more than 600 unique comments and ideas were solicited, detailing the specific needs of small businesses in communities across the five boroughs. As a result, the Small Business First initiatives will include:

- Consolidating locations for businesses to find and process applications, permits, and information across agencies—both in person and online
- Creating one place—both in-person and online—for business owners to settle the majority of fines and violations
- Helping businesses navigate regulatory processes such as providing pre-inspection walk-throughs to help them comply before receiving fines or violations
- Translating resources and information materials into multiple languages



Brooklyn Navy Yard

The City has made a \$76.8 million capital investment to upgrade Building 77, a one million square-foot building in the Brooklyn Navy Yard (BNY). The investment, along with an additional \$63.2 million from other sources, for a total of \$140 million, will transform this underutilized warehouse into a modern facility to accommodate both active manufacturing and technology-based businesses. This renovation will increase an additional 3,000 jobs will be created through this renovation, accounting for more than a 40 percent increase in employment at BNY. Not only will this increase capacity at BNY, which has had a 100 percent occupancy rate for over a decade, the City will also expand the on-site job training center in partnership with the local philanthropic community. The companies at the Yard will have the space they need, as well as a talented workforce with the skills for a 21<sup>st</sup> century economy.

Building 77 is a big part of the BNY’S current expansion, the largest since World War II. Other significant projects include:

1. **Green Manufacturing Center:** A \$67 million, 250,000 square-foot adaptive reuse of a former machine-shop building
2. **Steiner Studios:** New York City’s anchor for the film and television industry will create a next-generation media campus complete with pre-and post-production studios
3. **Admiral’s Row:** A site that will house a 74,000 square-foot grocery store, topped by 127,000 square feet of light-industrial space, 89,000 square feet of additional retail space, and a 7,000 square-foot office/community facility

All initiatives underway underscore BNY’s mission to support the growth of well-paying, modern industrial jobs and ensure positive community impact. Through the work of its Employment Center, BNY will ensure these opportunities are available to local residents.





## Workforce Development

**Goal: New York City will have a workforce equipped with the skills needed to participate in the 21<sup>st</sup> century economy**

### Overview

**INDICATORS + TARGETS**

- ✔ Increase workforce participation rate from current rate of 61 percent
- ✔ Increase the number of individuals receiving City-sponsored, industry-focused training each year to 30,000 by 2020
- ✔ Increase the number of New York City public school graduates attaining associate's or bachelor's degrees

**All able New Yorkers should have the opportunity to participate in the workforce, with access to stable, high-quality employment.**

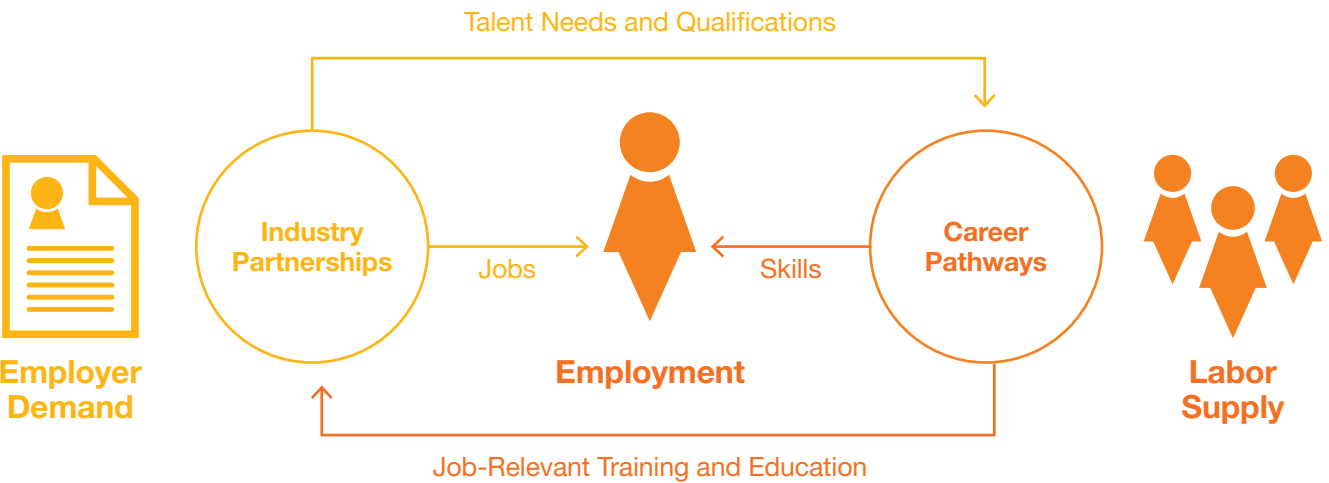
During the recession, New York City workers experienced flat or declining wages, except for those in select high-wage sectors. However, since 2014, more workers have started to see wage gains, due to increased employment and demand for labor across a range of sectors. Nonetheless, these gains have not fully offset the wage stagnation that occurred during the recession. For example, in 2014, inflation-adjusted average annual wages were 2.1 percent lower than in 2007 for private, non-financial workers. Consequently, low-income New Yorkers continue to struggle with the city's high living costs. Without the qualifications to advance to mid-wage jobs, these individuals and their families are likely to remain in poverty. Recognizing that high-, mid-, and low-skill jobs are all part of a diverse, healthy economy, the City is committed to supporting job quality across all sectors, as well as increasing wages and access to Paid Sick Leave and Family Leave for low-wage jobs.

**The City's new *Career Pathways* strategy aims to create a more inclusive workforce, comprised of individuals from a range of backgrounds in all five boroughs.** Through Career Pathways, the City is committed to providing New Yorkers with opportunities to enter the workforce and achieve economic stability, regardless of their starting skill level or educational attainment. To realize this vision of a more inclusive workforce, the City will support training programs that give people who historically struggle to enter the labor market the skills needed for entry-level work, as well as support the career advancement of low- and middle-skill New Yorkers. The Career Pathways strategy rests on the creation of a more comprehensive, integrated workforce development system and policy framework that supports agencies in effectively coordinating to help workers gain skills and progress in their careers.

**The City can leverage its purchasing power and investments to train and employ New Yorkers, including those investments envisioned by OneNYC.** Each year, the City spends billions of dollars on infrastructure, goods, and services. We can promote targeted hiring to employ and train New Yorkers of all skill levels and qualifications, including those who experience the greatest challenges to stable employment. We will provide these individuals with enhanced training and support to increase their participation in the labor market and build relevant skills.



**Workforce Development**



Career Pathways' workforce development feedback loop

**The City additionally recognizes that postsecondary attainment is critical to improving workforce participation and alleviating poverty.** Workers with higher educational attainment demonstrate lower unemployment rates and higher median weekly earnings. For example, workers with a bachelor's degree had an unemployment rate of 4.0 percent, compared to 7.5 percent for workers with a high school diploma and 11.0 percent for workers with less than a high school diploma. Likewise, based on median weekly earnings, workers with a bachelor's degree made more than twice as much as workers with less than a high school diploma. By investing in increasing postsecondary attainment, we can empower our residents to join the workforce and thrive.

### Initiative 1

**Train New Yorkers in high-growth industries, creating an inclusive workforce across the city**

The Career Pathways report identifies six target sectors for the City's workforce development efforts, including Healthcare, Technology, Industrial/Manufacturing, Construction, Retail, and Food Service, which account for about half of all jobs in New York City. These sectors offer economic mobility and/or significant potential for both employer and worker benefits through improvements in job quality. They were chosen based on analysis of tax revenue, recent job growth, forecasted job growth, total employment, jobs multipliers, wages, and wage distributions. Healthcare and Technology are high-growth sectors that offer higher-wage, middle-skill jobs. The Industrial/Manufacturing and Construction sectors represent lower-growth sectors that offer relatively well-paying jobs that do not necessarily require high educational attainment. Finally, the Retail and Food Service sectors represent high-growth sectors that employ a large part of the workforce, thus providing the opportunity to aid significant numbers of New Yorkers through improvements in job quality.





Supporting Initiatives

A. Establish and expand Industry Partnerships

Reflecting our commitment to enhanced industry-focused training, we will create four new Industry Partnerships focused on the Industrial/Manufacturing, Construction, Retail, and Food-Service sectors. The program will be modeled after the City’s two existing Industry Partnerships in Technology and Healthcare, specifically the Tech Talent Pipeline and New York Alliance for Careers in Healthcare programs. Partnerships are teams of trusted industry experts focused on addressing the mismatches of labor supply and demand in each sector. They formalize feedback loops between education, training, and employers, and mobilize outside resources to address the needs of supply and demand. The Partnerships will convene public and private stakeholders to develop curricula and training programs that match industry needs. They will be located within City government or be competitively contracted.

B. Use Common Metrics for workforce programs

The City will pursue a system-wide effort to align definitions and data among workforce development agencies and build a shared system to collect data across all workforce programs. This will allow for evaluation of programs and longitudinal study of the impact of training and investments.

C. Create bridge programs to prepare low-skill job seekers

Bridge programs serve individuals not yet ready for college, training, or career-track jobs, typically scoring below tenth-grade literacy levels. The Career Pathways program will develop bridge programs to help New Yorkers obtain the academic credentials, experience, and technical skills required to secure entry-level work and advance into skilled training.

D. Ease the path to employment for formerly incarcerated people

People with a criminal history are often excluded from employment opportunities because they are required to disclose their background on job applications, thus may miss the chance to gain an interview and be considered for hire. A policy adopted by City government, and other cities around the nation, removes this upfront disclosure requirement so that an individual’s full range of skills and attributes can be considered before making a hiring decision. The City supports pending local legislation to extend this policy to private sector employers.



Workforce Skills Training

Initiative 2

Leverage OneNYC investments to train and employ New Yorkers of all skill levels

OneNYC envisions major investments in housing and infrastructure. These investments present a valuable opportunity to support training and employment for New Yorkers, which advance their careers and build a more inclusive workforce that creates pathways for those who have historically experienced high rates of unemployment.

Supporting Initiatives

A. Leverage City investments to create jobs and training opportunities for New Yorkers, and encourage targeted hiring

The City will expand targeted hiring programs that encourage targeted hiring and establish a “First Look” process that requires employers receiving City contracts to review and consider local qualified workers. In pursuing targeted hiring, the City will build on the model of the Sandy Recovery Hiring Plan, which ensures housing recovery projects create construction jobs and training opportunities for New Yorkers who were economically impacted by Hurricane Sandy. An online portal will support this and other targeted hiring programs to facilitate interaction and data exchange, and provide feedback regarding hiring and recruiting. The portal will create a real time loop that allows the City to use employer input to better prepare and assist candidates.

In addition, the City will support the use of Project Labor Agreements to increase the number of New York City residents that have access to middle-class jobs in the unionized construction industry. For example, the City recently launched a new New York City Housing Authority (NYCHA) \$3.5 billion Project Labor Agreement, through which it is expanding its commitment to linking NYCHA residents, minorities, women, veterans, and high school students to the unionized construction industry.

B. Capitalize on the Career Pathways Construction Industry Partnership to create and expand construction training and employment opportunities for traditionally underrepresented New Yorkers

The City will establish a new Construction Industry Partnership to help qualified residents from targeted neighborhoods connect to construction jobs. The City will work with labor unions, construction firms, contractors, and developers to improve referral and recruiting systems that link New Yorkers to construction jobs. The model will be built on current successful pre-apprenticeship training programs such as the Edward J. Malloy Initiative for Construction Skills, a partnership among construction unions, the City, and union construction contractors to connect New York City’s youth to pre-apprenticeship programs. As part of this effort, the City will support construction training programs to help



“...There need to be more internship opportunities for those just starting out... and training programs that are extremely focused on entering the workforce... for people who... can’t find work that focus[es] on specialized, specific skills required to land jobs in certain areas.”

—Jesse W., Manhattan



traditionally under represented populations enter and thrive in this industry. These training programs will benefit inexperienced young adults, veterans, women, NYCHA residents, and low-income individuals, as well as underemployed construction workers. It will include pre-apprenticeship training for workers entering the field, including both adults and out-of-school/out-of-work youth, as well as skills-upgrade training for existing workers. The Partnership will also explore opportunities to expand access to design, construction management, and other construction-related careers.

C. Support the creation of, and training for, green jobs

The City will create jobs to maintain growing investment in green infrastructure. The Department of Environmental Protection (DEP) plans to hire 260 maintenance and horticultural workers by June 2018 to monitor and maintain the agency’s growing number of bioswales and other stormwater-management tools in public areas, including the right-of-way, parks, schools, and NYCHA properties. DEP’s goal to have 9,000 bioswales in place by June 2018 is the first milestone in its plan to decrease impermeable surfaces and improve stormwater management in New York City. These entry-level jobs will provide workers with opportunities for further professional advancement within DEP, and be coupled with a separate City program to train 10,000 building operators in the latest energy-efficiency principles and practices by 2025. The program will help operators develop their skills and gain access to new work opportunities and, at the same time, help reduce the city’s emissions and better manage its energy demands. While this program will focus on providing green operations and maintenance training opportunities to non-union workers, the City will collaborate with Union 32BJ and Local 94 to develop and share best-in-class curricula specific to New York City’s built environment. The program will also support the development of energy benchmarking and monitoring tools to ensure that we can track progress of greenhouse gas emissions reduction goals and key performance indicators.



“Our schools must be able to provide not only books, but Internet access, and information-literacy instruction if we hope to have successful students who are ready for college and careers upon graduation.”

—Stephanie R, Queens

Initiative 3

Ensure all New York City students have access to an education that enables them to build 21<sup>st</sup> century skills through real-world, work-based learning experiences

We are committed to preparing our students for the 21<sup>st</sup> century global economy through greater access to educational opportunities in computer science and related disciplines; Career and Technical Education (CTE) Programs; bilingual learning environments; support for college- and degree-attainment; and connections between schools and relevant businesses and industries to provide students with an on-ramp to a career.



Career and technical education in schools

Supporting Initiatives

A. Significantly expand access to computer science/technology education across New York City public schools by 2020

Recognizing the high demand for talent and education in the technology sector, we have made great strides in expanding access to educational opportunities in computer science and related disciplines. The Department of Education (DOE) is launching a comprehensive, standards-aligned computer-science and software-engineering education program, the Software Engineering Pilot, for grades 6 through 12. The goals of the program, launched in 2013 are to increase the number of high school graduates ready to enter new and emerging high-tech fields, and develop students’ computational thinking and problem-solving skills in real-world contexts. The Department of Small Business Services (SBS) launched the Tech Talent Pipeline to support the growth of the city’s businesses and prepare New Yorkers for 21<sup>st</sup> century jobs. We are committed to expanding these efforts even further. We have convened an advisory committee to define an ambitious vision for technology education in our schools, along with specific programs and goals to ensure our students have the skills they need to succeed in a 21<sup>st</sup> century economy. This group is working to develop a detailed strategy and will be releasing plans later this school year.

B. Strengthen and expand Career and Technical Education programs

CTE programs are valuable, high impact programs on par with college preparatory programs and a critical part of the current New York City workforce development plan, codified in the Career Pathways report. These programs, which are formalized academic and technical education opportunities, prepare enrolled students for a seamless transition into postsecondary opportunities in two- or four-year degree programs, further training, apprenticeships, and entry-level work. Approximately 120,000 New York City public high school students take part in CTE programs each year. To address challenges related to space and access to necessary technology, DOE will invest in building sustainable systems that strengthen current offerings and add capacity within existing and new CTE programs to ensure high-quality instruction aligned with industry expectations. We will also develop and launch new, leading-edge CTE programs within existing schools in order to benefit more students.

C. Expand Transition Coordination Centers to every borough by 2020 to improve postsecondary outcomes for students with disabilities

Given the focus on developing opportunities for all students to access work-based learning opportunities, it is critical to identify and enable students who may not be able to access these traditional opportunities. To empower these students to pursue postsecondary opportunities, we will consider expanding our Transition Coordination Centers, which provide disabled students with work-based learning opportunities, assessments, and professional learning experiences. Currently,





these centers serve only a small fraction of the population—between 500 and 800 of the 235,000 students receiving special-education services annually—and are available at one location in the city.

**D. Explore the opportunity to create bilingual learning environments to promote multilingualism among New York City students**

The 21<sup>st</sup> century global economy demands a bilingual learning environment for all New York City students. At the same time, the population of English-Language Learners (ELLs) is growing and would be better supported in a bilingual learning environment. The State and City have undertaken multiple initiatives to address these challenges and better prepare our students based on their language- and literacy-learning needs. We are constantly re-evaluating an ELL initiatives to include more innovative models and expand on others that have been proven to promote academic success. As part of DOE’s commitment to student achievement and increasing access to multilingual programs across the city, we will open 40 dual-language programs during the 2015-2016 school year.



The City has recognized that expanding tech education across our school system cannot be done without the help of industry partners who demand specific skills in our 21<sup>st</sup> century economy. As such, the Department of Education has already instituted the following programs and intends to expand its strategy with private sector partners:

- A. Preparing 100 high school teachers to teach a new AP Computer Science Principles course in partnership with the University of California at Berkeley and the Educational Development Corporation, and funded by the National Science Foundation
- B. Preparing 50 middle and 130 high school teachers through the Blended Learning Institute on Exploring Computer Science and Project GUTS (Growing Up Thinking Scientifically) curricula in partnership with code.org
- C. Expanding access to successful computer-science/coding curricula and programs run with partners such as CSNYC and Microsoft (e.g., Technology Education and Literacy in Schools, Bootstrap, ScriptEd)
- D. Ensure that every New York City high school has at least one university and/or industry partnership so that all students have robust college and career experiences throughout their high school experience



**Initiative 4**

**Increase postsecondary attainment**

Supporting efforts to increase postsecondary attainment is key to the City’s goal to lift New Yorkers out of poverty and strengthen an inclusive workforce. To achieve this goal, we are committed to increasing the number of New York City public school graduates attaining associate’s or bachelor’s degrees. This initiative complements other strategies to lift New Yorkers out of poverty, as part of a complete set of actions that the City will pursue to reach this goal.

Strategies to increase postsecondary attainment begin in high school, where the City will work to increase access to college-specific advising. Efforts to improve advising are intended to promote high school graduation and college matriculation. Based on a study by the Research Alliance for New York City Schools, 59 percent of public school graduates enrolled in postsecondary education programs in 2006: 16 percent in the City University of New York (CUNY) 4-year, 13 percent in CUNY 2-year, and 30 percent non-CUNY. The City will take a comprehensive approach to advising, ensuring that it continues beyond high school, to college. In college, the City will expand programs designed to assist students in completing their degrees.

Increased advising enables students to better access the myriad resources available to them in both high school and college, as counselors are often the primary source of information about the resources and services available to students. While progress has been made to improve the ratio of guidance counselors to students in New York City’s public schools, there is still a significant need for counselors who have been trained to advise students on postsecondary options. In many schools, guidance counselors have caseloads of up to 500 students, and not all schools have designated college counselors.

For New York City public high school students, the DOE is partnering with the Goddard Riverside Community Center to train new counselors and educators on the college advisement process. This and other efforts are intended to support a target of one trained counselor for every 35 high school seniors.

Once in college, students may require additional help completing their degrees. Of New York City public high school graduates who started at CUNY in 2006 and 2007, 53 percent completed the CUNY 4-year program and 13 percent completed the CUNY 2-year program. At CUNY, Accelerated Study in Associate Programs (ASAP) assists students in earning associate degrees within three years. ASAP participants are more than two times as likely to graduate as their peers. ASAP also increases credits earned, lowers the cost per degree, and raises the number of students transferring to four-year colleges. Building on the success of this program, we are committed to expanding ASAP to serve 13,000 students over the next three years.

The success of these programs will help to build a well-prepared workforce, and enable more New Yorkers to participate in the City’s economic prosperity through quality jobs and careers.



# Housing

**Goal: New Yorkers will have access to affordable, high-quality housing coupled with robust infrastructure and neighborhood services**

INDICATORS + TARGETS

- ✓ Accommodate 8.4 million households within the region by 2040, an increase of 1.1 million households
- ✓ Finance the new construction of 80,000 affordable housing units and preservation of 120,000 affordable housing units by 2024
- ✓ Support creation of 160,000 additional new housing units by 2024 and at least 250,000 to 300,000 additional housing units by 2040

Overview

Housing is in high demand and short supply, as the population continues to grow and housing production lags behind demand. Despite a total supply of 3.4 million housing units, the largest New York City’s housing stock has ever been, the vacancy rate was only 3.45 percent in 2014, well below the legal definition of a housing emergency (a vacancy rate below 5 percent).

In 2014, almost 56 percent of New York City renter households were rent burdened, defined as paying more than a third of their income toward housing costs. More than 30 percent of renter households were severely burdened, defined as paying more than half of their income toward rent. This trend is a result of stagnating wages and increasing costs over the past 20 years. As described above, the creation of new housing supply at all income levels will help to alleviate this pressure and contribute to housing affordability in the city. The initiatives below support housing preservation and production, emphasizing Housing New York’s focus on affordability and the City’s commitments to support overall housing production. Additionally, we are committed to pursuing strategies for mitigating homelessness, beginning with the provision of support services for the city’s most vulnerable populations. Initiatives discussed in Vision 4 address our commitment to strengthening the capacity of homeowners, landlords, renters, and tenants affected by Hurricane Sandy.

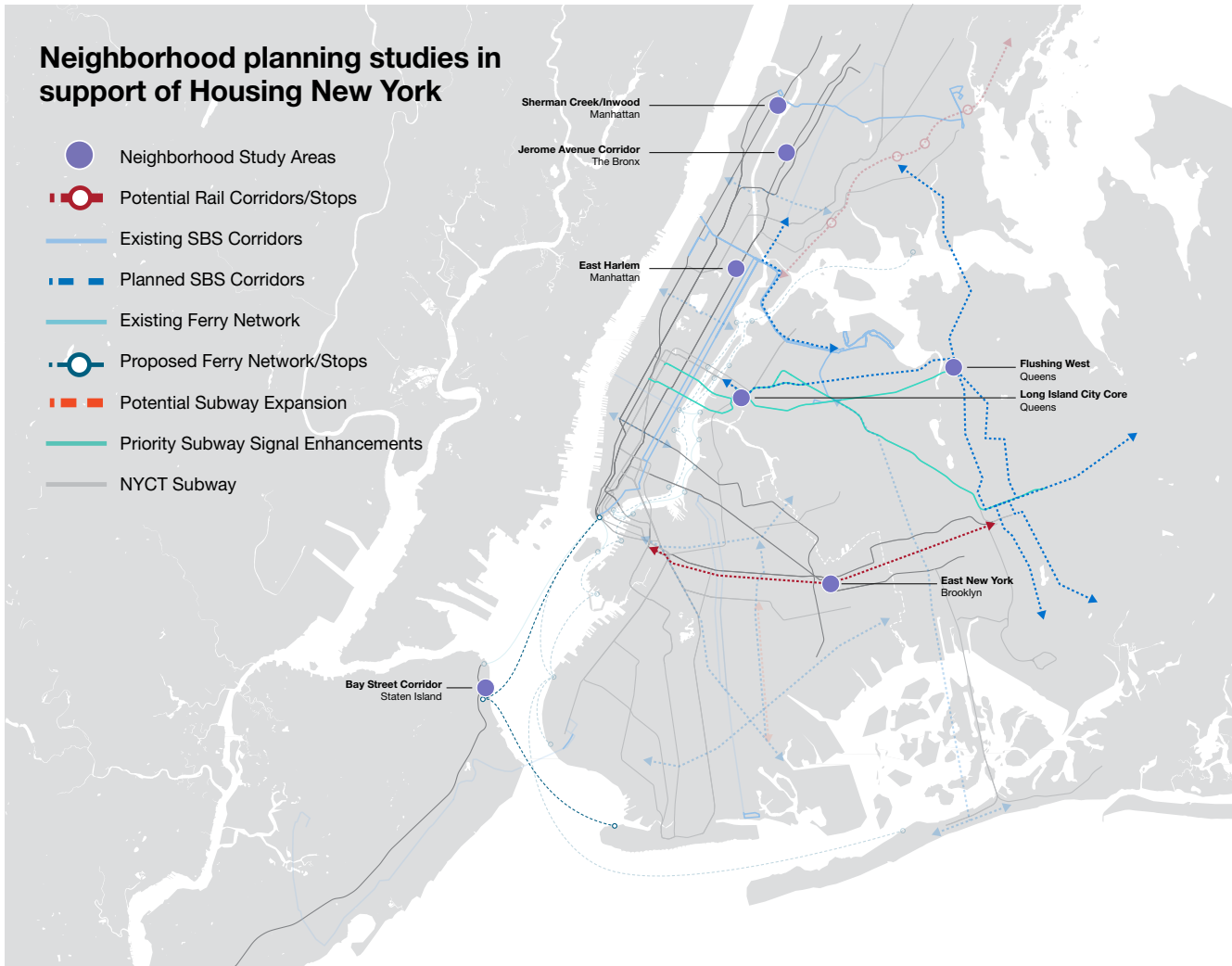
Rent Burden

56 percent of renters are rent burdened and three in 10 households are severely rent-burdened, paying half or more of their income to rent and utilities



= severely rent-burdened household    = rent-burdened household    = unburdened household

Source: New York City Housing and Vacancy Survey, 2014



Source: DCP

Initiative 1

**Create and preserve 200,000 affordable housing units over ten years to alleviate New Yorkers’ rent burden and meet the needs of a diverse population. Support efforts by the private market to produce 160,000 additional new units of housing over ten years to accommodate a growing population.**

The City is committed to an ambitious goal to alleviate New York City’s housing affordability crisis by creating and preserving 200,000 units of affordable housing over the next ten years. With this as a cornerstone of the city’s mission, we will produce opportunities to create housing, and engage communities in planning processes to accommodate growth in neighborhoods across our city.





## Housing 9 Million New Yorkers by 2040

To accommodate a population of over nine million New Yorkers by 2040, the city will need at least 3.7 million housing units throughout the five boroughs. The city’s population growth is driven by its desirability as a place to live and work. Without the production of new housing, this population growth drives housing prices upward, as new New Yorkers compete with current residents for a limited supply of existing housing units. To ensure all New Yorkers have access to housing they can afford, we must not only produce and preserve affordable units but increase the overall supply of all types of new housing.

Housing New York, the City’s ambitious ten-year housing plan, forms a foundation for creating and preserving 200,000 affordable housing units over the next ten years. The City will also support creation of 160,000 additional new units over the same period. This level of production will accomplish three key objectives to alleviate New York City’s housing crisis: accommodate a growing population, ease supply constraints, and offset loss in the housing market as units are taken offline, demolished, or converted to non-residential units. To meet demand and continue to alleviate the housing crisis, the City estimates it will need to support creation of 250,000 to 300,000 new units from 2025 to 2040.

Like New York City, other mature major U.S. and global cities are continuing to accommodate population growth and manage affordability challenges through increased density, new housing typologies, expansion into surrounding land area, and smart infrastructure and technology investments. Many of these strategies point the way for our future growth.

- London plans to accommodate population growth from 8.2 million residents in 2011 to 10.1 million residents in 2036 by developing significant areas of vacant or underutilized land in coordination with transportation improvements, intensifying uses in town centers, and pursuing regional coordination.
- San Francisco anticipates growth in the Bay Area to 9.3 million residents by 2040, from 7.1 million people in 2010. Regional housing production efforts will focus on housing for low-and middle-income households, concentrating development in existing neighborhoods that can accommodate growth with access to public transit, housing, jobs, and services, while preserving surrounding natural resources.
- Projecting a population of 6.5 to 6.9 million by 2030, from 5.5 million in 2014, Singapore plans to meet this demand by intensifying land use in new developments, recycling land currently occupied by low-intensity uses, and creating additional developable area through infill.

New York City can accommodate the number of units planned and future units required to meet the need. The locations most likely to be suitable for substantial numbers of new units are key areas close to public transit. Increased density can



build on the strengths of neighborhoods to improve quality of life, especially when aligned with targeted investments in public and private infrastructure.

Housing New York lays out a number of strategies to achieve these goals. These include engaging communities in neighborhood planning processes in all five boroughs to coordinate land-use and zoning changes, maximizing the use of City-owned land for new development of affordable housing, and effectively using City financing tools to expedite development of new housing and ensure the continued long-term affordability of existing affordable units.

Additionally, the City will:

- Pursue large-scale development on sites that may have been previously overlooked or present more complex opportunities for redevelopment, such as Sunnyside Yards
- Align new housing development with investments in public transit, to help New Yorkers reach critical services and their places of employment
- Support the growth of employment clusters in areas accessible to significant populations, providing New Yorkers with access to good jobs within a suitable commute





Supporting Initiatives

A. Maximize the use of City-owned land for new housing

The New Infill Homeownership Opportunities Program (NIHOP) seeks to promote creation of mixed-income communities with affordable homeownership opportunities for moderate-and middle-income households in new one- to four-family homes and small (less than 15 units) condominiums/cooperatives. The City will target small developers and local community development corporations to participate in the program and work with financial institutions to develop homes in neighborhoods that lack affordable homeownership opportunities. We will also launch the Neighborhood Construction Program (NCP), an initiative to aggregate sites to develop affordable housing in order to achieve economies of scale in the remediation, development, financing, and operation of scattered infill lots for rental housing. Both NIHOP and NCP have been designed to encourage the development of small, previously difficult- to-develop infill sites, and to offer opportunities for small developers, local non-profits, and community development corporations directly or through partnerships to build their development capacity.

B. Conduct collaborative, holistic neighborhood planning to support new mixed-income housing creation with supporting infrastructure and services

Over the course of the next ten years, we will work with communities to identify areas across the five boroughs where coordinated planning—including changes to land use and zoning, and improvements to infrastructure and services—can promote substantial opportunities for new housing that complements and enhances neighborhood character. The Department of City Planning’s (DCP) borough offices will coordinate closely with community organizations, local residents, and sister agencies to conduct neighborhood planning initiatives around new and existing housing, and plan for additional transit and service improvements. DCP will engage communities at the early stages of this process to collect and share data on land use, housing, infrastructure, and services, while soliciting guidance from local residents and businesses, community organizations, and elected officials about their concerns and first-hand experiences to identify existing community needs, set priorities, and shape the plans. All land use actions initiated as a result of these community planning processes will be subject to a full public review process, which will provide additional opportunities for input from Community Boards and local elected officials.

C. Establish a Mandatory Inclusionary Housing Program to promote economic diversity and affordable-housing development

The City will establish a new Mandatory Inclusionary Housing Program to create new housing affordable to local communities. The Mandatory Inclusionary Housing Program will be applied in conjunction with land use actions that promote increased housing capacity in order to create opportunity for economic diversity in neighborhoods. The housing created in the Mandatory Inclusionary Housing



Jerome Avenue streetscape

The neighborhood planning process

A multi-agency effort led by the Department of City Planning is engaging local residents, businesses, and institutions in a comprehensive planning process of a two-mile stretch of Jerome Avenue in the Bronx, to identify and evaluate opportunities to provide and support new and existing affordable housing; access to jobs and training; economic development and entrepreneurship; brownfield clean-up; cultural amenities; pedestrian safety; parks; schools and daycare; and retail and local services. The study and resulting community plan will promote coordinated investments in infrastructure and services to shape a resilient, sustainable community, and will include land use and zoning changes, and the application of a Mandatory Inclusionary Housing Program within the area to promote affordable housing.

Program will serve households at a range of income levels, and will be permanently affordable, as part of the City’s effort to preserve communities and neighborhood affordability.

D. Expand opportunities for minority- and women-owned enterprises and expand the pool of developers building affordable housing

The Department of Housing Preservation and Development (HPD) is committed to promoting the participation of Minority- and Women-Owned Business Enterprises (M/WBE) in the development and management of affordable housing subsidized under City-sponsored programs. Through the Building Opportunity initiative, HPD seeks to build the capacity of M/WBE through professional development, networking, and mentoring programs; improve access to capital for M/WBE developers with low-cost financing options for site-acquisition and predevelopment costs; and enhance the ability of M/WBE developers to compete more effectively for HPD support by providing targeted new construction and preservation opportunities.

E. Support and expand efforts to preserve affordable units through neighborhood planning and outreach

Effective preservation strategies will vary by neighborhood and should be tailored to each planning effort. This will require analyzing data on housing and market conditions to identify community needs, developing localized preservation strategies, and engaging communities to implement these strategies. For example, in a community facing rising rents due to market pressures, the City may be most effective in helping owners keep properties affordable by using tax incentives or financing tools to incentivize energy retrofits that would reduce utility costs. In a community experiencing high rates of physical distress, the City may need to focus efforts on expanding its Proactive Preservation Initiative (PPI) through HPD evaluations. PPI targets deteriorating properties for increased code enforcement, and works with lenders and regulators to encourage owners to make necessary repairs in a timely fashion.

F. Foster large-scale development at potential major-site assemblages

As the city’s population grows within its geographic limits, the availability of developable land will continue to decline. The rising cost of developable land, in turn, becomes a driving factor of the affordability challenge facing real estate development. There are potential development opportunities throughout the five boroughs where surface or subterranean infrastructure—such as rail-yards and tracks—can be built upon. At Sunnyside Yards alone, up to 200 acres are potentially available for such development. While overbuild development must be evaluated for technical feasibility and cost effectiveness, the City’s ability to identify feasible opportunities could make hundreds of acres of otherwise unavailable property across the five boroughs potential sites for transit-oriented development, improving connections to, and quality of life for, surrounding neighborhoods, and promoting affordable housing and economic development opportunities.





Initiative 2

Support efforts to create new housing and jobs throughout the region

The City recognizes that, as part of a regional economy and labor force, addressing housing challenges will require collaborative action by partners throughout the region if the economy of the whole region is to grow together in the coming years. Providing housing and convenient transit options in and around New York City will strengthen the region’s future economy, while also increasing locational options for the region’s workforce to live.

Supporting Initiative

A. Collaborate with regional municipalities and housing agencies on shared priorities

DCP will establish a unit that will address regional and long-range planning issues. The unit will analyze regional population, economic and land use trends. The unit will work with other municipalities and local governments throughout the metropolitan region, as well as their local planning departments, to coordinate regional planning initiatives. The unit will identify challenges that face the region as a whole and help shape regional responses to leverage strengths and address challenges of mutual interest.

Initiative 3

Expand housing and related services to support the city’s most vulnerable populations

Our most vulnerable residents need safe housing and supportive housing services. We will expand and streamline programs to help individuals and families find housing—a critical element of a stable life. Affordable housing is essential to meeting the needs of New York City’s homeless population of over 57,000 individuals—including nearly 1,000 veterans (over half of whom are in shelter)—and the city’s growing senior population. Youth who age out of foster care, and formerly incarcerated people, too often encounter barriers that prevent them from transitioning successfully to independent living. Leveraging Housing New York, the City will provide community-based housing resources to these vulnerable populations to promote strong, safe neighborhoods and livable communities.

Supporting Initiatives

A. Strengthen community-based homelessness prevention systems

We will enhance and expand the city’s homeless prevention services through community networks and neighborhood organizations, while strengthening coordination across government agencies at city, state, and federal levels.



Camba Gardens Apartments in Wingate, Brooklyn

B. Create a more streamlined process for intake, assessment, and rehousing to end veteran homelessness

The City has committed to the White House’s goal of ending homelessness among veterans by 2016. We will create a housing plan for every homeless veteran in the city, regardless of discharge status, within two weeks of their entry into the system. We will also connect all single adult male veterans entering shelters with a Supportive Services for Veteran Families Program provider. We will conduct multi-agency case conferences to overcome barriers to housing, and prioritize veterans for housing based on each veteran’s preference, housing needs, eligibility, and vulnerability.

C. Develop affordable housing appropriate to community needs, including housing for families, supportive housing, and senior housing

This effort will leverage federal and state rental subsidies that help seniors afford their rent and will include zoning and regulatory amendments to facilitate the development of senior housing units.

D. Expand rental assistance and aftercare to support individuals transitioning from shelters to permanent housing

We will expand the Living in Communities program to provide rental assistance and support to over 6,000 households annually, ensuring existing shelter populations have stable housing. Additionally, the City will connect homeless families to existing permanent subsidized housing through NYCHA and the Section 8 Program.

E. Expand housing options for people with disabilities by increasing oversight, targeting placement strategies, and accessing housing subsidies

We will help people with disabilities access housing subsidies by improving coordination across government agencies and removing barriers to the City’s affordable housing resources. The City will expand the role of ADA and Section 504 coordinators to full-time positions to ensure a more active and coordinated response to the housing needs of people with disabilities.

F. Advocate for state and federal funding to increase supportive housing production

The City will increase targets for the production of supportive housing and advocate for increased funding from programs such as the Medicaid Redesign Team and a NY/NY4 agreement with the State. We will continue to focus on the creation of supportive housing that focuses on the particular needs of ex-offenders, youth aging out of foster care, and people with chronic illness and disabilities.



# Thriving Neighborhoods

**Goal: New York City’s neighborhoods will continue to thrive and be well-served**

## Overview

New York City is a city of neighborhoods. When New Yorkers describe where they live, they often name their neighborhood. For residents to succeed, neighborhoods require basic services, healthy environments, a good quality of life, and connections to the city’s job centers. As New York City’s population continues to grow, we will make strategic investments to bring necessary public-transit access, quality affordable housing, retail, and services to both growing and underserved neighborhoods.



Brooklyn Weekend Walks

## Initiative 1

**Support creation of vibrant neighborhoods by alleviating barriers to mixed-use development and utilizing available financing tools**

Neighborhood planning, including zoning changes and maximizing available financing tools, can open up a wide range of opportunities for mixed-use communities. These tools are effective in providing space for neighborhood services, including local retail, while also encouraging new housing.

### Supporting Initiatives

**A. Pursue neighborhood planning strategies that expand opportunities for mixed-use development, especially the attraction of retail and services to underserved neighborhoods**

With input from communities and residents, the City will initiate strategies to create mixed-use communities that include housing, retail, and other commercial uses that together support the vitality of neighborhoods. For example, creation of appropriate commercial space can encourage location of retailers providing access to fresh food and necessary supplies for residents, as described further in Vision 2. In



particular, this will include identification of areas where zoning discourages vibrant retail and mixed-use development, including reducing burdensome parking requirements and allowing for high-quality retail space on ground floors, while preserving the full potential for housing above. Finally, we will develop recommended design guidelines for City-sponsored mixed-use development to maximize the competitiveness and flexibility of ground-floor space.

**B. Maximize the use of available financing tools that assist the commercial components of mixed-use projects to support vibrant mixed-use neighborhoods**

To support vibrant mixed-use communities and strong commercial corridors that provide neighborhood services, the City will use a variety of funding sources to finance new retail space in underserved areas. It will also leverage federal programs such as New Markets Tax Credits (NMTC) to maximize investments. Furthermore, we will conduct commercial needs assessments to assess demographic, economic, and physical factors and create customized programs to help small businesses adapt to such changes. These efforts promote mixed-use projects that serve neighborhood goals, small business, and affordable housing opportunities.



## Sheridan Expressway: Transportation for Businesses and Residents

The City will continue to work with the New York State Department of Transportation (NYSDOT), local businesses, and the community on the future of the Sheridan Expressway. We will pursue implementation of the “modify-combined” plan put forward in the City’s 2013 Sheridan Expressway-Hunts Point Land Use and Transportation Study. The plan involves reconfiguring the Bruckner-Sheridan Interchange, constructing on- and off-ramps at Oak Point to provide direct truck access between the Bruckner Expressway and the Hunts Point Industrial Area, transforming the at-grade portion of the Sheridan Expressway into a local boulevard and implementing targeted safety improvements at area intersections. The plan would reduce truck traffic on local streets and decrease overall congestion. This will improve pedestrian and bicyclist safety and air quality; enhance truck access to the Hunts Point Food Distribution Center; better connect local residents to new parks and the South Bronx waterfront; and support development. The immediate next step to advance these improvements is for NYSDOT to restart and complete an Environmental Impact Statement (EIS) on modifications to the Bruckner-Sheridan interchange, the Oak Point ramps, and the Sheridan Expressway.





Initiative 2

Make strategic investments for livable neighborhoods

The City will seek to align investments in infrastructure and services to support the livability of neighborhoods slated for growth. Across the city, there are neighborhoods where the hard work of planning and consensus-building for new housing development has already been completed and area-wide rezonings and large-scale development plans will foster new mixed-income housing and supporting uses. However, in some of these areas, the potential for new housing can only be fully realized after improvements to infrastructure and regulatory changes to allow for new mixed-use development. In these neighborhoods, and others going forward, agencies will work with local elected officials, residents, businesses, and community organizations to make targeted infrastructure investments to make it feasible for thousands of new affordable housing units and accompanying retail, services, and community facilities to be built. Examples of these types of investments are found in initiatives throughout OneNYC, as noted on the next page.



Planning for Vibrant Neighborhoods

The City seeks to overcome disparities in access to economic opportunity, transportation, city and community-based resources, parks and public space, and broadband across neighborhoods. The City’s efforts will reflect several critical neighborhood-planning principles, captured under the Thriving Neighborhoods goal. These principles include supporting vibrant mixed-use communities that align public transit, housing, and jobs while offering residents access to essential retail and services, especially in currently underserved communities; proactively planning for current and future growth; and engaging New Yorkers in the planning process. Reflecting and building on these principles, OneNYC includes a number of neighborhood-focused initiatives and sub-initiatives throughout the plan:

Vision	Goal	Initiatives/Sub-Initiatives
1	Workforce Development	The City will bring workforce training programs to traditionally overlooked populations and support the creation of <b>Transition Coordination Centers</b> in every borough to improve postsecondary outcomes for students with disabilities.
	Housing	The City will conduct collaborative <b>neighborhood planning</b> to identify areas across the five boroughs where land-use and zoning changes, and infrastructure and service improvements, can promote substantial opportunities for new housing that complements and enhances neighborhood character.
	Transportation	The City will work with the MTA and others to <b>improve existing transit services</b> and <b>invest in a major expansion of the transit network</b> in order to better serve neighborhoods and provide reliable and convenient transit access to employment.
	Broadband	The City will support expanded access to <b>affordable, reliable, high-speed broadband service</b> for residents and businesses by 2025.
	Culture	The City will ensure <b>high-quality cultural facilities and programming</b> in all neighborhoods.
2	Early Childhood	The City will <b>enhance its Neighborhood Health Hubs</b> with dedicated space for women’s health to reduce infant mortality and <b>offer high-quality, full-day Pre-K</b> to all children.
	Integrated Government & Social Services Delivery	The City will provide all New Yorkers with access to high-quality City and community-based resources through the <b>Community Schools</b> expansion, <b>Neighborhood Health Hubs</b> that co-locate health and mental health services with social services and City agencies, and digital platforms.
	Healthy Neighborhoods, Healthy Living	The City will <b>improve access to affordable, healthy food and physical activity opportunities</b> in all neighborhoods.
	Healthcare Access	The City will establish <b>health clinics in high-need neighborhoods</b> and co-locate <b>behavioral health services</b> with primary care.
3	Criminal Justice Reform	The City will make neighborhoods safer through <b>increased use of technology and data</b> as well as neighborhood engagement.
	Water Resources	The City will offer <b>high-quality water services</b> in all neighborhoods, as well <b>improve gray and green infrastructure</b> to address recurrent flooding in certain neighborhoods.
4	Public Realm	The City will support quality <b>parks and public space</b> in low-income, growing, and high-density neighborhoods through the Community Parks Initiative and other efforts while pursuing a <b>Parks Without Borders strategy to enhance neighborhood access and connectivity</b> to parks.
	Coastal Resilience	The City will <b>reduce flooding risk in waterfront neighborhoods</b> by strengthening the city’s coastal defenses against flooding and sea level rise.
	Social and Economic Resiliency	The City will make our neighborhoods safer by strengthening <b>social and economic resiliency</b> and enhancing community-based organizations’ capacity to support residents with services and information.



Culture

Goal: All New Yorkers will have easy access to cultural resources and activities

Overview

INDICATORS

✔ Increase in number of public cultural and civic events in community districts with the highest rates of poverty and lowest rates of public cultural and civic programming

As one of the main drivers of tourism to New York City, culture is a central pillar of economic development. Cultural institutions attract tourists, provide thousands of jobs, and contribute to resident well-being and quality of life.

Every year, people come from all over the world to visit our world-class museums and attend one of the thousands of theater, music, and dance performances that occur annually across the city. According to NYC & Company, the City saw a record-setting 56.4 million tourists, almost half of whom—27.6 million—came specifically to enjoy New York City’s cultural life. Visitor spending in general generated nearly \$38 billion in 2013, supporting nearly 370,000 leisure and hospitality jobs.

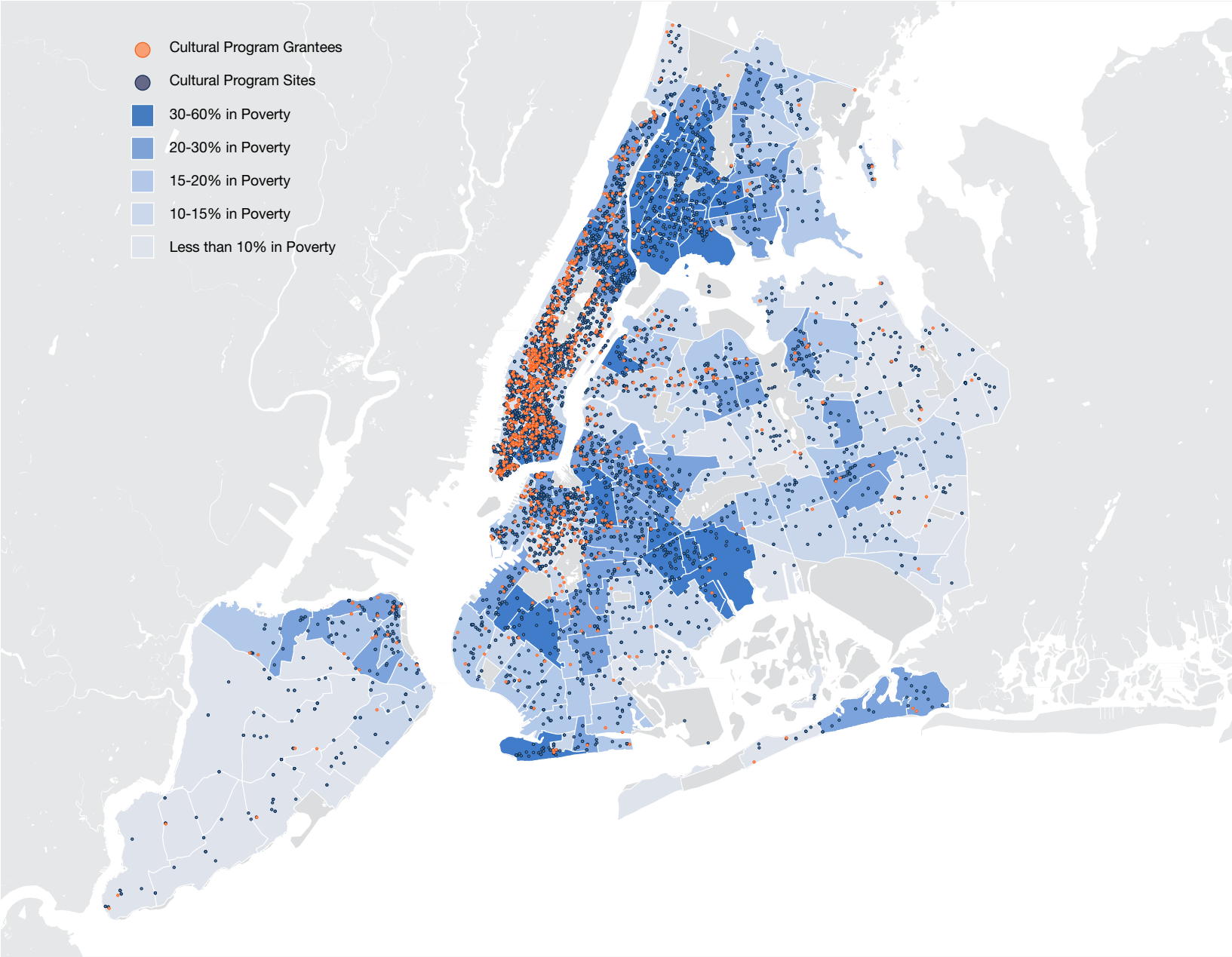
Moreover, our world-class institutions, of all scales and unique local offerings, underpin the fabric of our neighborhoods and attract artists and creative individuals to the city. This combination of home-grown talent and the newly arrived has spurred creation of new galleries, music venues, dance spaces, and theaters.

Cultural activities and spaces further underpin a high quality of life for residents, supporting the city’s ability to retain and attract talent. New York City’s rich cultural attractions figure in newcomers’ decisions to move and stay here, and factor among the neighborhood amenities that inspire residents to live in certain areas. Access to culture is critical to ensuring the well-being of residents, improving social connections, lowering stress, improving school effectiveness, raising community awareness, and enhancing civic engagement.

However, the boroughs other than Manhattan, and the low-income areas within these boroughs, are home to fewer grantee cultural organizations and facilities that drive programming, suggesting missed opportunities in supporting quality of life, jobs, and tourism in these areas (see Map). Across New York City, community-based cultural organizations and facilities face challenges in providing local cultural programming to residents due to limited funding and capacity. Parks, recreational centers, and public spaces often serve as convenient sites for neighborhood cultural programming, yet have suffered from inadequate investment as well as unclear permitting processes.



Cultural Resources and Poverty:  
New York City Department of Cultural Affairs Grants and Poverty Rates, 2013—2014



U.S. Census Bureau, ACS 2009–2013  
5-Year Estimates

University of Pennsylvania’s Social Impact of the Arts Project’s preliminary map of NYC Department of Cultural Affairs’ grantee sites against rates of poverty in NYC is only a first step in a much larger interrogation of the social impact that culture has in NYC’s neighborhoods.



We are committed to addressing these challenges and ensuring the vitality of the arts in New York City, as we have been throughout the course of New York City’s history, demonstrated by the following recent and ongoing initiatives:

- Supplying financial support and technical assistance to New York City’s cultural community, including 33 City-owned institutions that comprise the Cultural Institutions Group, and grants to more than 1,100 other cultural non-profit organizations through the Cultural Development Fund
- Commissioning public art through the Percent for Art program, which has commissioned more than 300 works of art at public building sites throughout New York City since its inception thirty years ago
- Providing affordable artist workspace through programs like Spaceworks, which subleases affordable spaces to artists at below-market rates

Recently-initiated projects to continue this commitment include:

- Providing 1,500 units of affordable live/work spaces, and 500 below-market work-spaces, for artists by 2024
- Collaborating with the University of Pennsylvania’s Social Impact of the Arts Project to conduct a study of the impact of cultural engagement on neighborhoods in order to help align policies with target neighborhoods

Initiative 1

Ensure well-used, high-quality cultural facilities and programming in all neighborhoods

Supporting Initiatives

A. Provide funding and capacity-building support to local cultural organizations to create public art and programming in underserved areas

The Department of Cultural Affairs (DCLA) will explore strategies to build upon the existing Community Arts Development Program (CADP) to develop a capacity-building program for public art and programming. This includes workshops and grant support for community-based cultural organizations that serve neighborhoods identified by the City as sites for cross-agency coordination and investment, including those home to Community Parks Initiative sites. DCLA will build upon the existing CADP, which offers workshops on expanding organizational capacity, to include capacity-building around commissioning neighborhood-based public art projects. In conjunction with this program, additional funding would enable DCLA to initiate a new competitive process for capacity-building grants aimed at supporting staff at cultural organizations to interface with other neighborhood civic groups.



Center for Arts and Education (Casita Maria)



Casita Maria, Dancing in the Streets

**Center for Arts & Education (Casita Maria)** is a venerable settlement house, founded in East Harlem in the 1930s, which followed the Latino immigrant community to the South Bronx in 1960. Casita Maria weathered the economic collapse of the area in the 1970s, when its neighborhood was devastated by an arson epidemic, unemployment, street gangs, and drug use. Recognizing that the South Bronx has been a hub for the cultural innovation and hybridization that has influenced American popular culture for decades—Jewish culture in the 1930s, the emergence of Latin music as Caribbean immigrants moved in, doo-wop in the 50s and 60s, and rap and hip hop in the 1980s—Casita decided to move the arts to the center of its identity as a social-service organization and use the arts to change the way people think about the South Bronx. According to Executive Director Sarah Calderon, “People from outside the area, but also local residents, have internalized its identity of helplessness and hopelessness. What this area needs is respect.” Casita has chosen the area’s rich cultural legacy as a strategy for cultivating that respect, including bringing Dancing in the Streets, a producer of adventurous free public performances in unexpected places like grain silos, beaches, parks, rooftops, and fire-escapes to the middle of the street, into its building as a resident company. Casita’s building, which is shared with a public school, also includes a gallery and theater. The two organizations have produced the South Bronx Culture Trail, which maps historic cultural sites and venues from the first Latin record store to the Fort Apache police station. Last fall, they began to breathe life into the Trail with tours and live performances on the fire escapes, stoops, and sidewalks of Hunts Point and Longwood. Dancing in the Streets will continue to animate the Trail for at least another year with mambo dancers, conga players, stickball games, and a salsa concert in a walking and dancing celebration of the neighborhood featuring professional and neighborhood residents.

**B. Facilitate cultural partnerships, such as artists-in-residence, in public agencies**

Funding for cultural partnerships enables agencies to further their missions, promote community engagement, support residencies and project production, and encourage public dialogue around social questions and issues City agencies work to address. Several City agencies, including the Department for the Aging, Department of Probation, and Department of Sanitation, have already engaged in cultural partnerships in recent years and attested to the value these partnerships have created for their agencies. Other agencies, including the Office of Immigrant Affairs, Administration for Children’s Services, and the Economic Development Corporation, have also expressed interest in engaging cultural partners.

**C. Streamline the permitting process in order to increase access to public spaces and facilities for community events**

There is widespread demand among New York City residents for use of public spaces and facilities for community events. Fragmented permitting processes and information across agencies that offer these services, however, make it difficult to meet this demand. This will enhance access to public facilities and spaces by improving information-sharing and process-coordination across agencies for event permitting. DCLA will form a citywide task force dedicated to improving existing processes. Creating a unified coordination and communications strategy will make it easier for residents to navigate the permitting process and increase awareness of the availability of spaces for hosting community events.

**D. Increase use of parks and public spaces by expanding cultural, educational, and civic engagement programming available to the public**

Many public spaces and parks are underutilized, particularly in low-income neighborhoods. This would aim to increase resident use of parks and public spaces by providing grant funding to community-based cultural organizations to develop dynamic cultural and civic programming in these venues. Such programming could include public visual art, live music and dance, and information-sharing on community issues. Priority would be placed on cultural and civic programming conducted in public spaces such as community parks, plazas, and streets, to reach the greatest number of people, facilitate community interaction, cultivate pride of place, and promote physical exercise and community stewardship. As such, the initiative would seek to build upon and coordinate with the publicly-sited programming efforts currently in development as part of the Community Parks Initiative.



**Museum of Contemporary African Diasporan Arts (MoCADA)**



Soul of Brooklyn

**Museum of Contemporary African Diasporan Arts** is a community-based museum located in Brooklyn’s Fort Greene area. MoCADA established a collaborative of 32 African diaspora arts organizations called Soul of Brooklyn that has built partnerships with local businesses in central Brooklyn neighborhoods around arts programming as a means of promoting their businesses and the enormous diversity of art rooted in the African diaspora. The keystone of Soul of Brooklyn is its annual Block Party, a summer event that draws some 20,000 people. MoCADA’s second project, #SoulofBK, will bring arts programming to public spaces in four public-housing developments in Brooklyn’s Fort Greene and surrounding neighborhoods on a monthly basis. The series began in February with a screening of the award-winning feature, *Middle of Nowhere*, a film that explores the effects of incarceration on women whose loved ones have been sent to prison. The screening, co-sponsored by the Ingersoll Homes Tenant Association, was attended by a balance of residents and non-residents, and was followed by a discussion with CNUS, a “think tank of formerly incarcerated professionals...working for justice.” Upcoming programs include a jazz performance, screening of the Harry Belafonte biopic *Sing Your Song* (with Belafonte present), a dance performance with “the street dance king of Brooklyn,” and participatory arts projects in the public-housing tenant gardens led by MoCADA teaching artists. The programming is designed to weave together MoCADA’s commitments to the cultural interests and needs of public-housing residents, breaking down the boundaries that may isolate them from the surrounding neighborhoods them, the museum’s exploration of the rich complexity of African-rooted expression, and dialogue about the difficult issues facing the large and complex black community of Brooklyn.





# Transportation

**Goal: New York City’s transportation network will be reliable, safe, sustainable, and accessible, meeting the needs of all New Yorkers and supporting the city’s growing economy**

INDICATORS + TARGETS

- ✔ Increase overall transit capacity into the Manhattan core by 20 percent by 2040
- ✔ Double the number of cyclists, tracked by the NYC Commuter Cycling Index, by 2020
- ✔ Increase the share of cargo moved within the region via rail and water

Overview

Our transportation network is the lifeblood of the city’s neighborhoods and our economy. Every day the city’s public-transit system enables millions of New Yorkers to get to work and school, access services and shopping, and enjoy the life of the city.

Throughout its history, New York City’s economic growth has been supported by investment in its transit system. Despite the importance of the transit network, the first phase of the Second Avenue Subway—scheduled to open in late 2016—will be the first major capacity expansion of the system since the late 1930s. Today, a growing number of subway lines, such as the 4/5/6, are at capacity during peak periods. Transit hubs serving the region, such as Penn Station (Amtrak/NJT/LIRR) and the Port Authority Bus Terminal (PABT), are also strained. These capacity issues are not limited to Manhattan and traditional central business districts. Growth throughout the five boroughs, both to dispersed centers of employment and communities experiencing commercial and residential growth, like DUMBO, Williamsburg, and Long Island City, is creating new challenges, a telling sign of the need for better service and connections to emerging job clusters throughout the city.

Reliable and convenient transit access to employment and other activities remains stubbornly out of reach for too many New Yorkers. This problem is particularly acute for low- and moderate-income residents in areas poorly served by the subway or buses. For seniors and those with disabilities, this can affect their ability to simply get groceries, or see family and friends.

For New Yorkers who are active, biking offers a convenient travel option for work and other trips. As biking creates no carbon emissions, it also supports the City’s sustainability goals. New York City’s Commuter Cycling Indicator, an indicator developed by DOT that makes use of the most robust data availalbe to estimate levels of cycling within the central areas of the city over time, has almost quadrupled since 2000. This growth has been facilitated by a dramatic expansion in the City’s bike network to 980 lane miles. However, many neighborhoods outside Manhattan and inner Brooklyn and Queens still lack significant bike infrastructure.

New York’s three main airports—JFK, LaGuardia, and Newark Liberty—consistently rank as the most delay-prone in the nation. During peak hours, the Federal Aviation Administration caps take-offs and landings in an effort to control delays. Adding to



this challenge, forecasts show demand at these airports increasing from about 117 million passengers today to 150 million by 2030.

New York City’s freight system also faces significant challenges. Although New York City’s port and rail connections fueled the city’s rise in the 19<sup>th</sup> and 20<sup>th</sup> centuries, almost all of the nearly 400 million tons of cargo that enters, leaves, or passes through the city every year are now transported by truck. This creates a host of challenges, from air quality to costs for businesses, to security and resiliency, to quality of life concerns for residents.

And those trucks put a tremendous amount of wear and tear on the City’s roads, which are used by millions of vehicles each day. Our streets, bridges, and highways are among the oldest in the country and are in need of near constant repair and rehabilitation. A sustained commitment to maintaining our road network is essential to supporting the movement of people and good across the five boroughs.



Subway capacity expansion

Initiative 1

**Support full funding of the MTA capital plan**

A modern and reliable regional transit system is essential to New York’s future growth and realizing the goals of OneNYC. Thus, the City strongly supports the full funding of the Metropolitan Transportation Authority’s (MTA) 2015–19 Capital Plan. As the city’s transit riders, toll payers, and taxpayers already support the much of the MTA’s operations, we will continue to look to every level of government to support the modernization and expansion of New York’s transit system, which is a key economic driver of the downstate New York region.

The City will also work closely with the MTA to identify significant savings and improve operational coordination in areas of common interest, such as bus rapid transit, other bus services,

and Access-a-Ride. Any savings we achieve together can be leveraged to create new capital support for the MTA.

To support the goals on OneNYC, the City calls for the inclusion of the following additional capital projects and initiatives in the MTA capital plan:

- The development of a strategy to accelerate the installation of Communications-Based Train Control (CBTC), a technology that allows the MTA to operate more frequent service on existing subway lines. CBTC improves safety, expands capacity, increases reliability, shortens travel times, and enables the installation of count-down clocks. To keep up with growing ridership on our subways, CBTC must be more quickly deployed on congested routes
- A study to explore the expansion of the subway system south along Utica Avenue in



Brooklyn, one of the densest areas of the city without direct access to the subway

- Entrance upgrades at a number of subway stations in high-growth areas to relieve crowding and provide access for the disabled beyond those already included in the MTA plan
- A transfer connection at the Livonia Ave/Junius St stations between the L and the 3 lines, which would improve subway options for residents of Canarsie and East New York
- The development of a strategy to upgrade the Long Island Railroad (LIRR) Atlantic Branch to subway-like service after the completion of East Side Access—including adoption of the subway fare—and a timeline for implementation
- Improvements to the LIRR and Broadway Junction stations and necessary enhancements, including streetscaping and pedestrian improvements, to strengthen connections in a potential high growth area with transit capacity

Initiative 2

Improve existing transit services

Supporting Initiatives

**A. Relieve congestion on major subway corridors.** In addition to accelerating the installation of CBTC on key subway lines, as detailed in Initiative 1, the City will also continue to work with the MTA to move forward on design and construction of Second Avenue Subway Phase II, and move forward on the planning and design of Phase III. When completed, these phases will extend the line north to 125th Street and south to Houston Street, dramatically relieving congestion on the over-crowded 4/5/6 subway lines.

B. Improve and expand bus transit throughout the city

To improve bus service throughout New York City, we will:

- **Expand the Select Bus Service (SBS) network to 20 routes citywide by 2017.** The MTA and New York City Department of Transportation (NYCDOT) will significantly expand the reach of SBS, bringing faster and more-reliable bus service to tens of thousands of daily bus riders. The City and the MTA will initiate service on three new SBS routes in 2015 and five new routes in both 2016 and 2017. The next routes to launch in 2015 are 86th Street in Manhattan, Utica Avenue in Brooklyn, and Flushing to Jamaica via Main Street in Queens. The City has also begun work on a transformative new bus rapid-transit route on Woodhaven Boulevard which will reduce travel times by 25 to 30 percent for more than 30,000 daily bus riders. The SBS program has been successful in reducing travel times and increasing ridership.
- **Improve local bus service.** NYCDOT will work with the MTA to identify key congestion points along busy local bus routes, and to develop and implement solutions.



Select Bus Service



Over the next four years, the City will address eight of these bus hot spots. The City will also continue to expand transit signal priority (TSP), a system that improves bus reliability by giving buses an early green light or extra green time at intersections. The City will implement two new TSP corridors per year over the next four years (in addition to the nine corridors already being planned, and three already in operation).

- **Increase camera enforcement of bus-lane rules.** Bus lanes are an essential tool for moving buses through congested city streets and getting bus riders where they need to go more quickly. Effective enforcement of bus lanes requires cameras in order to keep the lanes free from traffic. The current State legislation authorizing enforcement of bus-lane rules with cameras expires this year. Working with our elected representatives in Albany, the City will work to expand use of bus-lane cameras to keep buses moving and thus provide faster trips for tens of thousands of New York City bus riders.
- **Provide real time bus information to more riders.** Working with the MTA, the City will install 250 real time bus information signs at key SBS and local bus stops in 2016 and 2017. These displays will provide better information to bus riders, especially those without smartphones.
- **Leverage the commuter rail system to better serve New York City communities.** The City will work with the MTA to better leverage the commuter rail system to provide improved transit connections within the city. The City will continue to support the building of new accessible stations in the Bronx as part of the Metro-North to Penn Station project, which will bring commuter rail service to Co-Op City and other Bronx communities currently without rapid transit access. The City will also work with the MTA on a study of the conversion of the Atlantic Branch to a more frequent and affordable shuttle service between Atlantic Terminal and Jamaica, which would provide a new transit option to residents of Crown Heights, East New York, and Jamaica. Finally, the City will advocate for changing commuter-rail-fare policy for intra-city trips, including the expansion of City Ticket, which would make the Long Island Rail Road and Metro-North an affordable option for travel within the city.



Port Authority Bus Terminal





### Improving Transit Access to Jobs

The initiatives described within this goal will improve existing transit service and provide support for major expansions to the transit network. While increasing access to jobs for all New Yorkers, these improvements will particularly impact those whose poor access by public transit affects their economic outcomes.

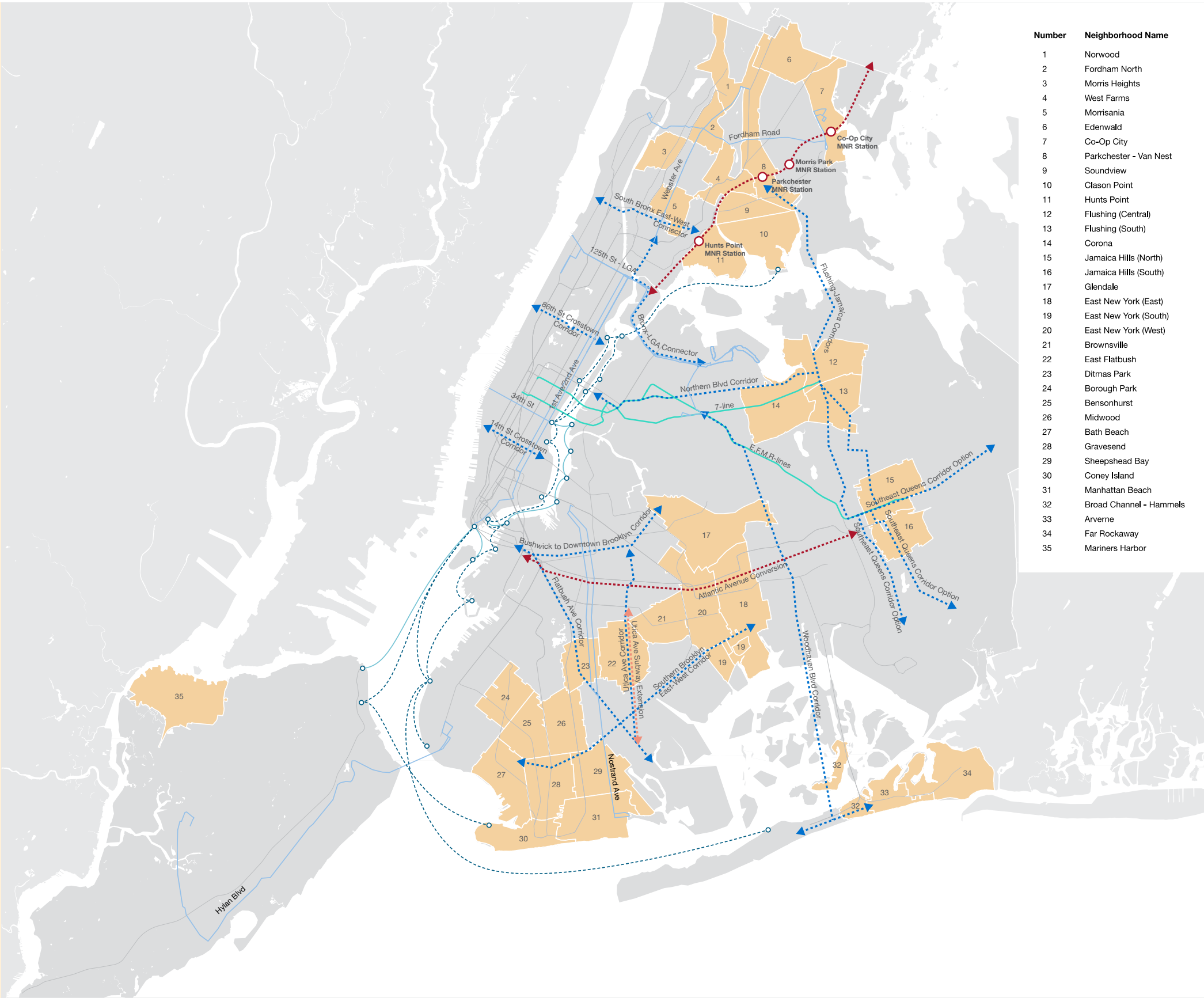
The neighborhoods highlighted in the above map are those in which median household income for a family of four is below the citywide average of \$52,259 and access by public transit to jobs is comparatively poor. Many workers in these communities do not have access to a car and rely exclusively on mass transit to get to work.

To improve access to employment in these priority areas, the City will implement a program of public transit and bike improvements, including new Select Bus Service (SBS) routes and expanded ferry service. The City will also work with the MTA to improve and expand the transit network. These initiatives are described in more detail in Initiatives 1, 2, 3 and 4 of this goal.

Including existing SBS routes, these projects will improve transit service in 25 priority communities, contributing to the target of providing 90 percent of New Yorkers with access to more than 200,000 jobs by transit in 45 minutes.

- Below Average Job Access and Income<sup>1,2</sup>
- Potential Rail Corridors/Stops
- Existing SBS Corridors
- Planned SBS Corridors
- Existing Ferry Network
- Proposed Ferry Network/Stops
- Potential Subway Expansion
- Priority Subway Signal Enhancements
- NYCT Subway

<sup>1</sup> NYC median income is \$52,259 (2013)  
<sup>2</sup> Weighted average jobs accessible via transit within 45 minutes  
  
5-Year Estimates, Economic Opportunity and  
New York City Neighborhoods  
NYU Rudin Center Analysis

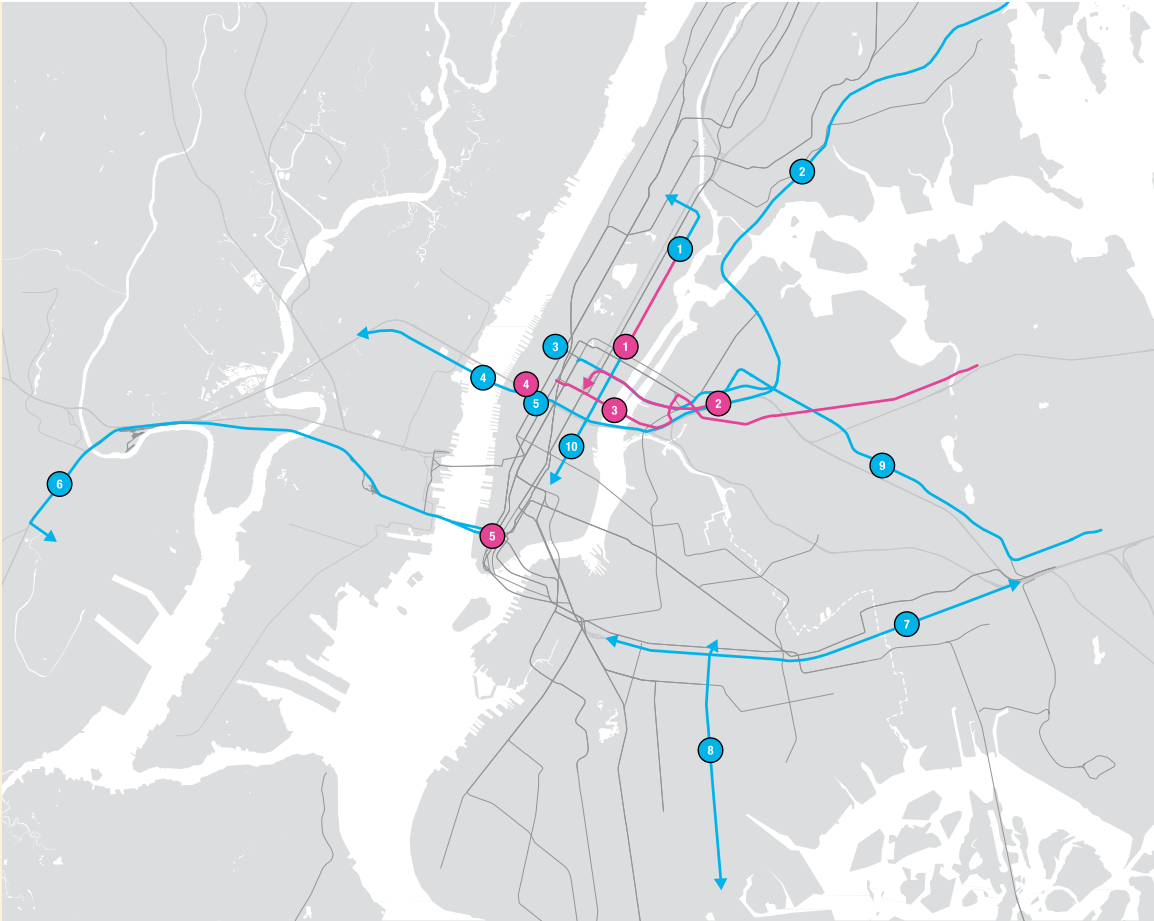




## Transit Network Expansion Projects

This map shows two types of projects:

1. Major transit projects already under construction by the MTA and PANYNJ.
2. Major capital projects that are essential to the future growth of the city and are called for in OneNYC.



## Major Transit Projects Under Construction

**1. 2nd Avenue Subway (Phase 1)**  
**Who:** MTA-CC  
**What:** Tunneling and station work to extend Q line service to 96th Street.

**2. East Side Access**  
**Who:** MTA-CC  
**What:** Provide LIRR access to Grand Central Terminal via the 63rd Street Tunnel, increasing frequency and providing direct access to East Midtown.

**3. Advanced Subway Signals**  
**Who:** MTA-NYCT  
**What:** Installation of new communications and signal equipment to increase reliability and frequency on the 7 line.

**4. Moynihan Station Expansion**  
**Who:** Amtrak  
**What:** Initial design and construction to convert the Farley Post Office into a new passenger rail station while improving Penn Station as a major component of the Gateway Project.

**5. WTC Transportation Hub**  
**Who:** PANYNJ  
**What:** Replacing World Trade Center PATH station with a new transportation hub that provides connections to subway and ferry services.

## New York City's Priority Transit Projects

**1. 2nd Avenue Subway (Phase 2)**  
**Who:** MTA-CC  
**What:** Extension of the Second Avenue Subway from 96th Street to 125th Street, with new stations at 106th, 116th, and 125th Streets.

**2. Metro-North Railroad Penn Station Access**  
**Who:** MTA-CC  
**What:** Creation of a new connection from the Metro-North New Haven Line to Penn Station, with four new stations in the Bronx.

**3. Port Authority Bus Terminal**  
**Who:** PANYNJ  
**What:** Design of a new terminal and supporting facilities to accommodate future bus demand and improve the customer experience.

**4. Gateway Program**  
**Who:** Amtrak  
**What:** Construction of two new Hudson River rail tunnels and other improvements to double train capacity into Penn Station.

**5. Penn Station Terminal Redevelopment**  
**Who:** NJT/MTA  
**What:** Design of a new modern train station to replace the existing outmoded facility, alleviating overcrowding and improving the passenger experience.

**6. PATH Newark Airport Extension**  
**Who:** PANYNJ  
**What:** Extension of PATH service to Newark Liberty Airport to provide a one-seat ride from Lower Manhattan.

**7. Atlantic Avenue Conversion**  
**Who:** MTA-LIRR  
**What:** Study of the conversion of the commuter rail line between Atlantic Terminal and Jamaica Station into subway-like passenger service.

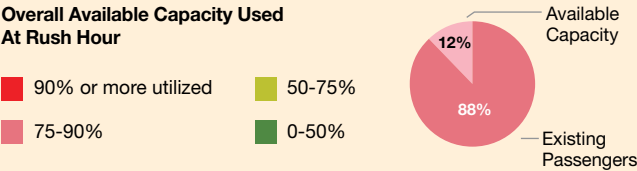
**8. Utica Avenue Subway Extension**  
**Who:** MTA-CC  
**What:** Study of the extension of the Eastern Parkway Line to provide service on the 3 and 4 lines along Utica Avenue in Brooklyn.

**9. Advanced Subway Signals**  
**Who:** MTA-NYCT  
**What:** Installation of CBTC, new communications and signal equipment to increase reliability and capacity on the E,F,M and R lines.

**10. 2nd Avenue Subway (Phase 3)**  
**Who:** MTA-CC  
**What:** Design of the extension of the Second Avenue subway south to Houston Street, with new stations at 55th, 42nd, 34th, 23rd, 14th, and Houston Streets.

**Other Subway Enhancements**  
**Who:** MTA-CC  
**What:** Study of new transfer between the L and 3 lines at Livonia Avenue, improvements at Broadway Junction, and acceleration of advanced subway signals on other key congested subway lines (not shown).

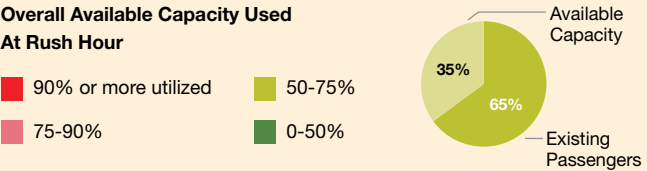
## Existing Transit Capacity



New York City subway ridership has reached record highs. In 2014, the system recorded over 6.1 million trips in a single day, the highest daily figure since recording began in 1985. Commuter rail tunnels under the Hudson River, which are over 100 years old, are also carrying a record number of passengers. High transit ridership is putting tremendous strain on the subway and commuter rail systems.

The first map shows that subway and commuter rail lines are at 88 percent of passenger capacity overall entering the Manhattan central business districts during rush hour, with many lines (shown in dark red) at over 90 percent capacity. In some cases lines are operating at over 100 percent, with trains tightly packed and passengers often waiting for several trains to pass before being able to board.

## Increased Capacity with Expansion Projects



The second map shows estimated capacity with the set of major expansion projects described in Initiative 3, including Amtrak's Gateway Project, current and future phases of Second Avenue Subway, acceleration of advanced subway signal system improvements to expand the capacity of existing lines, as well as the East Side Access project currently underway. With completion of these projects, lines would be at 65 percent passenger capacity overall entering Manhattan during rush hour, allowing over half a million more passengers to reach places of work in the central business districts during the average work day. Many lines would achieve significant improvements to their capacity as shown by the number of dark green lines on the map.





New York City Ferry Service

- (PANYNJ) to develop an integrated strategy to address this challenge, including:
- The Gateway Project, an initiative to build two new commuter rail tunnels under the Hudson River and dramatically expand rail capacity into Penn Station
  - Long- and short-term interventions to improve access, connectivity, amenities, and circulation in Penn Station
  - Modernization of the Port Authority Bus Terminal and other bus facilities. The City will also work with the PANYNJ to develop a cost-efficient strategy to modernize the PABT

**B. Study new subway routes in underserved communities and other improvements to the subway network**

The City will work with the MTA to study a Utica Avenue extension from the Eastern Parkway Line (3/4 train). The Utica Avenue corridor is a prime candidate for the next generation of subway expansion—it is one of the densest areas in the city not directly served by the subway and is served by the second busiest bus route in the City, the B46. The City will also work with the MTA to explore creating new system transfers, such as a transfer between the L and 3 trains at Livonia Avenue. These new connections will reduce travel times and expand travel options for thousands of subway riders. Finally, the City will work with the MTA to identify strategies to improve and expand station entrances at subway stops experiencing growing ridership. As subway ridership continues to climb, we must take action to reduce over-crowding within subway stations, especially at choke points like stairways and fare-gate areas.

**C. Expand the ferry network**

The City will launch an expanded citywide ferry network to improve transit connections between the city’s waterfront communities; this service will be fully accessible to New Yorkers with disabilities. Three new routes—Rockaway, South Brooklyn, and Astoria—are scheduled to launch in 2017, with two

others in 2018 (Lower East Side and Soundview). The City has also committed capital funding for the construction of landings.

**D. Expand and improve service to and within Staten Island**

Improving connections to Staten Island will support recent revitalization along the North Shore and strengthen the connection of the South Shore to the rest of the city, an essential link in expanding economic opportunity and building resiliency for those communities. The City will work to expand service through:

- Enhancements to east/west transportation along the North Shore. In the short term, this includes a package of bus service improvements, including additional Transit Signal corridors, real time information signs, and treatments for bus hot spots
- More frequent service on the Staten Island Railway (SIR). New train cars will improve service for existing ridership, while enhanced off-peak service will benefit residents of Staten Island as well as visitors to Staten Island’s neighborhoods and new attractions and amenities



Expanded Bike Lane Network

**Initiative 4**  
**Expand the City’s bike network**

**Supporting Initiatives**

**A. Continue to expand the City’s bike-lane network, especially to neighborhoods with limited bike infrastructure**

Bicycling as a way to get around the five boroughs continues to grow in popularity. Between 2013 and 2014, the City’s In-Season Cycling Indicator—a measure of bike volumes on major bike routes into the Manhattan CBD—rose by 4 percent. Overall, cycling has increased a staggering 337 percent since 2000. To support this growth and the City’s goal of doubling the Cycling Indicator by 2020, the City will continue to invest in new bike infrastructure. Over the next four years, the City will add another 200 miles of bike lanes, including 20 miles of protected lanes, bringing the total to 1,180 lane miles. The City will work collaboratively with communities to continue expanding the bike network outward from the Manhattan core and inner Brooklyn. The City will also explore ways to better measure bike ridership in areas outside of the Manhattan CBD.

**B. Improve bike access on bridges**

Safe and convenient bridge access for bikes is crucial to making New York City more bike-friendly. In 2015 and 2016, the City will improve bike connections between Brooklyn and Queens with the construction of a two-way bike path on the Pulaski Bridge and the installation of protected bike lanes on the John Jay Byrne Bridge on Greenpoint Avenue. The City will also improve bike connections



NYCHA, Citi Bike and DOT

New York City Housing Authority (NYCHA) is part of a collaboration with Citi Bike and NYCDOT to place bike share stations at public housing complexes. NYCHA residents receive a discounted rate on the annual fee charged by Citi Bike. Having bike share stations located nearby provides more mobility options for NYCHA residents and the local community. There are currently 43 Citi Bike stations serving NYCHA developments, with 11 more planned for the summer of 2015.

to the High Bridge in Upper Manhattan to coincide with its reopening this summer. Moving forward, DOT is evaluating potential designs for improved bike routes on the Grand Street Bridge in Brooklyn and the Honeywell Street Bridge in Queens. The City is also initiating a study of bike access to the 15 Harlem River bridges, which will recommend a program of both short- and long-term improvements. Finally, the City is working with the MTA to pilot external bike racks on buses that cross bike-inaccessible bridges and to explore options for adding pedestrian and bike paths on the Verrazano Narrows Bridge.

C. Expand bike share

In 2015, the City and its partner, New York City Bike Share, will expand Citi Bike to Long Island City in Queens, and to additional parts of Williamsburg, Greenpoint, and Bedford Stuyvesant in Brooklyn. This expansion will include 1,000 new bikes and over 90 stations. In 2016 and 2017, Citi Bike will add another 5,000 bicycles and increase its service areas to additional areas of upper Manhattan, central Brooklyn, and western Queens.

Initiative 5

Expand the accessibility of the city’s transportation network to seniors and people with disabilities

Supporting Initiatives

A. Increase accessibility of the pedestrian network to people with disabilities

The City will identify a range of measures to increase the accessibility of our streets to New Yorkers with disabilities. These measures include the expansion of Accessible Pedestrian Signals (APS) and sidewalk-repair programs, development of accessible design guidelines for all New York City street projects, and a pilot program to explore ways technology can improve accessibility. New technology, such as smartphones, opens up opportunities to assist pedestrians with disabilities, particularly the vision-impaired, in navigating the city’s streets—in addition to other efforts like DOT’s upgrading of pedestrian ramps.

B. Improve accessibility to bus services for transit users with disabilities

Buses are a critical transportation link for older residents and New Yorkers with disabilities. In 2015, the City will roll out a second phase of its Safe Routes to Transit initiative to address accessibility problems at 25 bus stops located under elevated train lines. At these bus stops, buses cannot pull to the curb, leading passengers to wait and then board from the street. This initiative will build sidewalk extensions on boarding islands at these stops so that passengers are safe and the bus ramps can be properly deployed.



Red Hook Container Terminal Operations

C. Improve convenience and reliability of modes of transit for New Yorkers with disabilities

Working with the MTA, the City will expand use of the yellow and green taxis—including the growing number of wheelchair-accessible taxis—to provide faster and more convenient paratransit services to New Yorkers with disabilities. The City and the MTA will work to increase the proportion of paratransit trips made by yellow and green taxis over the next four years. And to improve the quality of life for the taxi drivers providing these services, the City will create new relief stands and rest areas in all five boroughs. The City will also explore the feasibility of installing public toilets and benches at some stands.

Initiative 6

The City will make the trucking sector greener and more efficient, and continue to expand freight movement via rail and water where possible

Supporting Initiatives

A. Encourage water and rail freight to the New York region through projects such as the Cross-Harbor Rail Tunnel and Brooklyn Marine Terminals

The City will continue to protect and invest in deep-water marine terminals in Brooklyn and Staten Island. The City has already invested \$100 million in upgrades and a rail link to the South Brooklyn Marine Terminal (SBMT), a long underutilized facility. In the immediate term, SBMT will focus on non-containerized cargos primarily used in the construction industry and roll-on/roll-off cargos such as automobiles. In the longer term, and in conjunction with the Cross-Harbor Rail Tunnel, additional facility upgrades at SBMT and improved distribution facilities East of Hudson, could allow the SBMT to handle container ships, which carry most of the world’s ocean freight. By directly serving New York at a point that is already in the market, truck trips will be reduced and air quality improved. The City will also support state and federal efforts to dredge primary and secondary waterways in order to better facilitate waterborne freight movement and water-dependent uses along the waterfront.

To realize the inherent environmental and cost advantages of using rail, the City will continue to work with PANYNJ to advance the Cross-Harbor Rail Tunnel connecting New Jersey and Brooklyn. Specifically, the City supports a two-track, double-stack rail freight tunnel as this configuration offers the largest capacity and greatest redundancy. When completed, this tunnel will result in a meaningful shift in the City’s dependence on truck service for freight. PANYNJ estimates that construction of the tunnel would reduce annual greenhouse gas emissions by 80,000 to 110,000





Off-hour truck delivery

metric tons by 2035. Such a tunnel would also greatly expand East of Hudson freight-rail capacity, and support domestic rail needs as well as container activity at SBMT. In the meantime, the City will support the PANYNJ’s efforts to enhance the capacity of freight movements by rail barge across the Hudson River, increasing opportunities now for shippers in Brooklyn, Queens and beyond.

**B. Reduce the impact of the trucks that must bring freight “the last mile” to market**

The City will increase off-hour deliveries by food- and retail-sector trucks, with a focus on large buildings, high-pedestrian areas, and bicycle-conflict areas such as Midtown and Lower Manhattan, Downtown Brooklyn, and Downtown Jamaica. By shifting deliveries to over-night and early-morning hours, the City will decrease both congestion and truck emissions. As part of this effort, we will work with the trucking industry to explore and pilot low-noise truck technologies.

Mobile applications are now available to match suppliers who need to move goods with truckers who are already on the road and have room to pick up additional cargo, thus reducing new truck trips on our streets by consolidating loads. The City will launch a pilot project to encourage the use of these platforms.

The City will work with large fleets to create a Smart Fleet rating system, similar to the Leadership in Energy & Environmental Design (LEED) standard for buildings, but based on truck safety, noise reduction, energy efficiency, and emissions-control technology. The City will then publicly recognize fleets that go above and beyond in using safe, quiet, and green trucks for their deliveries.

To facilitate the delivery of construction-related cargo by water, such as building components, turbines, and generators, the City will create designated roll-on/roll-off and lift-on/lift-off staging areas for maritime cargo in each borough, making it easier and cheaper to bring these essential construction supplies into New York City.

**C. Expand JFK Airport’s air freight activity**

The City is working with PANYNJ to improve JFK’s air-freight facilities. Over the past decade, cargo volumes at JFK have declined by almost a third. Today, over 15,000 people at JFK work directly in air cargo related jobs. Regionally, the air cargo industry supports over 50,000 jobs, \$8.6 billion in sales, and almost \$3 billion in wages. The City remains committed to supporting the air cargo industry and will work with PANYNJ to increase the capacity of our air freight systems to expand JFK’s share of the air-freight market.

In March 2015, the City adopted a new rule allowing industry-standard 53-foot tractor trailers to access JFK. The City is also working with the PANYNJ to build new facilities. Over the past two years, a truck stop has opened on-airport, and a new animal handling facility (for which the City provided financing) is under construction. The next two years will see the construction of a new state-of-the-art cargo handling facility.



Baggage claim at LaGuardia Airport

This work is complemented by the City’s efforts to establish an industrial business improvement district in the adjacent Springfield Gardens neighborhood.

**Initiative 7**

**Expand airport capacity**

To maintain our competitiveness as a center of tourism and the global economy, the City will work with PANYNJ, New York State, and the Federal Government to expand flight capacity and improve airport facilities and terminals at the region’s airports, particularly LaGuardia and JFK. Working with PANYNJ and the airline industry, the City will support the expansion of Terminal One, Terminal Eight, and Terminal Four at JFK and the complete reconstruction of the Central Terminal at LaGuardia Airport, an outdated facility that is long overdue for replacement. Additionally, the City will encourage the Federal Aviation Administration and PANYNJ to continue to implement NextGen technology, a series of upgrades to the region’s air traffic control system that will improve safety and enable more-efficient take-offs and landings.

The City supports expanding flight capacity at JFK, but only in a manner that is sensitive to the environment and the quality-of-life concerns of adjacent communities. The City will work with PANYNJ as it completes a study of capacity-expansion options, including the addition of a fourth runway. This study should take into account the noise, air quality, and greenhouse gas emission impacts of different expansion options and ways to mitigate these impacts.

**Initiative 8**

**Provide reliable, convenient transit access to all three of the region’s major airports**

Though they are all served by transit, none of New York’s major airports offers a one-seat transit connection to the City’s central business districts (CBDs). This lack of access impacts air travelers and airport employees, and increases congestion on the regional highway system.

The City will continue to work with the MTA and others to improve existing bus connections to LaGuardia in the short term, while working with PANYNJ, the MTA, and the State of New York to develop a plan for better long-term transit. Similarly, it will continue to support PANYNJ’s project to extend Port Authority Trans-Hudson (PATH) to Newark Airport, which will add airport access from Lower Manhattan. Finally, the City will work with PANYNJ and the MTA to explore additional ways to improve existing bus and rail connections to JFK, such as adding more frequent shuttle service on the Atlantic Branch of the Long Island Rail Road after East Side Access is complete.

Initiative 9

Improve the city’s roads, bridges, and highways

The City is responsible for the operation and maintenance of a complex network of roads, bridges, and highways that connect the five boroughs. Much of this infrastructure is aging—the four East River Bridges, for example, are all over 100 years old—and requires continual reinvestment to remain in a state of good repair. Over the next ten years, the City will undertake dozens of major capital projects to restore our network of roads and bridges, including significant rehabilitation of major roads essential to the City’s economic vitality. For example, sections of the critical FDR Drive will be rehabilitated along with the esplanade that sits above it.

In Brooklyn, the City will rehabilitate and reconstruct the 21 interconnected bridge structures that carry the Brooklyn Queens Expressway from Atlantic Avenue to Sands Street, including the “triple cantilever” stacked section of highway completed in 1948, topped by the iconic Brooklyn Heights Promenade. With no reconstruction work in recent history, the triple cantilever is in need of major repair with many components experiencing significant deterioration. In Queens, the City will repair multiple structures carrying and crossing both the Van Wyck Expressway and the Cross Island Parkway. In addition, the City is initiating a series of robust safety improvements along sections of Queens Boulevard, a Vision Zero Priority Corridor, as part of the Administration’s Great Streets initiative. In the Bronx, the Great Streets initiative will implement safety and quality of life improvements for users along the Grand Concourse, a major thoroughfare in the borough, while the City will also undertake the rehabilitation and reconstruction of highway structures along the Bruckner Expressway and the Hutchinson River Parkway.

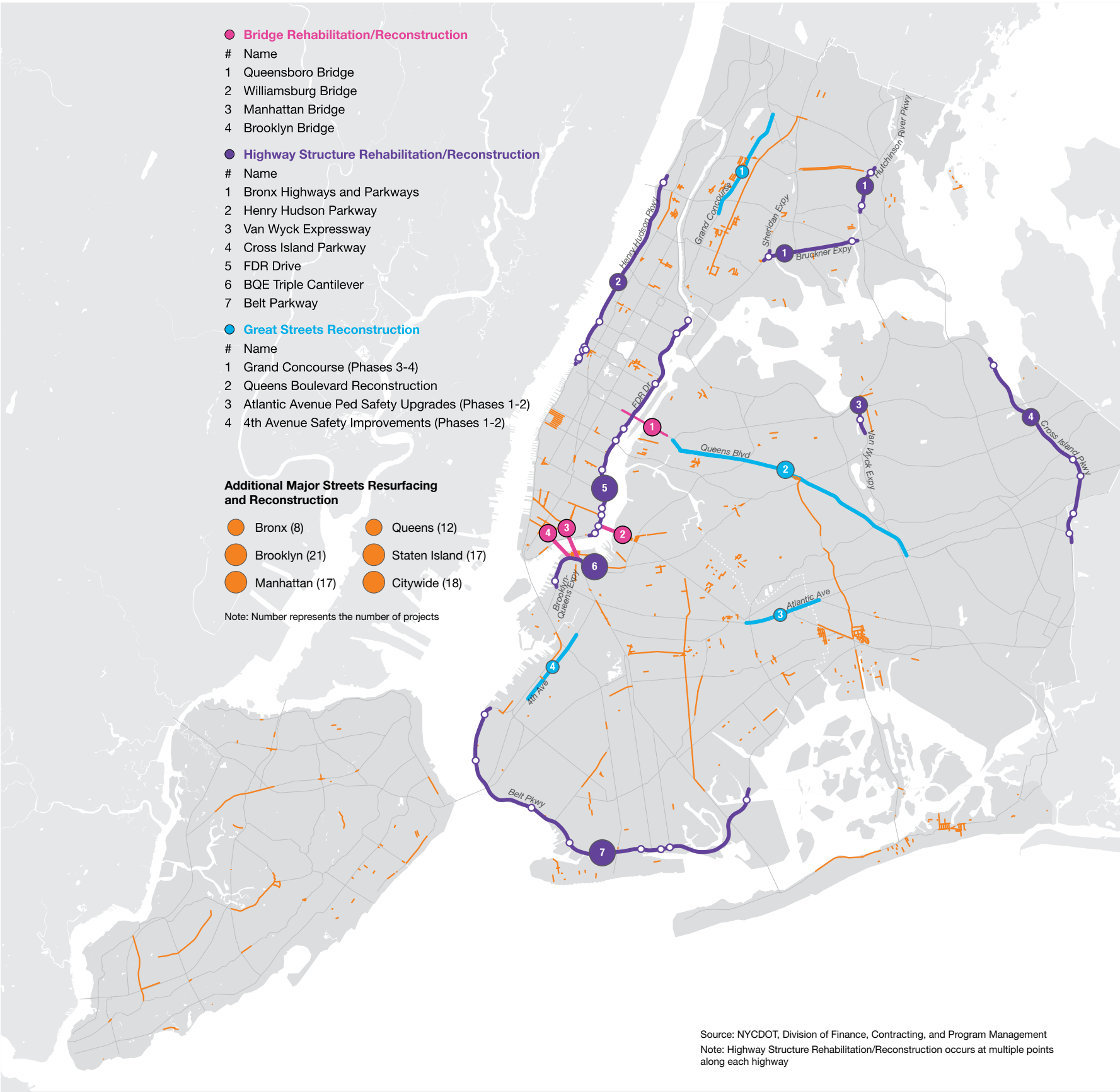
In Staten Island, the City will undertake 17 projects to fully rebuild city streets, including sections of Father Capodanno Boulevard, Victory Boulevard, and Arthur Kill Road. Together, these projects will ensure our road and bridge network can continue to safely support the movement of people and goods across the city.

Department of Transportation Street, Bridge, and Highway Reconstruction Program

- Highway Structure Rehabilitation/Reconstruction
- Bridge Rehabilitation/Reconstruction
- Great Streets Reconstruction
- Major Streets Reconstruction
- NYC Major Roads
- Less than \$100 million
- \$100-500 million
- More than \$500 million



The “Triple Cantilever” in 1948 and today







# Infrastructure Planning & Management

**Goal: New York City’s infrastructure and built environment will exemplify global economic, environmental, and social leadership**

## Overview

Infrastructure is the foundation of our regional economy and provides for the everyday needs of all New Yorkers, yet much of New York’s core infrastructure is aging and outdated. Many systems, including transit, sewers, and schools, were built decades ago and are at capacity, straining to meet the demands of a growing population and a modern, thriving economy. Fixing our infrastructure requires significantly more funding and a renewed national commitment to cities, as well as smarter, more efficient infrastructure planning and project delivery.

The physical legacy of disinvestment during the fiscal crisis of the 1970s stands as a testament to the urgency of achieving a “state of good repair.” The City spent the next three decades trying to catch up, investing billions of dollars to rehabilitate infrastructure and buildings. We need a near-term infusion of funding from all levels of government in order to prevent history from repeating itself and to allow us the opportunity to expand infrastructure systems that catalyze economic expansion and neighborhood revitalization.

While more investment is required, we will take significant steps to improve our use of existing funds through integrated capital planning, improved project delivery, and asset management. Current investment plans would benefit from better coordination with our regional partners, including State government, public authorities, utilities, and other private entities. The City is committed to taking a leadership role in coordinating these investments and incorporating them into our own strategic planning process.

As it currently stands, many capital projects come in over budget and behind schedule. This is partially due to reasons outside of our control, such as the complexities of construction in a dense city. However, we can do better in a number of areas, including reforming City and State laws, streamlining rules for public procurement and construction, streamlining permitting processes, improving capital project tracking and accountability, and enhancing the City’s technology and data systems.

Our overall goal is to ensure New York City’s infrastructure is the product of best practices and is consistent with our City’s reputation as a global leader in economic, environmental, and social policy. In this vein, we are fully committed to reforming the processes that support each stage of the infrastructure lifecycle.



Additionally, the City’s massive infrastructure program creates a wide range of jobs and economic activity. We will leverage these investments to create employment and career opportunities for New Yorkers, targeted to those who have historically experienced high rates of unemployment. These commitments are carried out through targeted training programs and Project Labor Agreements, discussed earlier in the Workforce Development goal.



## School Construction Authority

A growing city needs more room for children to learn in facilities that meet their educational needs. To address increasing demand in high growth areas across New York City, the City will add over 30,000 new classroom seats during this plan, as well as investing in new technology and the improvement of aging facilities.

The School Construction Authority’s (SCA) current inventory of facilities includes over 190 buildings that are at least 100 years old. The needs for improvements in these schools identified by the SCA are based on several factors, including the annual Building Condition Assessment Survey of all schools, which provides an evaluation of the condition of building systems. The SCA uses this evaluation of what is required to maintain a state of good repair—in conjunction with recommendations from facility personnel, school administration, and the community—to develop the projects to be included in its Capital Plan.

In its upcoming Capital Plan, the SCA will create thousands of seats in areas of current overcrowding and projected enrollment growth, and will take significant steps to address the pre-kindergarten need.



Initiative 1

Secure funding sources that are equitable, sustainable, and dedicated to our core infrastructure

Over the next decade, the City will continue to advocate for a robust federal commitment to funding urban infrastructure, while exploring new streams of dedicated revenues.

Supporting Initiative

A. Leverage land-use actions to encourage infrastructure investments

City policy, such as rezonings, create economic value for property owners, some of which should be recaptured in order to fund the infrastructure improvements needed to accommodate growth and development. For instance, as part of the zoning changes associated with the planned One Vanderbilt office tower, the development firm SL Green Realty Corporation has committed to spend \$210 million on improvements to the Grand Central Terminal and subway station. Investments in infrastructure can in return enhance real estate values and thus lead to increased tax revenue for the City.

Initiative 2

Maximize the economic, environmental, and social benefits of infrastructure investments

Every City agency strives to achieve economic, environmental, and social benefits with its investments—the triple bottom line. New methodologies have emerged to help inform investment decisions. The City should maintain a focus on achieving a state of good repair for its infrastructure assets while prioritizing projects that are socially, fiscally, and environmentally advantageous, as exemplified by the emissions reductions, energy cost savings, and jobs created through retrofits to public buildings under One City: Built to Last.

The City already collects a wealth of data that could be harnessed to inform infrastructure investment decisions based on triple bottom line criteria. Over the next year, we will review current indicators and identify data gaps that would support more sophisticated prioritization methodologies.

We will also facilitate interagency and intergovernmental collaborations in order to realize higher economic, environmental, and social returns (the triple bottom line). These efforts will include improvements to the City’s geographic information systems (GIS) and data-sharing platforms that will also increase the transparency of our infrastructure programs and facilitate greater partnerships with our infrastructure partners in state and federal government.



Initiative 3

Enhance capital project delivery

Capital projects often take too long and cost too much. While many of the reasons for this are outside of the City’s control, there is much we can change to improve the situation, particularly in rules and processes. Over the next several months, the City will establish a task force to identify strategies for accelerating investment programs and modernizing project delivery, procurement, and payment processes to greatly reduce the time between project approvals and completion.

Supporting Initiatives

A. Reform state laws to enable design-build

City construction is governed by state laws, some of which are outdated and undermine timely capital project delivery. In 2014, we were pleased to see the joint bidding law passed in Albany, which increases the pace and lowers the cost of upgrading our underground infrastructure--what EB White described as the “ganglia” of subterranean power lines, steam pipes, gas mains, and sewer pipes.

The City also supports an amendment to the New York State Construction Law authorizing the use of the design-build method of project delivery. Currently, the City is required to contract separately and sequentially for design and construction services. Design-build saves a great deal of time by requiring the procurement of only one contract for both phases and allowing these phases to overlap. New York State is using a design-build contract for the Tappan Zee Bridge rebuild, which may save taxpayers as much as \$1 billion. New York City agencies should be able to use similar cost-saving measures for their projects.

B. Expand the Accelerated Work Program

Last spring, the City created the Underground Infrastructure Taskforce to improve the response protocol for gas leaks and find ways to advance the replacement of older gas pipes and water mains. In cooperation with private utilities, the City piloted the Accelerated Work Program in 2014, which identified locations where water- and gas-main work could be coordinated. The City will continue to expand the program in 2015. The Department of Environmental Protection will spend \$100 million to replace old water mains on an accelerated schedule. Thanks to the Accelerated Work Program, private utilities will be replacing their gas pipes at many of the same locations using the same contracts. As a result these streets will be dug up only once.

C. Improve project scoping and design to improve green-building and save costs

Spending more time and effort on the early phases of any project pays great dividends during the design and construction phases. However, due to funding structures for capital projects, the scoping of a project is often short changed.





Several years ago the City created a program to fund early and enhanced project scoping. This program has proven to be successful and will be expanded to build on the progress already made.

We will take a more integrated approach to planning and design in general, and bring more of a design focus to capital planning and budgeting. Moreover, we will make a conscious effort to focus on citywide goals and values during each public-project design phase. Led by the Department of Design and Construction, the City will plan, design, and construct the City’s infrastructure and public buildings to integrate green building and energy-efficient goals in a cost-effective manner.

**D. Modernize project delivery requirements and project management processes**

The City is investigating additional ways to reduce construction costs and shorten project schedules. As a whole, the City’s project delivery requirements must be modernized to meet national and global project management lifecycle standards. Developing citywide project management knowledge and frameworks to address scoping, design, procurement, construction, payments, change orders, and permitting will reduce project costs, schedules, and risks. We will create a higher level of transparency and accountability for capital projects, and revamp the online Capital Projects Dashboard for internal tracking and public information. The Mayor’s Office of Contract Services is also reviewing every step of the City procurement process for opportunities to reduce delivery time and reduce costs.







# Major Planned City Projects 2014-2025

The City will soon release its Ten-Year Capital Strategy, providing a blueprint for capital spending over the next decade that will be critical to improving New Yorkers’ lives in the years to come. A selection of major planned projects, including transportation, parks, water, sewers, hospitals, and schools, economic development and resiliency projects are highlighted on the map at right. OneNYC and the Ten-Year Capital Strategy are aligned to ensure funding for OneNYC goals.

- CUNY

DOC

DSNY

EDC

HHC

DEP

DOT

DPR

NYCHA

SCA

Less than \$100 million

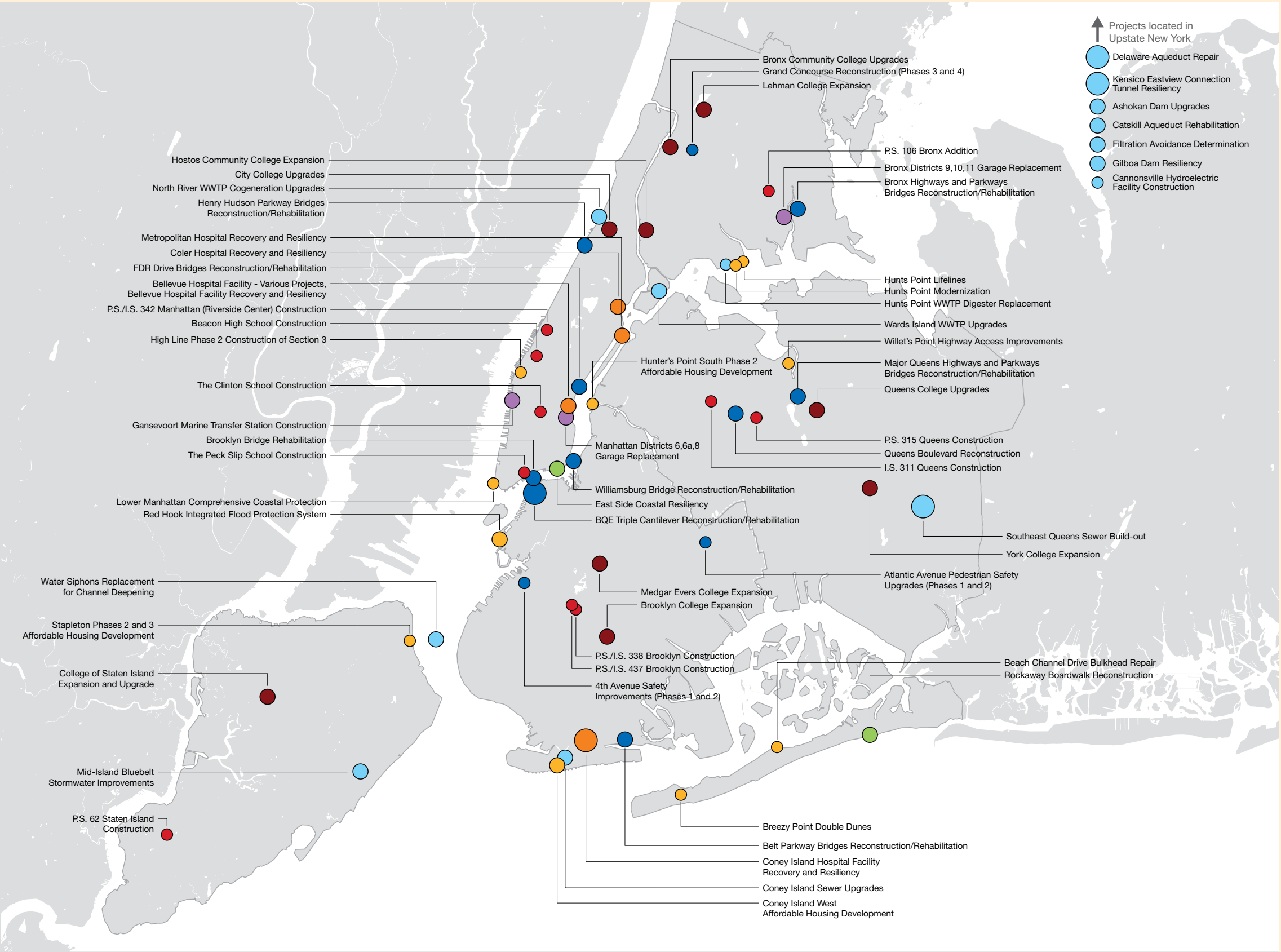
\$100-500 million

More than \$500 million

Note: Partial list of City-led projects

## Projects Not Shown

- Citywide Green Infrastructure Program
- NYCHA Recovery and Resiliency Investments
- Citywide Parks Initiative
- Parks without Borders







# Broadband

**Goal: Every resident and business will have access to affordable, reliable, high-speed broadband service everywhere by 2025**

INDICATORS + TARGETS

- ✔ Increase the percentage of New Yorkers with affordable, reliable, high-speed Internet access at home
- ✔ Increase the percentage of New Yorkers with access to free public Wi-Fi within 1/8<sup>th</sup> mile from home
- ✔ Substantially increase access to fast, affordable, reliable connections of 1 gbps (gigabits per second) or higher

Overview

High-speed Internet access is not a luxury, but an essential service that New Yorkers depend on to communicate, make a living, and access essential goods and services. Without broadband, families and businesses are unable to fully participate in many aspects of contemporary life. Lack of broadband negatively affects the civic, economic, and social engagement of community residents; makes it difficult for startups and small businesses to succeed and scale; and impedes neighborhood development, job creation, and the economic health of the city. Twenty-two percent of New York City households do not have Internet service at home, with major disparities in households above and below the poverty line. 36 percent of households below the poverty line do not have Internet access at home, compared to 18 percent of households living above the poverty line.

Commercial high-speed connections are often priced out of reach of small businesses and startups. The average cost of monthly gigabit speeds for commercial users is \$8,000 in New York City, outpacing those in peer cities like Chicago, and far outstripping costs in cities that have made recent investments in broadband infrastructure.

Sluggish Internet speeds and capacity can also create barriers to local economic development and weaken New York City’s global competitiveness. Despite recent investments by Verizon to build a citywide fiber-optic network, many New Yorkers cannot access or afford this high-speed service. And while businesses located in Manhattan’s commercial corridors generally enjoy high-speed connections, there are insufficient options in the neighborhoods in other boroughs where growth in key sectors is taking place. Large healthcare and research centers are also finding Internet speed and access to be a barrier to their operations and growth. This poses a risk that critical New York City economic sectors might lose competitive ground to national and international cities.

The City has, to date, taken significant steps toward building its capacity to meet this goal, creating new positions focused on telecommunications infrastructure and policy, and establishing the Broadband Task Force, an advisory body composed of experts in broadband technology, real estate development, venture capital and digital equity.



Broadband

Initiative 1

**Promote competition in the residential and commercial broadband markets**

The City will create new or expanded franchises and alternative service models to expand infrastructure, produce more competition, and increase affordability by 2025—in addition to holding incumbent providers accountable for their legal obligations and negotiating for additional upgrades when those franchises come up for renewal in 2020.

According to the Federal Communications Commission, broadband providers appear to invest more heavily in network upgrades and offer faster Internet speeds in areas where they face competition. The City will therefore seek to increase the diversity of residential and commercial broadband service options through new technologies, combined with novel approaches to the exercise of existing franchise authority, establishment of new franchise authority, creative investment of City resources, and/or creative uses of regulatory authority. The City will explore avenues for increasing competition, including maximizing non-exclusive franchises, supporting hyper-local residential and commercial networks, and facilitating the transition of companies that have, to date, solely focused on infrastructure to Internet service providers.

Initiative 2

**Provide high-speed, residential internet service for low-income communities currently without service**

The City will invest in networks providing high-speed residential access either free or at low-cost for low-income communities. Investments may be targeted at particular locations such as communities identified for economic and housing development, or may be focused on particular types of housing, such as public or subsidized properties. Sites may also serve as nodes in a citywide network consisting of LinkNYC and other wireless corridors and networks.

The City expects to realize cost savings resulting from greater efficiencies, such as the use of smart building technologies and resident utilization of e-services. The City will also develop revenue models—grounded in advertising, branding opportunities, premium paid service, and other strategies that will ensure networks are ultimately self-sustaining.



Initiative 3

Increase investment in broadband corridors to reach high-growth business districts, with a focus on outer-borough neighborhoods

The City will invest in new technologies to support innovation economy business in key commercial corridors. This will address the relative lack of high-speed fiber or wireless options for businesses in the boroughs outside of Manhattan, high prices and their combined impact on economic growth and development across the City. Selection criteria will include demonstrated need for and potential benefit from robust broadband by businesses in considered areas, and/or demonstrated engagement from community-based organizations and other stakeholders to help drive the adoption and implementation process.

WiFi coverage within 1/8<sup>th</sup> of a mile of New Yorkers’ homes



Initiative 4

Promote seamless user experience across public networks to create high speed access across the boroughs

The City will ensure a successful citywide rollout of LinkNYC network, which will consist of up to 10,000 structures across the five boroughs, offering 24/7 free Internet access up to gigabit speeds, as well as a range of other services.

The City will leverage existing public and commercial wireless networks and corridors and the backbone created by LinkNYC, with a goal of covering a critical mass of the City’s public spaces with free Wi-Fi by 2025. Today, there are 1,050 documented public hotspots across the five boroughs; the City will enable a dramatic increase in this number.

Through these initiatives, the City will support a seamless user experience across all five boroughs, leveraging LinkNYC and other wireless hotspots. As a result of rising usage levels, the potential advertising-based revenue models—similar to the LinkNYC model—is sure to grow, which will promote the sustainability of these networks over time.

All networks in public spaces can be woven together to ensure a seamless user experience that can be



Initiative 5

Explore innovative ways to provide high-speed Internet to homes, businesses, and the public

The City has released a Call for Innovations targeting the needs of underserved residential and commercial customers, identifying public and private infrastructure that might be leveraged to meet these needs, and requesting suggestions for innovative models to provide service to low-income households and startups. These policy and project proposals will inform City efforts to increase access, affordability, and adoption.

Finally, the City will conduct research on the latest broadband developments and trends to help inform the City’s strategy on connectivity.



Rendering of LinkNYC structure



Vision 2

# Our Just and Equitable City

New York City will have an inclusive, equitable economy that offers well-paying jobs and opportunities for all New Yorkers to live with dignity and security

New York City will...

- ✔ Lift 800,000 New Yorkers out of poverty or near poverty by 2025
- ✔ Reduce overall premature mortality by 25 percent by 2040 and dramatically decrease racial and ethnic disparities
- ✔ Increase median household income

Goals



Early Childhood

Every child in New York City will be nurtured, will be protected, and will thrive



Integrated Government & Social Services

All New Yorkers will have access to high-quality, conveniently located, community-based City resources that promote civic engagement and enable them to thrive



Healthy Neighborhoods, Active Living

New Yorkers of all ages will live, work, learn, and play in neighborhoods that promote an active and healthy lifestyle



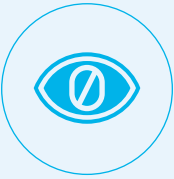
Healthcare Access

All New Yorkers will have access to the physical and mental healthcare services that they need



Criminal Justice Reform

Among large U.S. cities, New York will continue to be the safest and will have the lowest rate of incarceration, with a criminal justice system that leads the nation in fairness and efficiency



Vision Zero

New Yorkers will continue to embrace Vision Zero and accept no traffic fatalities on New York City streets

# Nearly half of New York City residents live in or near poverty



23.6%

Near Poverty

15.8%

Poverty

5.7%

Extreme Poverty

45.1%

Total

Near poverty defined as below 150 percent poverty threshold;  
poverty defined as \$31,156 threshold for a family of four;  
extreme poverty defined as below 50 percent poverty threshold

The CEO Poverty Measure, 2013

# We will lift 800,000 New Yorkers out of poverty or near poverty by 2025

This can be achieved through a broad set of anti-poverty initiatives including raising the minimum wage—a particularly effective tool for reducing poverty and income inequality.

## Scheduled and proposed minimum wage increases and anti-poverty initiatives will help us reach more than half of our goal

- Minimum wage is already scheduled to increase to \$9 per hour in January 2016 (phased in from 2013 to 2016)
- Governor Cuomo has proposed raising the minimum wage to \$11.50 per hour
- Early impact of anti-poverty initiatives (detailed below)

## We will fight to raise the minimum wage to more than \$13 per hour in 2016, indexed to inflation so it rises to \$15 in 2019

## We will not wait. OneNYC anti-poverty initiatives will continue to move us toward our goal while we push to secure the right starting wage for New York City

- Pre-K for All to provide early education and help parents re-enter the workforce
- Educational programs to prepare students for college and career success
- Workforce development programs to build skills and find New Yorkers quality jobs
- Better transportation to increase accessibility to work
- Healthy environments and access to quality healthcare to help New Yorkers stay in the workforce
- Affordable housing to reduce living costs for a range of households
- IDNYC—already issued to more than 100,000 New Yorkers—to access government and community services
- Accessible broadband to enable full participation in the city’s civic and economic life





Soccer game at Brooklyn Bridge Park

## Introduction

To truly achieve our aspirations, New York City must be a place where all can participate and contribute. **Regardless of background or circumstance, all residents must be able to fully engage in the economic, civic, and social life of the region.**

Equity is imbued in all the visions of OneNYC. Vision 1 of this plan, for example, lays out a strategy for an inclusive workforce that ensures all New Yorkers have the skills they need to access well-paying jobs; Vision 3 aims to improve greenhouse gas emissions, air quality, flood-control, and parks across all the boroughs; and Vision 4 sets out a plan for all of our neighborhoods to be ready to withstand and emerge stronger from the impacts of climate change and other 21<sup>st</sup> century threats.

**Equity must inform all of our planning, policymaking, and governing.** Through this lens we assess who will benefit, who is burdened or needs help, and whether the actions we undertake broaden the participation of underrepresented groups, reduce disparities, and expand opportunities for all New Yorkers. **Where someone starts out in life should not determine where they end up.** Equal opportunity and the genuine possibility of upward mobility are our nation’s signature ideals, and New York City has long been a place where these ideals can be achieved. Remarkable stories of extraordinary individuals who beat the odds and achieved their dreams provide inspiration to new generations of people seeking a better life for themselves and their families.

But we know there is a gap between our ideals and the real-world experiences of many New Yorkers. Too often, a person’s home address, parents’ income, race, or other demographic traits can weigh on his or her life outcomes—from educational attainment to future earnings, and even life expectancy. **We must change these underlying odds.**

### A commitment to reduce poverty

**In 2013, 45.1 percent, or 3.7 million, of our residents were living below 150 percent of the CEO poverty line, meaning they were in poverty or near poverty.**

The economic insecurity of people living in or near poverty plays an outsized role in undermining individual potential, and compounds other challenges. The hungry student has difficulty focusing in the classroom; poor living conditions produce health challenges; and financial stresses can lead to depression, which in turn can affect the wellbeing of a family’s children. What might appear to be an issue specific to education, health, safety, or another concern is often rooted in something more basic: not having enough money.

## Center for Economic Opportunity (CEO) Poverty Measure

The CEO poverty rate is an alternative, more comprehensive poverty metric than the official, federal poverty rate. It measures the cost of living in New York City and the resources available to households after tax and social policy are taken into account. CEO has developed a variety of models that estimate the effects of taxation, nutritional and housing assistance, work-related expenses, and medical out-of-pocket expenditures on total family resources and poverty status. The most recent data available is from 2013.

1. The poverty threshold for a family of four in 2013 was \$31,156. The threshold to move out of near poverty, 150 percent of the threshold, was \$46,734 for a family of this size
2. The most recent CEO poverty rate for New York City is 21.5 percent, and the near poverty rate is 45.1 percent
3. As of 2013, the poverty and near poverty rate has remained essentially unchanged since 2011

Concurrent with the publication of this plan, CEO is releasing its annual poverty report, this year covering the period of 2005 through 2013.

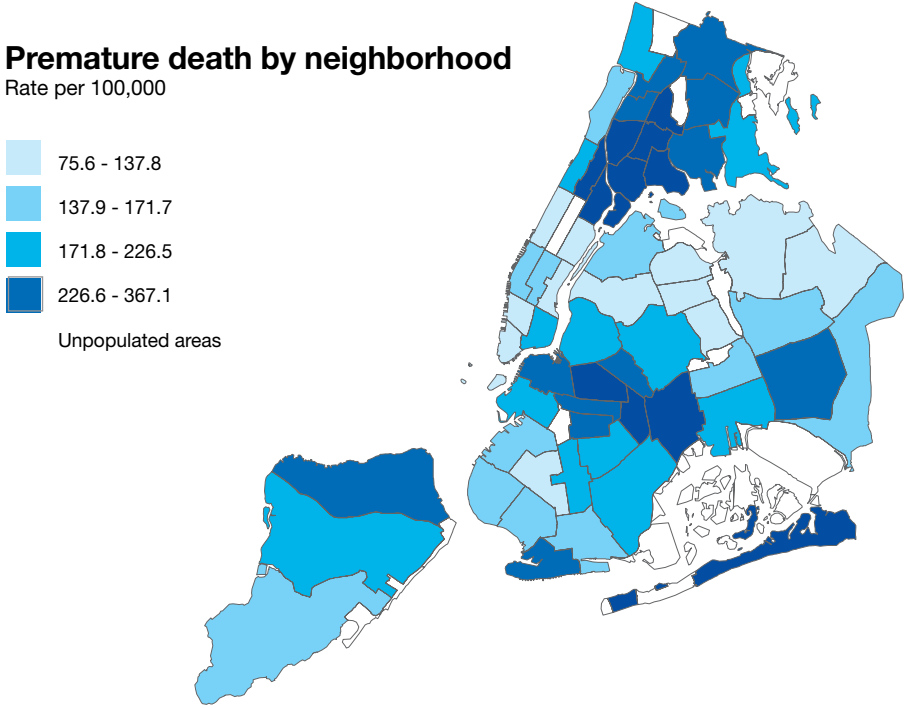
See [www.nyc.gov/ceo](http://www.nyc.gov/ceo).

A higher minimum wage would be a powerful force in reducing poverty. In his 2015 State of the City address, the Mayor stated the City’s goal to raise the minimum wage to more than \$13 per hour in 2016, and to index it so that it is expected to rise to \$15 per hour by 2019. If this were to happen, and OneNYC anti-poverty initiatives are implemented, 800,000 New Yorkers would be lifted out of poverty or near poverty by 2025. **The change would be transformative.**

### Ensuring all New Yorkers live a long and healthy life

**We are committed to ensuring every New Yorker has the opportunity to live a long and healthy life.** Premature mortality—death before the age of 65—is closely tied to poverty and a lack of access to critical services. There are significantly more premature deaths among certain racial/ethnic groups and in certain neighborhoods. In 2013, the age-adjusted premature mortality rate per 100,000 deaths was 276.1 for black Non-Hispanic New Yorkers, 188.2 for white Non-Hispanic New Yorkers, 160.3 for Hispanic New Yorkers, and 98.5 for Asian New Yorkers.

As a City, we are committing to reduce the premature mortality rate by 25 percent by 2040, so as to dramatically decrease disparities among racial/ethnic groups. OneNYC targets causes of premature death such as infant mortality, chronic diseases, gun violence, and traffic fatalities. We will promote the health, safety, and wellbeing of all of our residents.



DOHMH, Bureau of Vital Statistics

Equity benefits us all

The city benefits from everyone’s contributions. We all gain when a child discovers a passion for dance watching his first neighborhood performance; when a middle-schooler can post to GitHub from her home because of broadband access; when a high school student receives guidance to apply for financial aid and realizes he can afford college after all; and when a parent goes to her job confident her toddler is safe in affordable childcare. **City investments can make all of these things possible—and the future artistic works, entrepreneurial ventures, and productive workforce these investments create enrich our city and drive it forward.**

New York City’s economic and cultural leadership over time won’t last if we do not make progress toward greater equity. Research is beginning to show that inequality can stymie economic growth. It can also undermine the social cohesion necessary to create resilient communities. We will all bear the consequences of inequality as our budgetary and social costs rise in areas such as healthcare and criminal justice. It is in our shared long-term interest to have a just city.

**All New Yorkers deserve a chance to reach their potential**, and over the next two decades, we will work as a city to ensure access to these opportunities. New York City will persist in its historic legacy as a city for everyone.

Taking action now

**While the fight for a higher minimum wage goes on, New York City will not rest.** Dozens of initiatives across all four visions in OneNYC are aimed specifically at reducing inequality and promoting opportunity. This plan describes the actions the City will take even as the effort to enact a fair minimum wage continues, and ultimately succeeds.







# Early Childhood

**Goal: Every child in New York City will be nurtured, will be protected, and will thrive**

## Overview

The City is determined to close the opportunity gap that exists for young New Yorkers, starting from the birth of every child. The infant mortality rate (IMR)—an indicator of the entire population’s health and wellbeing—was the lowest in New York City history in 2013, at 4.6 deaths per 1,000 live births. However, despite a declining rate that is nearly 25 percent below the U.S. average, there are significant, and in some cases widening, disparities between neighborhoods. According to NYC Vital Statistics data, in 2013 infant mortality rates were nearly double in areas with very high poverty compared to areas with low poverty (5.2 infant deaths per 1,000 live births vs. 2.8, respectively).

Among racial ethnic groups, the disparity is the starkest between black and white babies. The 2013 infant mortality rate for black babies, 8.3 infant deaths per 1,000 live births, was the infant mortality rate for white babies more than 20 years ago. Among Hispanics, the 2013 infant mortality rate for Puerto Rican babies, 4.8 deaths per 1,000 live births, was over 1.5 times the rate for white babies, and was the infant mortality rate for white babies nearly a decade ago. Other Hispanic babies had an infant mortality rate of 4.3 deaths per 1,000 live births, a little under 1.5 times higher than the rate among white babies in 2013.

To address infant mortality disparities, the City proposes achieving a historic low of 3.7 infant deaths per 1,000 live births citywide by 2040 and dramatically decreasing the racial/ethnic disparity. The City will reach its commitment by targeting key neighborhoods with high infant mortality rates and implementing social and structural supports before, during, and after pregnancy.

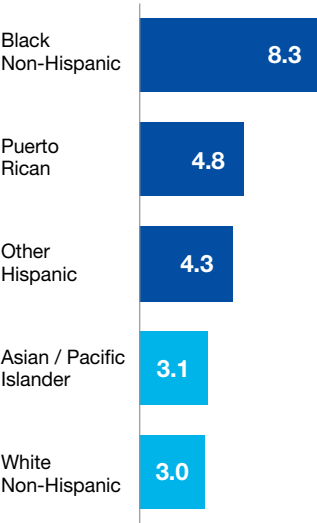
High-quality early childcare and early childhood education lead to improved academic and life outcomes. High-quality pre-kindergarten promotes cognitive and academic gains that persist into adulthood, reduces involvement with the criminal justice system, increases high school graduation rates, and increases college attendance rates. When a child attends pre-kindergarten, his or her chances of reaching advanced reading levels by the third grade—a critical indicator of future success—increases by 18 percent. Studies have found that students who are proficient readers by third grade are more likely to graduate high school and enter college. However, not all families have the chance to provide pre-k for their four-year-olds. In New York City, such strides have been made. Pre-K for All, launched in January 2014, has helped bridge this gap for families with four-year-olds.

### INDICATORS + TARGETS

- ✔ Reduce infant mortality rate by 20 percent to achieve a historic low of 3.7 infant deaths per 1,000 live births citywide by 2040, and dramatically decrease the racial/ethnic disparity
- ✔ All four-year-olds receive access to free, full-day, high-quality pre-kindergarten

### Infant mortality rate by race/ethnicity

Per 1,000 live births, 2013



DOHMH, Bureau of Vital Statistics



## Initiative 1

**Nurture and protect all infants so they thrive during their first year of life and beyond**

Disparities in the infant mortality rate arise from inequities including, but not limited to, adverse working and living conditions, inadequate healthcare, socioeconomic position, and discrimination. Thus, the City proposes a series of projects that address these root causes of poor pregnancy outcomes and promote safety in the first year of life in order to reduce the number of infant deaths.

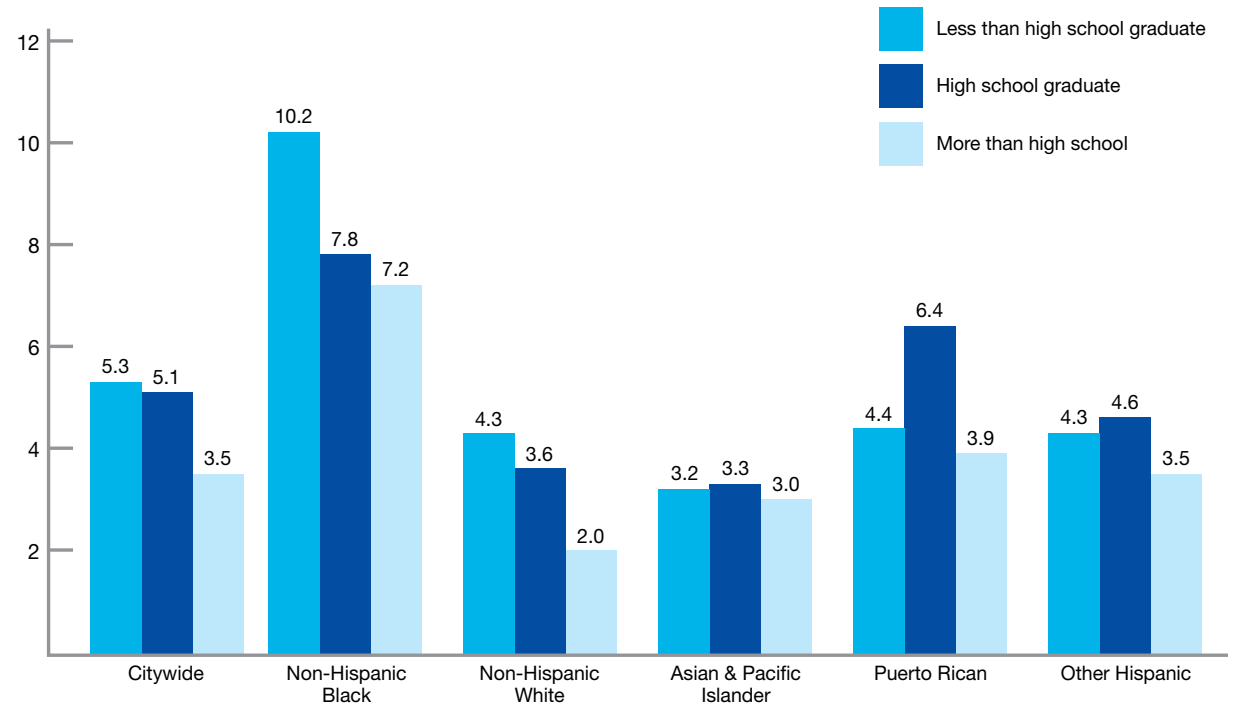
## Supporting Initiatives

### A. Create neighborhood spaces dedicated to advancing women’s health

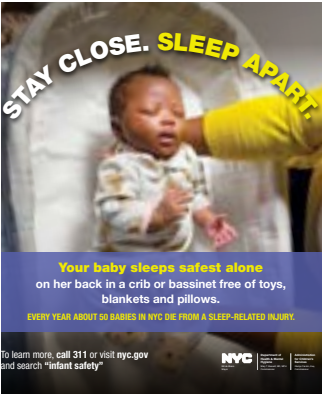
The Department of Health and Mental Hygiene (DOHMH) will explore enhancing its Neighborhood Health Hubs (described further in goal on Integrated Government & Social Services) with designated space for women’s health

### Infant mortality rate by mother’s racial/ethnic group and education

Per 1,000 live births, 2013



DOHMH, Bureau of Vital Statistics



Safe Sleep Campaign

Approximately 80 percent of all infant deaths due to injury are related to the infant’s sleep position and environment. The City has launched the Safe Sleep Campaign to make parents and other care-givers aware of the potentially fatal risks of sharing a bed with an infant, and how to prevent injuries and deaths associated with other unsafe sleep practices, such as excessive bedding, bumpers, and toys in cribs. City hospitals and community health centers are leading these efforts.

promotion. Located in seven low-income, underserved areas, these hubs would provide access to comprehensive women’s health and baby-friendly care, which would help address infant mortality. Possible features include space for supportive group work (e.g., parenting support and coaching, smoking cessation), and exercise studios and equipment. In addition, the space would support healthy birth outcomes by reducing stress and providing a physical space for women to breastfeed, rest, exercise, and connect with each other. These structural supports are often missing in communities with poor birth outcomes and high infant mortality rates.

City programming in these spaces would also provide women with information and resources they need to stay healthy before, during, and after pregnancy, and offer them the support their young infants need. Some of the DOHMH’s key initiatives to support infants and healthy mothers include breastfeeding and safe sleep education, cribs for families that cannot afford them, home visitation during pregnancy and early childhood, and promotion of women’s health, including increasing access to contraception to help plan pregnancies.

B. Expand the number of “baby-friendly” hospitals to promote access to breastmilk for newborns

The Baby-Friendly Hospital Initiative (BFHI) is a global program sponsored by the World Health Organization (WHO) and the United Nations Children’s Fund (UNICEF) to encourage and recognize hospitals and birthing centers that offer an optimal level of care for lactation based on the WHO/UNICEF Ten Steps to Successful Breastfeeding for Hospitals.

Breastfeeding has been shown to have many health benefits for infants, including reducing the risk of ear infections, diarrhea, and pneumonia. Moreover, it helps reduce infant mortality because it helps increase the likelihood of survival for premature infants. Research shows that infants born at facilities that provide recommended care for lactating mothers and babies, such as those that have incorporated the WHO/UNICEF Ten Steps to Successful Breastfeeding, are more likely to initiate breastfeeding, exclusively breastfeed, and continue to do so for longer periods of time.

Of the 40 maternity facilities in New York City, 17 hospitals and one birthing center are participating in the New York City Breastfeeding Hospital Collaborative, an initiative to increase exclusive breastfeeding rates. Of these 18 participating facilities, three are Baby-Friendly Designated, and seven are in the final phase of designation. Under this initiative, the City will pursue and encourage physical interventions in hospitals that will transform newborn nurseries into smaller observational areas, assuring adequate space for newborns to safely sleep in the same room with their mothers; establish space for breastfeeding education and support, including a private place to breastfeed for mothers whose infants are in the Neonatal Intensive Care Unit; and establish a central place to store infant formula for mothers who are not exclusively breastfeeding.



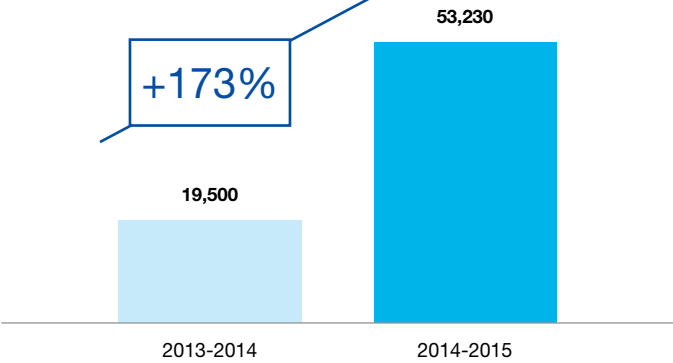
Children at a New York City public school



Playground at PS 347 - The American Sign Language and English Lower School

Full-day pre-kindergarten enrollment

Number of four-year-olds



DOE

Initiative 2

Offer free, full-day, high-quality pre-kindergarten for every four-year-old to ensure all New York children have the opportunity to enter elementary school with a solid foundation for future success

Pre-K for All is New York City’s truly universal full-day pre-kindergarten system. As of December 2013, fewer than 27 percent of four-year-olds in the city had access to full-day pre-kindergarten. Launching Pre-K for All in January 2014, the City committed to ensuring all four-year-olds whose families are interested in full-day pre-k could participate in a high-quality program by the 2015-2016 school year.

In September 2014, the City opened 245 new full-day sites in all five boroughs. Recognizing the critical role teachers play in early childhood education, the City committed to recruiting high-quality pre-k teachers with early childhood certification, as well as supporting several hundred teachers in earning their certification through a partnership with City University of New York (CUNY). It also trained more than 6,000 lead teachers, assistants, and paraprofessionals. Programs are expected to support all children in gaining the foundation needed to realize their potential. These programs focus on curriculum, instruction, and family engagement on the skills and knowledge reflected in the comprehensive state pre-k learning standards, known as the New York State Prekindergarten Foundation for the Common Core.

In conjunction with its commitment to offer a high-quality, full-day pre-k seat to every four-year-old, the City will continue to focus on developing high-quality early childhood programs through teacher recruitment and training as well as through increased support for students whose native language is not English, students with disabilities, and students from high-need areas.

The Center for Economic Opportunity and the Department of Education are collaborating with Westat,





Metis Associates, and Branch Associates, with supplemental support from the New York University Institute for Human Development and Social Change, to undertake a rigorous two-part research study of this work. It will include an evaluation of the effectiveness of the implementation process and an impact study assessing the kindergarten readiness of children in pre-k. The research is designed to inform future years of program delivery as well as lay a foundation for future longer-term research.

Given the research that demonstrates how critical early childhood learning is, the City will explore the possibility of expanding pre-kindergarten to three-year-olds. Like Pre-K for All for four-year-olds, this program would help close the opportunity gap among New York City students and will enable new parents to re-enter the workforce earlier.

Initiative 3

Develop a comprehensive plan for high-quality early childcare

Childcare is a major expense for working families in New York City. Studies show that providing increased access to high-quality childcare—and lowering the cost of childcare—can significantly increase mothers’ employment rates and incomes. It can also help businesses retain employees and, in turn, provide job stability. However, in 2014, New York was the least affordable state in the nation for childcare, with the average price of center-based, infant childcare about 15 percent of the median annual state income for married couples, and 54 percent for single mothers.

A 2011 Center for Urban Future (CUF) report found that only one in four low-income children under the age of six was being served by center-based childcare programs across the five boroughs. In addition, waiting lists for childcare centers in some parts of the city were long, with as many as 40,000 parents in line for childcare services. Several city neighborhoods, most notably the South Bronx, northern Manhattan, and parts of Central Brooklyn, were underserved in subsidized and affordable childcare.

Currently, the Administration for Children’s Services (ACS) runs the Early Learn initiative, which provides center-based and family-based early care and education to more than 29,000 children from six weeks through four years of age. Early Learn is a model for early care and education that brings together Head Start, childcare, and pre-k services, and provides quality early learning opportunities at 350 centers in the highest need areas.

As part of an effort to expand early-care and education programs, ACS is conducting a large-scale community needs assessment to better understand the changing needs of New York City communities. The City will use the findings to develop a plan to close the gap in access to childcare. In drawing up the plan, the City will consider subsidies, property and zoning concerns, and economic development initiatives to increase the availability of group childcare in underserved communities.



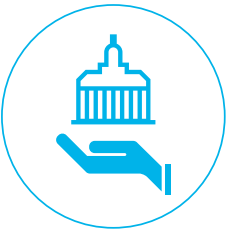
“I am a social worker and my husband is a postal worker...We do not qualify for affordable childcare, so between childcare, afterschool, rent, and clothes, we barely have money for food. I visit the local pantry at my church to get help with food. Our school-age children attend public school, but I pay \$1,800 a year for afterschool for one child, \$3,000 a summer for day camp, \$30,000 in rent, and \$18,200 on daycare for my two-year-old.”

—Sanaya B., Manhattan



Talk to Your Baby Campaign

On April 1, 2015, the City launched Talk to Your Baby, which is a campaign to encourage early childhood language development and establish strong bonds between parents and children. The campaign promotes talking, reading, and singing to babies to help build their brain. Children of low-income parents typically hear 30 million fewer words by the time they reach age four. This “word gap” persists over time, having a negative impact on their language development, school readiness, and academic achievement later in life. By providing parents with free books and other information and resources, we are providing them with simple tools to improve the lives of their children. Just like we encouraged thousands of new parents to sign up for pre-kindergarten, we can get thousands of parents to start talking, reading, and singing to their babies. These efforts are led by the Children’s Cabinet, the Mayor’s multi-agency initiative intended to increase communication and coordination among City agencies and develop strategies for a holistic approach to child safety and wellbeing.



# Integrated Government & Social Services

**Goal: All New Yorkers will have access to high-quality, conveniently located, community-based City resources that promote civic engagement and enable residents to thrive**

## Overview

New York City is home to a world-class government and non-profit programs that provide social services, civic engagement opportunities, and resources for improving residents’ lives. Participation in these services and civic engagement opportunities, however, is often inhibited by a variety of barriers, including inaccessible or inconvenient locations, lack of information, timing constraints, immobility, lack of language options, and lack of broadband access. In addition, in many cases, people need help identifying their needs and which services can best help them.

We are working to give New Yorkers the right services at the right times in a coordinated and integrated manner through both physical and digital approaches. This involves meeting people where they are in their communities—their schools, health providers, libraries—and providing them with a “one-stop shop” that addresses their service and information needs. In addition, we need to invest in a data platform that helps us identify the services that New Yorkers need most.

The City is looking to build on existing successes and work toward establishing physical hubs, which will provide a cohesive range of social and community services. Hubs allow access to City government and community information, and civic engagement opportunities specific to those neighborhoods. We will use existing government-owned and non-profit-owned real estate to the greatest extent possible and build on local initiatives.

With the expansion of the Department of Education’s (DOE) Community Schools and the launch of the Department of Health and Mental Hygiene’s (DOHMH) Neighborhood Health Hubs, we have already begun to break down service silos.



## Salomé Ureña de Henríquez Campus School

Located in Washington Heights, the Salomé Ureña de Henríquez Campus School is a Community School founded in a partnership between The Children’s Aid Society, Community School District 6, local community-based partners, and the City of New York. Most students qualify for free school lunches, and a large number are English Language learners. The school is as a prototype for community schools across the country.

Working with school staff, an on-site Community School director coordinates the activities and services offered to students. These services include afterschool, holiday, and summer programs; medical and preventative health services; and family and community engagement and development opportunities (such as a family resource room, vocational and educational training, and Advocacy and leadership opportunities).

The school has offered mental health support to students and families in neighboring communities after major tragedies such as 9/11, and emergency community support like water and cooling stations after incidents such as prolonged blackouts.

## Initiative 1

### Transform schools into community schools

Community Schools are an effective model for engaging communities, delivering services, and improving student performance. The City is laying the groundwork for expanding the Community Schools initiative, which began transforming 128 schools in 2014, with the goal of eventually making every school a Community School.

Students face a number of challenges in the classroom and at home that impede their ability to succeed academically. The Community Schools model identifies student needs and connects students with services to address these needs. The Community Schools’ “whole child, whole community” approach recognizes that, by intervening in this way, schools can help every student achieve his or her full potential.

At Community Schools, students receive high-quality academic instruction, families access social services, and communities are invited to share resources and address their common challenges. Community Schools establish strong partnerships among principals, parents, teachers, and community-based organizations (CBOs). These partnerships offer a coordinated approach to increasing learning opportunities, student wellness, readiness to learn, personalized instruction, community partnerships, and family engagement. At each Community School, the services provided—such as extended days, school-wide vision and dental screening, and mental health services—are tailored to the specific needs of the community in which the school is located.

As of spring 2015, 128 Community Schools are already under development. As a result of this unprecedented commitment—and of the network of Community Schools currently being run by non-profits across the city—New York City has become a national leader in the Community Schools movement, an educational movement focused on addressing students’ diverse needs, empowering parents to be active participants in their child’s education, and engaging entire communities around student success.

Over the next three years, we will implement a number of key system-building initiatives to strengthen these schools, including developing a data framework, engaging parents and communities, building capacity, and fostering collaboration among City agencies. The City has already begun investigating how best to expand the existing Community Schools





network beyond our initial cohort of 128 schools, with the aim of ultimately transforming every school into a Community School. Given the large number of CBOs across New York City, there is ample opportunity to expand the network of partners.

The first cohort of Community Schools will provide important information on strong practices and lessons learned. We will draw on this experience when we release the next competitive RFP for 100 additional City-supported Community Schools, which will occur in 2017 or 2018.

Initiative 2

Establish Neighborhood Health Hubs that co-locate clinical health and mental health services with social services and City agencies to foster improved coordination

Community health and service offerings are often fragmented, duplicative, and have persistent service gaps. Too often, despite an array of services provided by many dedicated organizations, there has not been the kind of impact needed to significantly improve population health.

Thus, the DOHMH will launch Neighborhood Health Hubs, which aim to eliminate health disparities and promote health equity. These health hubs revitalize a 1920s idea whereby CBOs, providers of medical and mental health services, and other New York City government agencies co-locate to provide coordinated services to neighborhood residents. The aim is to foster cross-sector work that addresses the root causes of health inequities—such as violence, low income, and low educational attainment—in communities with the greatest burden of disease, while building on the wealth of existing assets in those neighborhoods.

DOHMH will begin by establishing at least seven Neighborhood Health Hubs in neighborhoods with high health disparities. The first site is expected to be in East Harlem. These Neighborhood Health Hubs will be located inside DOHMH District Health buildings.

Building on this health hub model, additional City agencies are exploring new ways to co-locate their staffs with one another and with non-profit organizations. Not every access point to the government needs to be a City office. We will explore ways to embed staff from agencies in other institutions, including existing non-profits that already serve as trusted community providers. Staff can provide information and help residents navigate and enroll in available programs and services, register to vote, and access other civic services. In conjunction with the multi-service centers, these access points can reduce the challenges that residents have to get what they need, when they need it.



Historical Neighborhood Health Hub



Initiative 3

Enhance the digital capabilities of NYC 311 to provide easier connections to government and community services and information

We will continue to make it easier for residents to find information, enroll in programs, and provide feedback to the City online. Today, too much information is presented by individual agencies, which means residents must know the City’s organizational structure in order to discover relevant opportunities. We will make it easier for New Yorkers to search for and find relevant services and opportunities.

This enhanced digital platform will provide the same information available at the physical hub offices, without residents needing to visit an office to access information. Some of the tools that help residents discover relevant information and engage online have already been announced, including LinkNYC, which will offer up to a gigabit of free wireless in 10,000 locations, and Neighborhoods.nyc, which will provide domain names for community groups to develop a single neighborhood digital presence for civic engagement, online organizing, and information sharing.

311 is the single most recognizable and easy-to-access customer service tool for all New Yorkers. The digital capabilities of 311 will continue to be enhanced to provide easier connections to services and information and to simplify customer engagement. Customers will be able to create and manage their own accounts and relationship with the City and collaborate on content. They will also be able to unlock access to service requests and access data currently not available in the existing 311 system. Human Resources Administration (HRA) call centers will be merged with 311 to provide “one-stop shopping” for customers with multiple questions or needs. The expansion of social media and mobile app offerings will streamline the customer experience.

We will continue to develop other ways to enhance the digital experience of New York City residents so they can receive services and information in a more efficient and simple manner.



IDNYC

On January 12, 2015, the Mayor launched a major municipal identification (ID) initiative, IDNYC, to ensure every New Yorker has access to the opportunities, security, and peace of mind that comes with having government-issued photo identification. There is a critical need for this program because approximately half of New York City residents age 16 and over do not have a New York State Driver License. The IDNYC card is helping more New Yorkers, regardless of immigration status, homeless status, or gender identity, access public- and private-sector services, programs, and benefits.

The IDNYC card is broadly accepted across the city and provides eligibility for City services, entry to City buildings and schools, recognition by City agencies such as the NYPD, and opportunity to open bank accounts at select financial institutions.

The vision for the IDNYC card is to create a single card for each New Yorker's wallet. This card integrates the various forms of identification issued by local government, giving it dynamic value and expansive functionality. To supplement the card's value as a form of identification, the City has developed a set of key partnerships with libraries, cultural institutions, and other organizations. Learn more at [www.nyc.gov/idnyc](http://www.nyc.gov/idnyc).



Mayor de Blasio at an IDNYC enrollment center

Initiative 4

Expand the City's internal data integration capacity to help ensure clients receive the right resources and service at the right times

The challenges faced by social service clients can cut across the purview of different City agencies. Many times, however, different agencies are unaware that they are working with the same clients. Technology-enabled tools can help agencies better support individuals and families to achieve better results. For example, auto-notifications can alert caseworkers from different agencies that they share common clients (subject to privacy protections), which can help them coordinate support. With greater investments in integrated data systems, the City will also be able to better track the results of its programs. By examining the short- and long-term outcomes of interventions and services, we will be able to, over time, reallocate resources toward the most effective approaches.

Analytic tools can improve decision-making across a range of disciplines. In criminal justice, smarter use of data can not only inform criminal justice processing and programming decisions, but also be used to share data to improve residents' health and safety. These tools are detailed further in the section below on Criminal Justice Reform.

To advance these and other solutions, the City aims to enhance its data platforms to be able to personalize and improve its social services work. By integrating data about the City's people, places, and program activities, the City can conduct more powerful analyses and do a better job of sharing information among agencies about both community needs and specific individuals and families. This enhanced analytic capability will help us connect residents with the right services when they need them. It will also help us track the relative impact of the City's funding streams and programmatic models so we can make more evidence-informed decisions about what works. Our initial scoping work for this "intelligent service platform" will begin this year.



Brooklyn Public Library Central Library Branch



NYC Library Systems

New York City's three library systems, comprising 210 branches across all five boroughs, offer free quality services to students, families, job-seekers, seniors, and anyone in need of information or assistance as centers of learning and civic engagement. In addition to their important traditional services—circulating millions of books and supporting research by students and scholars alike—the libraries are expanding their roles and working in increasingly close partnership with the City to support the changing needs of our neighborhoods and residents.

The library systems are assisting new immigrants by providing English Speakers of Other Languages (ESOL) classes, citizenship education, and support for immigrant small business owners and entrepreneurs in coordination with the Department of Small Business Services. The libraries are critical partners for the Department of Education in supporting students and families through early education services, after school programming, and homework support. Libraries are also helping us close the digital divide by offering Internet access in their buildings and lending Wi-Fi hotspots and other mobile devices for families to use at home. Libraries help strengthen our communities by offering cultural and recreational neighborhoods, and serving as resident service centers in times of emergency.

The library systems are also critical partners on major citywide initiatives including IDNYC, Pre-K for All, and OneNYC. Together, we are ensuring that all people have access to the many resources and opportunities our City has to offer.





INDICATORS + TARGETS

- ✔ Increase the average number of servings of fruits and vegetables that adult New Yorkers eat per day by 25 percent, from 2.4 to 3 servings, by 2035
- ✔ Increase the percentage of adult New Yorkers who meet physical-activity recommendations from 67 percent to 80 percent by 2035
- ✔ Increase the percentage of New York City public high school students who report meeting recommended levels of aerobic physical activity from 19 percent to 30 percent by 2035
- ✔ Decrease asthma emergency department visits by children by 25 percent, 299 per 10,000 to 224 per 10,000, by 2035

Healthy Neighborhoods, Active Living

**Goal: New Yorkers of all ages will live, work, learn, and play in neighborhoods that promote an active and healthy lifestyle**

Overview

The access New Yorkers have to nutritious food and beverages, opportunities for physical activity, and quality housing play a large role in determining their physical and mental wellbeing and their ability to fulfill their potential. Many New York City neighborhoods have considerable room for improvement in promoting good health and wellbeing, with large disparities in opportunities for healthy living and health outcomes between high-poverty and low-poverty neighborhoods. We will implement several initiatives to ensure all New Yorkers live in neighborhoods and housing that promote healthy lives.

Initiative 1

**Improve food access, affordability, and quality, and encourage a sustainable, resilient food system**

Quality food is fundamental to a healthy life. However, the City’s current food system does not allow for equitable access to nutritious food. There are broken links between food production, sales to distributors and wholesale buyers, and delivery to consumers that result in inequitable distribution of and access to healthy food.

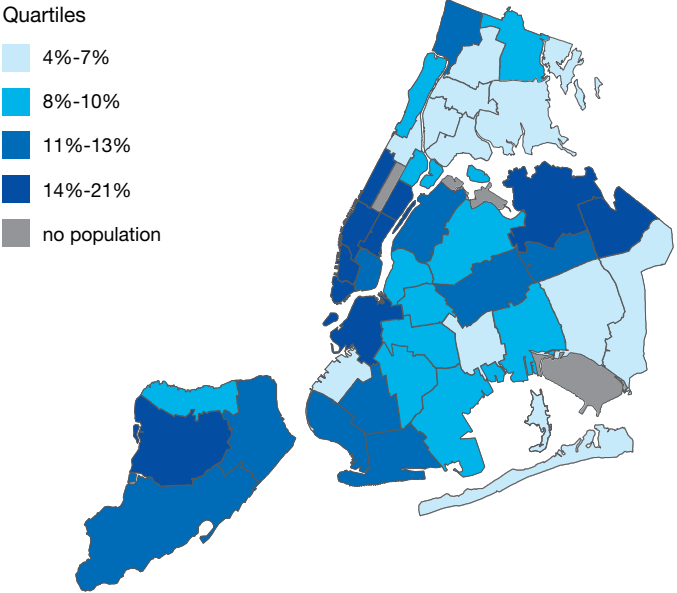
Moreover, approximately 1.4 million New Yorkers, or one in six, report they are food insecure, a result of unemployment, poverty, and other household characteristics. Food insecure families may worry that food will run out before they have enough money to buy more, eat less than they should, or be unable to afford to eat balanced meals. The availability, quality, and affordability of food affect the quality of New Yorkers’ diets. Cardiovascular disease, which is often connected to poor diet, is the leading cause of death for men and women in New York City.

Increased fruit and vegetable consumption is associated with a decreased risk of chronic diseases such as hypertension, heart disease, and stroke. Not all New Yorkers consume the same amount. The 2013 Community Health Survey reported the lowest levels of consumption were among black and Hispanic New Yorkers, those with low education levels, and those living in high-poverty neighborhoods.

Our goal is to increase the average number of servings of fruits and vegetables adult New Yorkers eat every day by 25 percent, from 2.4 to 3 mean servings, in the next



**Adults eating five or more daily servings of fruits or vegetables by neighborhood**  
Percent, 2011-2013



DOHMH, Community Health Survey

twenty years. The City will undertake a variety of initiatives aimed at promoting access to nutritious, quality food for all New Yorkers, especially those most in need.

Supporting Initiatives

**A. Increase the share of regional food in the New York City food system through investments in the regional food distribution system**

Our region produces high-quality, nutritious foods, including fruits and vegetables, legumes, meat, and dairy. Farmers in the region are interested in selling more products in the New York City market, but face distribution and other barriers. By investing in the regional food distribution system, we can increase the availability of local food for the city’s consumers across the income scale, while also enlarging the market for local and regional farmers in the city.

Increasing the amount of food from the region has broader benefits. It will reduce greenhouse gas emissions from shipping food from far away, make

our food system more resilient to climate change and other potential disasters, and create jobs locally and across the region.

To increase access to good quality food produced in the region, the City will work with the State on the Regional Food Hubs Task Force, which was launched in March 2015. We will act on its recommendations to increase the amount of regionally-produced food coming into the city through investments in the food system. Furthermore, upstate farmland that feeds the city and protects our water supply is disappearing. We will work with the State to conserve the region’s agricultural land for farming.



**“Make it appealing for supermarkets to open in high-population areas so people can have access to nutritious foods at reasonable prices.”**

—Phyllis G., Manhattan

**B. Expand and improve quality of New York City school food**

The City’s public school system has 1.1 million students, about 75 percent of whom qualify for free lunch. Providing over 160 million meals a year, the NYC Department of Education (DOE) runs the largest school food-service program in the United States. This program has enormous reach and buying power such that its potential to transform the eating habits, nutrition, and food security of young New Yorkers is monumental.



**“Start with our children. We need to educate students about how to foster good mental, physical, and environmental health”.**

—Kate G., Manhattan

To ensure no public school student goes hungry, and that all are ready to learn, we will work to increase participation in school meal programs.

We must also improve the lunchroom experience and environment for students. To promote participation in meal programs, and healthy choices, we will begin by renovating 45 middle and high school cafeterias over five years with new furniture, paint, and improvements to serving lines.

To improve the quality of food served, the City will continue to increase procurement of sustainable, healthy, and local food and supplies. We will promote food and environmental education by increasing student engagement with gardens—both by working to increase the number of school gardens and facilitating school partnerships with existing gardens. By investing in the quality of our school food, we will continue to provide nutritious meals to families and children that need them, and help build healthy eating habits in New Yorkers at a young age, promoting a lifetime of healthy eating.

**C. Ensure all communities have access to fresh food retail options, with a special focus on traditionally underserved neighborhoods**

New Yorkers see significant disparities in their neighborhood food options. A survey of the food stores in the Crotona-Tremont neighborhood of the Bronx in 2012 found that for every supermarket in the neighborhood, there were four fast food restaurants and ten bodegas. We have an opportunity to work with the private sector to improve the food marketplace and access to healthy food for those in need.

To improve the availability of healthy food in retail settings, we will expand on the City’s work to attract new supermarkets to underserved neighborhoods and encourage renovations and upgrades of existing small or independent grocery stores.

We will also work with the private and non-profit sectors to explore innovations and business growth in food retail, including health- and community-focused grocery stores, restaurants, and corner stores. Improving the nutritional quality and affordability of the food available citywide will encourage better health outcomes for all and will have positive effects on job creation and economic development.

In addition, we will support and expand initiatives to provide fresh food options to underserved neighborhoods. For example, we will support and expand fresh food box programs that bring an affordable basket of fresh fruits and vegetables to community settings such as childcare centers. This means ensuring the non-profit providers of these programs have the resources they need to be viable and expand; and that we help community settings get a program like this



New Yorker enjoying locally-grown fresh produce

**Building Healthy Communities**

Building Healthy Communities is a place-based initiative that recognizes a community’s health is not limited to access to medical care. Physical health, mental health, and quality of life are critical elements for improving social wellbeing. Vibrant public open spaces are a crucial feature of livable urban neighborhoods. Parks, pedestrian plazas, community gardens, and recreation centers are essential community resources where people come together to play, learn, grow food, exercise, and relax.

Yet many of our most densely populated and highest poverty neighborhoods have historically been neglected in public investment in the preservation, rehabilitation, and activation of open spaces and playgrounds. Many of these same communities continue to report high rates of crime and equally high rates of obesity and diabetes.

Over the next three years, Building Healthy Communities aims to address these inequities and improve community health outcomes in our neediest neighborhoods by increasing access to physical activity and nutritious and affordable food, and promoting public safety in 55 of the city’s neighborhoods that were targeted by the Department of Parks and Recreation in its Community Parks Initiative. Leveraging the capital investment of the Community Parks Initiative, Building Healthy Communities will activate the neighborhood parks and surrounding open spaces, including streets, sidewalks, schools, and community gardens offering physical activity programs, cooking classes, nutrition education, and farmers’ markets. This initiative supports our efforts across Vision 2 and Vision 3.

to their area. We will work with community organizations to bring new community-based farmers markets to underserved neighborhoods. These initiatives will be complemented by an annual distribution of in Health Bucks—vouchers that can be used to purchase fresh fruits and vegetables—to provide additional buying power for local and fresh foods among low-income consumers.

**D. Support community gardens and urban farms in select neighborhoods in the city**

Urban agriculture plays a small but critical role in communities underserved by quality, affordable, fresh food. Urban farming provides opportunities for residents to engage in growing local produce, educates children about nutrition, and offers training in food preparation, gardening, and retailing skills. By offering young people jobs in the youth markets and providing formal horticulture training for community members, urban agriculture also provides opportunities for workforce development.

To encourage the growth of the urban farming sector, the City will support community gardens in neighborhoods with necessary infrastructure. We will also support these gardens with assistance in selling produce at farm stands and teaching nutrition and cooking. We will work to support school gardens, and educate students about nutrition, gardening, and science.

We will also support larger-scale urban farming ventures, and establish food-producing gardens at NYCHA sites through it’s Gardening and Greening program. We will study additional emerging urban agriculture opportunities, such as vertical farming projects, to activate underutilized light industrial space and offer related community programing.





Girls running and playing

Initiative 2

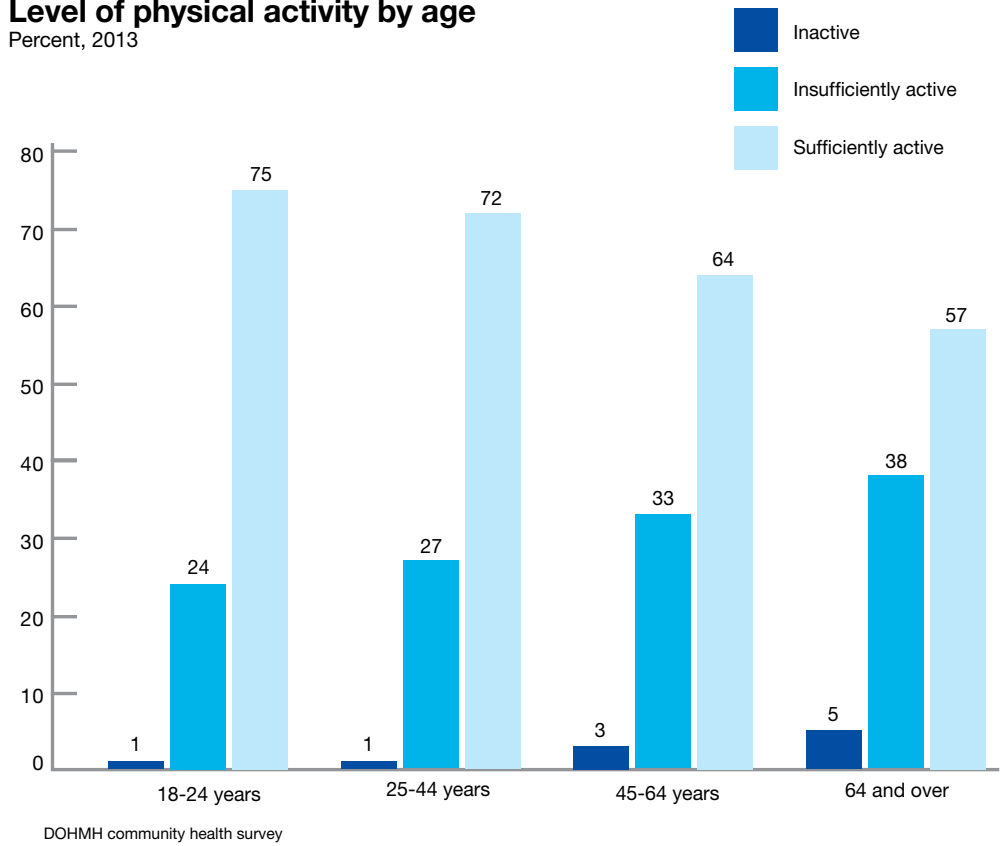
Create environments that encourage New Yorkers to be physically active regardless of age

Physical activity is beneficial for overall health and wellness, leading to lower risk of developing chronic diseases, greater cardiorespiratory fitness, stronger muscles, better bone strength, and higher self-esteem. Still, 33 percent of all adults and 43 percent of older adults in New York City fail to meet physical activity recommendations, putting them at higher risk for heart disease, diabetes, stroke, and falls.

Residents living in poor or predominantly minority neighborhoods are less likely to have clean, safe, and attractive places to be physically active. Consequently, physical activity levels are often correlated with income, race, and neighborhood. In New York City, 37 percent of residents in very high-poverty neighborhoods fail to meet physical activity recommendations compared to 29 percent in low-poverty neighborhoods.

A strong body of evidence demonstrates how one’s physical environment influences physical activity. For example, residents in neighborhoods with

Level of physical activity by age  
Percent, 2013



Open, accessible, and attractive stairs promote stair use. The NYC Health Department’s Riverside Health Center received a LEED innovation credit entitled “Design for Health through Increased Physical Activity” for including active design features such as the enhanced stairs, a physical exercise room and bicycle racks, and shower facilities for staff



Riverside Health Center’s renovation and expansion promotes health

recreational facilities are more likely to use them and be more active; and making stairs accessible and attractive is associated with increased stair use. By increasing access to physical activity space in and around schools, to commercial and community recreational facilities, and to accessible stairs, the City will increase opportunities for physical activity for all New Yorkers. And we will work to reduce inequities in access to environments that support physical activity by focusing these efforts on low-income neighborhoods.

Supporting Initiatives

A. Increase opportunities for physical activity in and around schools

As children spend about half of their waking hours in school, schools are uniquely positioned to play a role in improving physical activity levels of students.

To encourage active play at school, the City will explore enhancing existing school yards by painting colorful ground markings including games, tracks, and other creative designs. Painted ground markings have been shown to be a low-cost but effective way to increase physical activity.

B. Increase design elements that promote physical activity in buildings

New Yorkers, on average, spend over 90 percent of their time indoors. As the City constructs and renovates buildings, we will take advantage of the opportunities to apply Design Guidelines for Healthy Living building elements such as secure bicycle storage, accessible stairs, indoor and outdoor recreation space for building users, and building exteriors that contribute to making the streetscape welcoming for pedestrians. The City will expand the scope of Department of Design and Construction (DDC) projects to incorporate Design Guidelines for Healthy Living strategies such as stair improvements, bicycle storage, and fitness rooms.

Further, we aim to improve stair use by supporting legislation that, consistent with the recommendation of the Green Codes Task Force, requires new buildings and certain major renovations to include at least one stairway that is easily accessible and open for use.

We will continue to explore incentives for residential building owners receiving City financing for new construction and substantial rehabilitation to promote physical activity through Design Guidelines for Healthy Living. We also support passing the Department of City Planning Zoning for Quality and Affordability text amendment, introduced in February 2015, which would remove obsolete provisions and modernize other zoning provisions to foster diverse and livable neighborhoods. The text amendment, for example, would allow ground floors to accommodate more active uses and add interest to the streetscape.



C. Provide opportunities for physical activity in the community for residents of all abilities

People are more likely to exercise and be active when they have quality, affordable, and accessible recreational facilities. The City is working to ensure such facilities are available to all New Yorkers. New York City will build off the success of existing adult exercise equipment in the City by co-locating universally accessible age-appropriate adult exercise equipment in or near playgrounds, where feasible.

Beyond this, the City will encourage the creation of community recreation centers and commercial gyms by exploring the elimination of special permit requirements for gyms in certain districts and by conducting outreach to gym and recreation center operators.

Furthermore, Parks Without Borders will pursue new and better ways to connect neighborhoods to the city’s parks and make our streets, sidewalks, and other pedestrian plazas more inviting public spaces (detailed further in Vision 3).

Finally, to ensure New York City active and healthy design initiatives meet the needs and priorities of the communities we serve, we will conduct community engagement as part of Department of City Planning (DCP) comprehensive neighborhood studies, with the goal of creating neighborhoods with access to key facilities and services and a more vibrant street life.

By integrating opportunities for physical activity into the environments where we live, work, study, and play, we will make staying active and healthy easier for all New Yorkers.

Initiative 3  
Address health hazards in homes

The home environment is critical to the health and wellbeing of people of all ages. When homes are poorly maintained or not designed to promote safety and health, occupants can be exposed to a variety of health hazards, such as asthma triggers and fall hazards.

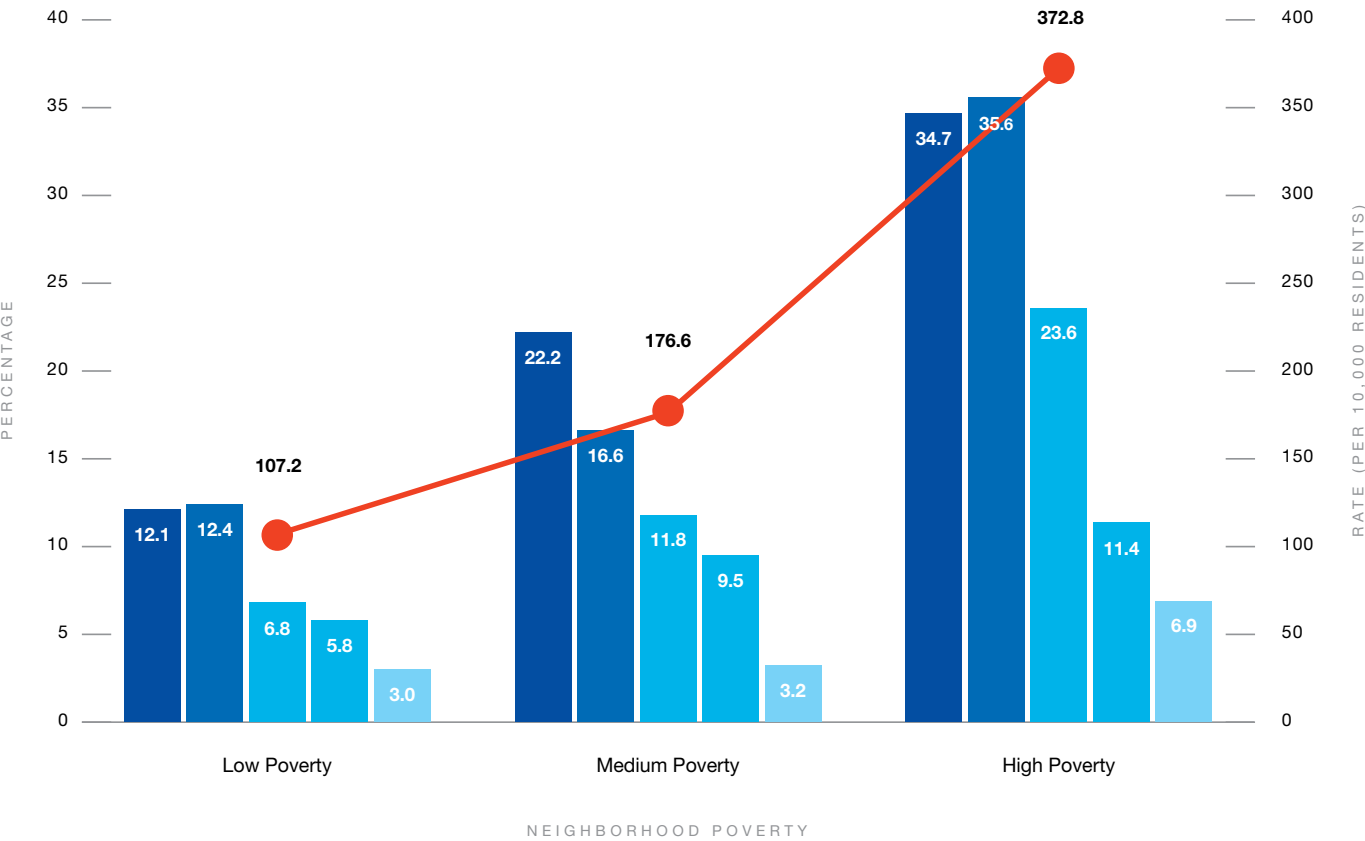
Supporting Initiatives

A. Reduce asthma triggers in the home

Asthma affects nearly one million New Yorkers and is the most common chronic respiratory disease in children. More than one in three children with asthma living in high poverty neighborhoods are exposed to potential asthma triggers in the home. Home-based asthma triggers include tobacco smoke, pest infestations, moisture, and mold, as well as some building materials and products. Housing disrepair, such as water leaks, cracks, and holes, create housing conditions conducive to pest infestation and mold growth. Living in pest-free environments is correlated with children having the ability to fulfill their potential; for children with asthma, specific



Housing asthma triggers by income



- Homes with cockroaches (%)
- Homes with mice or rats in building (%)
- Homes with 3 or more maintenance deficiencies (%)
- Adults reporting mold in the home (%)
- Adults reporting second-hand smoke in the home (%)
- Asthma emergency department visits among children 5-17 years (rate per 10,000)

Data obtained from NYC Department of Health and Mental Hygiene, Environment and Health Data Portal, March 23, 2015  
<http://www.nyc.gov/html/doh/html/environmental/tracking.shtml>  
\*Neighborhoods are ranked according to the percent of people whose annual income falls below twice the federal poverty level. Rankings are then divided into 3 approximately equal groupings of low, medium and high poverty. Then the median value of the selected indicator is displayed for each poverty grouping. The median is the exact mid-point of the individual environment or health indicator values for each neighborhood within a grouping.

housing interventions have been shown to be effective in reducing allergens, resulting in fewer symptom days, missed school days, and emergency room visits. Secondhand smoke is also a powerful asthma trigger, with exposure occurring when there is a smoker in the household or smoke travels from one apartment to another.

New York City will fund a roof replacement program in NYCHA developments which will address the root causes of mold. The City will also implement a joint HPD-DOHMH enforcement initiative focused on housing with egregious pest infestation. Efforts will target neighborhoods at highest risk for asthma, with building owners required to implement safe pest-control measures using integrated pest management (IPM).

Additionally, we will explore creating strong incentives for building owners receiving City financing for new construction or substantial rehabilitation to use IPM, a comprehensive and prevention-based approach to pest control, smoke-free policies, safer building materials/products, and moisture/mold control. Each year, the City receives applications from affordable housing owners and developers for the financing of new construction or the financing of substantial and moderate rehabilitation of existing housing, impacting an estimated 16,000 housing units per year. These “financing moments” provide important opportunities to promote the use





of healthy building practices that reduce asthma triggers in the home. By integrating simple, often low-cost healthy housing measures into building design and construction, renovation, and ongoing operations and maintenance, our buildings will be healthier places to live.

**B. Decrease secondhand smoke exposure in the home**

There is no safe level of exposure to secondhand smoke (SHS). Non-smokers exposed to secondhand smoke in the home have higher risks of asthma attacks, heart disease, lung cancer, and chronic respiratory disease. Children and the elderly are particularly affected by SHS exposure in the home because they are more vulnerable to its health effects, and because they typically spend more time at home. Secondhand smoke complaints are common, with 40 percent of adult New Yorkers reporting smelling cigarette smoke in their home that comes from another home or apartment or from the outside. We are already making strides to dramatically reduce SHS. An overwhelming majority of non-smokers (81 percent) and most smokers (53 percent) in New York City do not allow smoking in their homes. And 69 percent of New York City adults support smoke-free housing. To address secondhand smoke, a primary driver of unhealthy indoor air quality, the City will work to pass legislation requiring multi-unit housing to have a smoking policy and to disclose it to residents and prospective residents. To complement this, we will explore opportunities for the adoption of other smoke-free housing policies in New York City.

Together, these strategies will work to reduce asthma triggers in the home, which will decrease the percentage of homes with housing conditions associated with asthma.

**C. Reduce housing-related fall hazards for older adults**

Falls are the leading cause of injury-related hospitalizations and deaths among older adults in New York City, causing an average of 17,000 hospitalizations and nearly 300 deaths each year. Fall-related hospitalization charges total more than \$750 million. There are currently more than one million older adults (age 65 or older) in the city, and the older adult population is expected to grow by 41 percent to 1.41 million by 2040, which could dramatically increase the burden of falls and their associated costs.

Most falls among older adults occur at home. Finding and fixing fall hazards in the home is effective in lowering both the risk of falls and the rate of falls among older adults. By 2030, all City contracts for providing home-based services for older adults will require an assessment for fall hazards, as per the DOHMH recommendation. In addition, for new construction, the City will promote the adoption of universal design elements such as grab bars, hand rails, slip-resistant floors, and lighting that reduces the risks of falls. Similarly, for existing buildings, the City will provide incentives for in-place retrofits for these measures aimed at promoting safe home environments and preventing falls among older adults.

By reducing housing-related fall hazards for older adults, we will reduce the number of falls in the home, keeping our aging population healthy and safe.



Age Friendly NYC

Enhancing Our City's Livability for Older New Yorkers



**Age Friendly NYC**

Soon, older adults in New York City will outnumber school-aged children. To prepare for this demographic shift, the Office of the Mayor, the New York City Council, and the New York Academy of Medicine have partnered to create Age Friendly NYC. Age Friendly NYC is dedicated to ensuring our older population is healthy, active, and engaged. Initiatives that support the efforts of Age Friendly NYC include:

**Increased mobility through accessible transportation:** As further detailed in Vision 1, the City aims to expand use of yellow and green taxis—including the growing number of wheelchair accessible yellows and greens—to provide faster and more convenient paratransit services to New Yorkers with disabilities. Additionally, DOT is planning to install attractive and durable benches around the city, particularly in areas with high concentrations of seniors, to make streets more comfortable for transit riders and pedestrians.

**Convenient healthy and nutritious food:** The City will explore improved meal- and grocery-delivery programs that will improve access to seniors and people with disabilities whose limited mobility and fixed incomes make it challenging to purchase nutritious food.



INDICATORS + TARGETS

- ✔ Increase the percentage of adult New Yorkers who feel they have received the medical care they needed in the past 12 months
- ✔ Increase the percentage of adult New Yorkers with serious psychological distress who have received counseling or taken a pre-scription medication for a mental health problem

Healthcare Access

**Goal: All New Yorkers will have access to the physical and mental healthcare services that they need**

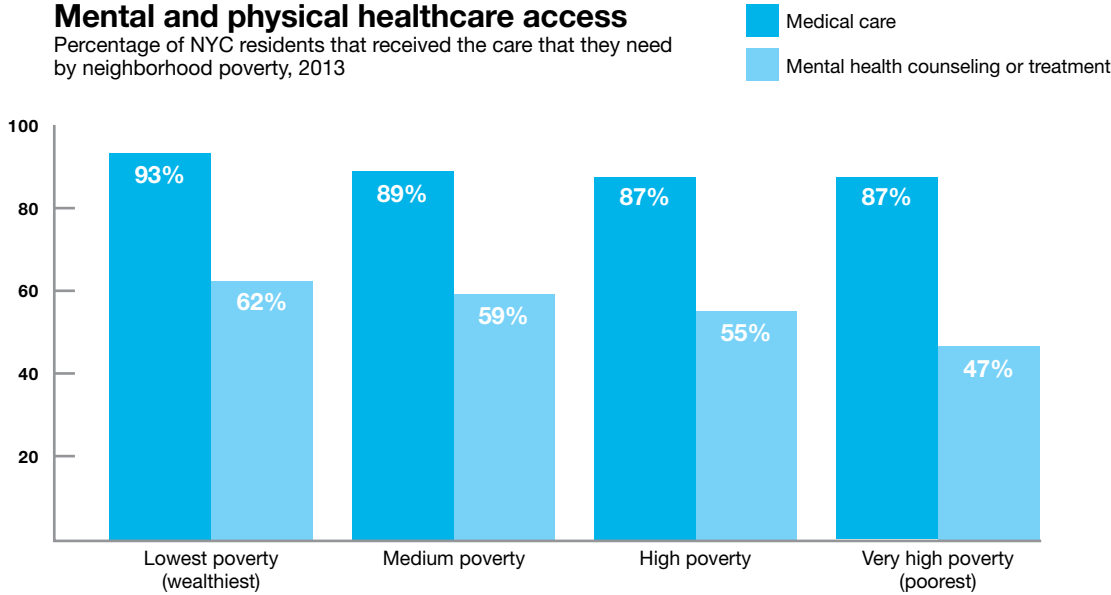
Overview

In 2013, nearly one million New York City residents felt they did not receive the medical care they needed in the past year, with residents of the poorest neighborhoods reporting they were receiving the least care. Residents of these low-income neighborhoods also bear a greater burden of specific diseases, such as heart disease, diabetes, and infant deaths, when compared to other neighborhoods. For example, more than a third of residents of very high-poverty neighborhoods have been diagnosed with high blood pressure; by contrast, less than a quarter of residents of low-poverty neighborhoods were diagnosed with high blood pressure.

Mental health and substance abuse issues affect many New Yorkers. Fifteen percent of all New Yorkers report having been diagnosed with depression. However, the highest prevalence is in high-poverty neighborhoods. In the poorest New York City neighborhoods, seven percent of residents experience serious psychological distress (SPD), compared to three percent in the wealthiest neighborhoods.

Mental and physical healthcare access

Percentage of NYC residents that received the care that they need by neighborhood poverty, 2013



Medical care is percentage of adult New Yorkers that feel they received the medical care that they have needed in the past 12 months  
Mental health is percentage of adult New Yorkers with serious psychological distress that have taken a prescription medication for a mental health problem



De Blasio protests the layoffs of 500 LICH nurses and healthcare workers.

To reduce disparities in health outcomes, the City will work to develop a healthcare delivery system that emphasizes an integrated and patient-centered approach to care that is delivered in convenient and accessible locations.

Initiative 1

**Ensure all New York City neighborhoods have access to high-quality essential healthcare services**

Over the past decade, far too many New York City communities have lost critical healthcare services due to the closure of hospitals essential to their wellbeing. Changes in the science of healthcare delivery and healthcare reimbursement are realities we have to face. But New York City cannot allow neighborhoods to lack critical medical services. And we certainly cannot allow the closure of major hospital facilities that would leave communities without essential healthcare.

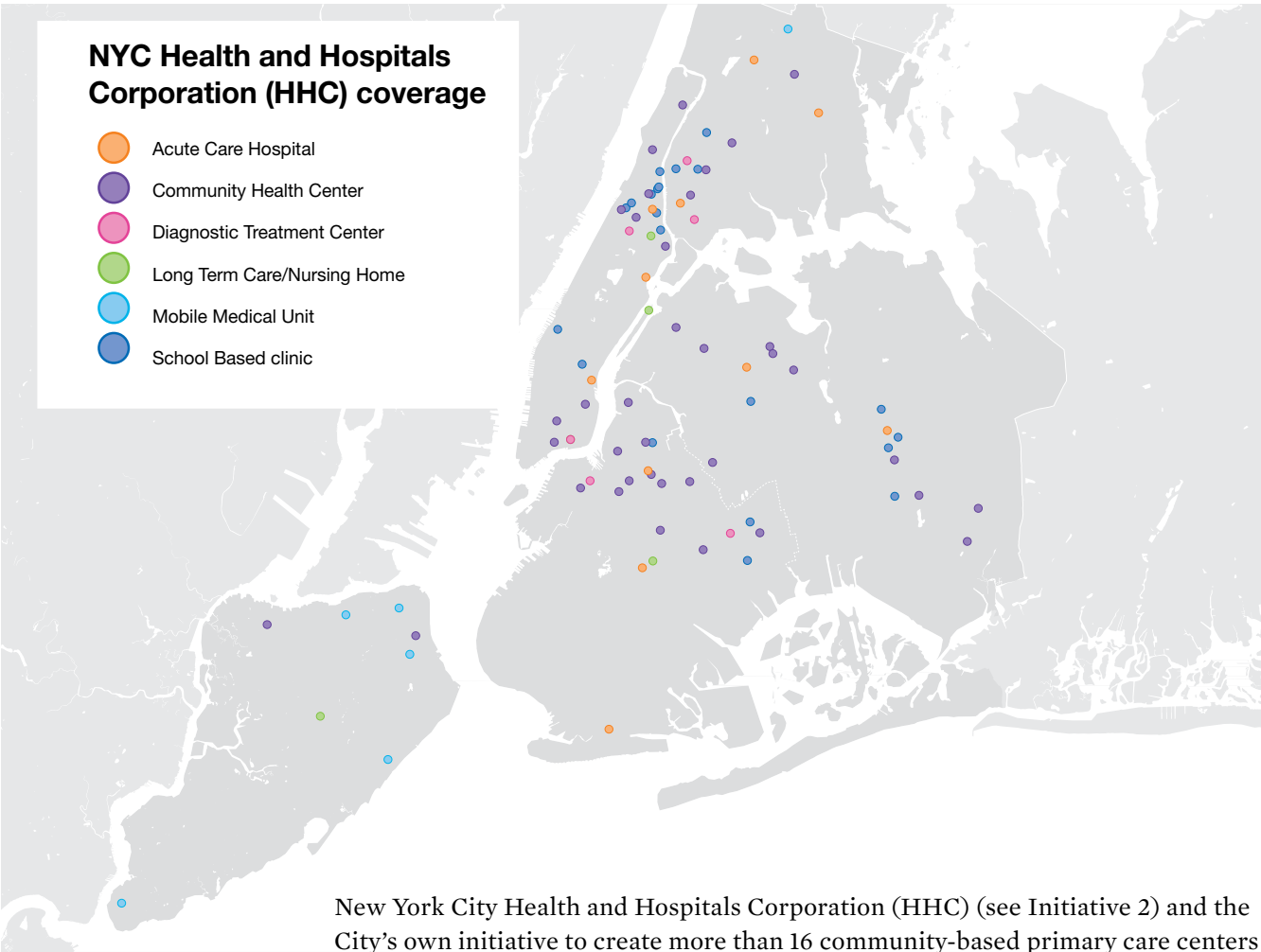
For these reasons, Mayor de Blasio called for the creation of several new models in healthcare, including the Brooklyn Health Authority, to ensure that no community is left without essential care services. The Authority’s role was envisioned as ensuring adequate funding, leading integrated planning, and promoting the new types of coordinated healthcare service delivery models that protect families and workers given the shifting healthcare landscape.

There have been major developments since the Mayor’s initial proposal for the Authority several years ago. Thanks to the support of the federal government, Governor Cuomo, and Mayor de Blasio, the \$8 billion Medicaid waiver was approved by the Obama Administration in April 2014. \$6.4 billion of this waiver is explicitly designed to help hospitals across the state restructure their care delivery models to reflect the most current science and reimbursement structures. New York City’s hospitals now have the opportunity and resources to make planned, orderly reforms rather than resorting to the sudden closures that marked the previous decade, while improving the quality and experience of care across the city.

The implementation of these changes has already significantly altered the healthcare landscape in New York. New hospital networks called Performing Provider Systems (PPSs) have developed across the city and pair some of the city’s most financially stressed institutions with those that are more stable. If used properly by the networks, Medicaid waiver funds can prevent major hospital closures and ensure that every community in New York City has access to essential healthcare.

The City must remain vigilant however to ensure these one-time funds are used appropriately and effectively. The City remains steadfast in its commitment that every community has access to the care it needs. We will fight for critical healthcare services across the City and not accept the closure of any more hospitals in Brooklyn or any other communities which would be left without the medical care we need. This commitment includes investments made by the





HHC

New York City Health and Hospitals Corporation (HHC) (see Initiative 2) and the City’s own initiative to create more than 16 community-based primary care centers in under-served areas (see Initiative 3). These actions, as well as direct engagement with the major private health systems in New York City and continued review and development of new structural mechanisms, such as the local Brooklyn Health Authority or other options, will ensure that our city has a strong healthcare delivery system.

## Initiative 2

### Transform NYC Health and Hospitals Corporation into a system anchored by community-based preventive care

New York City Health and Hospitals Corporation (HHC), the nation’s largest public healthcare system, serves 1.4 million people every year, approximately one out of six New Yorkers. HHC’s role as the city’s largest safety net provider is critical to ensuring all New Yorkers have access to healthcare regardless of their ability or pay or documentation status. Close to half a million of HHC’s patients are uninsured and/or undocumented.

In addition to its role in providing care for vulnerable New Yorkers, HHC is well positioned to lead transformation of the healthcare delivery system in the City because it offers a comprehensive array of healthcare services. Through its seven regional healthcare networks, HHC operates 11 acute care hospitals, four long-term care facilities, six diagnostic and treatment centers, a certified home health program, and more than 60 community-based health clinics throughout the five boroughs. In addition, MetroPlus, HHC’s wholly-owned health insurance company, takes care of more than 469,000 New Yorkers annually. HHC also provides emergency and inpatient services to New York City’s inmate population at City correctional facilities, and HHC conducts mental health evaluations.

Given the recent shifts in the City’s healthcare landscape, HHC, like the other large hospital systems, is transforming from a healthcare system focused on delivering inpatient services to those who are already sick to a model of care that keeps people healthy throughout their entire lives. This transformation requires HHC to invest in new models of care coupled with a new infrastructure.

## Supporting Initiatives

### A. Create health access points embedded in communities rather than hospital campuses

In 2015, HHC is rolling out a primary care expansion aimed at providing care to 100,000 additional patients in under-served neighborhoods across the five boroughs though a combination of expanded service offerings at existing and new HHC Gotham Health community clinic locations, including a newly constructed clinic on Staten Island. In addition, as one of only two PPSs that serve all five boroughs, HHC’s Medicaid waiver projects that increase community-based primary care and behavioral healthcare will have a significant impact throughout the city. Finally, when patients seek primary care in hospital emergency rooms, HHC is connecting patients without primary care providers to settings ensuring continuity of care.

### B. Ensure critical hospital services are fully functioning in the face of increased demand, weather disasters, and aging infrastructure

The Elmhurst emergency room, where patient volume is expected to increase by 20 percent given hospital closings in the catchment area, is in design phase for its planned renovation and expansion. Significant infrastructure projects underway at Coney Island, Bellevue, Metropolitan and Coler Goldwater hospitals are designed to ensure these facilities can continue operating during future weather disasters (see Vision 4 for more detail). Finally, ongoing infrastructure upgrades at HHC facilities are essential to meet new regulatory requirements and safety initiatives.



C. Adequately provide healthcare services to New York City’s growing senior population

A key part of transforming HHC’s system is tailoring care to the needs of different populations to ensure their care is the most appropriate and effective. In particular, recognizing New York City’s growing senior population, HHC is including age-appropriate designs in its infrastructure projects. This translates into exam rooms, diagnostic treatment areas and bathrooms meeting wheelchair and walker space requirements, and soundproofing of rooms to improve communication between patient and provider for patients with hearing impairments. HHC also plans to transform the Seaview Campus on Staten Island, which currently offers services for seniors, it into a vibrant healthcare destination site which will meet the ongoing needs of the surrounding community.

By strengthening HHC’s infrastructure and adapting to the changes in the healthcare environment, HHC will continue to be a leader improving the health of all New Yorkers.

Initiative 3

Expand access to primary care by establishing health clinics in high-need communities

Healthcare is an essential component of creating and maintaining healthy communities, and primary care is a key part of this equation. High-quality primary care provides a “medical home” for individuals and ensures they get the right care, in the right setting, by the most appropriate practitioner, and in a manner consistent with their desires and values. A close partnership between providers and patients helps patients navigate an increasingly complex healthcare system and strive toward better health outcomes.

In New York City, there are 26 neighborhoods federally designated as primary-care shortage areas. Even this measure undercounts the real need, as neighborhoods must apply for this federal designation.

To address inequalities in access to primary care the City will help create at least 16 health clinics by the end of 2017 in neighborhoods identified by the Community Healthcare Association of New York State as being in need of additional primary-care services. Some of these clinics will be based in New York City Department of Health and Mental Hygiene (DOHMH) Neighborhood Health Hubs (detailed further in goal on Integrated Government & Social Services), collaborating with other local organizations to improve health in their communities. Additionally, New York City HHC’s Gotham health network and other federally qualified health centers will expand to new locations to address the need for primary care.



Unmet need for mental health treatment in New York City

23 percent of NYC adults experiencing serious psychological distress reported not getting the medical treatment that they needed in the past year

41 percent of New Yorkers with serious mental illness reported not getting the medical treatment they needed

56 percent of New Yorkers with SPD reported not getting any outpatient mental health treatment at all

Initiative 4

Expand access points for mental health and substance abuse care, including integrating primary care and behavioral health services

Mental health concerns are widespread in New York City. Fifteen percent of New Yorkers reported having been diagnosed with depression, and 12 percent of the city’s adult population reported receiving some form of counseling or taking prescription medication for a mental health problem in the past year. In 2013, five percent of the New York City adult population experienced serious psychological distress (SPD), which is characterized by a range of symptoms commonly present in individuals with mental illness but are not specific to any particular disorder. Mental health issues are not distributed evenly across the City. New Yorkers with serious mental illness are overwhelmingly of low- and moderate-income, with 39 percent living below the federal poverty line. Mental health concerns are also much more prevalent among those with physical health issues.

There is significant unmet need for mental health treatment in the city. Twenty-three percent of New York City adults experiencing SPD reported they did not get all the mental health treatment they needed in the past year, as did 41 percent of New Yorkers with serious mental illness. Barriers to receiving necessary mental health treatment include language difficulties, stigma, difficulty with navigating the mental health system, and cost. Immigrant populations may be more likely to experience stigma around mental, emotional, and behavioral (MEB) health and may be less familiar with their communities’ health resources. Additionally, the behavioral healthcare system is fragmented and poorly integrated with the primary care system.

NYC HHC intends to improve the overall health of New Yorkers with mental health and substance-abuse diagnoses by scaling two best practice approaches: first, co-located and integrated substance-abuse and mental health specialty services, and second, integrated behavioral healthcare in primary care through the integrated Collaborative Care model—a collaborative team of a primary-care providers, care management staff (e.g., nurses), and psychiatric consultants. Each of the models requires providers to build deep relationships with community-based organizations, social-services agencies, and government agencies able to identify patients in need, engage them, and assist in supporting their treatment.





Initiative 5

Work with New York State in enabling and supporting the transformation of the healthcare delivery system

The aforementioned initiatives are cornerstones of our vision of all New Yorkers living fully realized lives. But New York City can’t do it alone. As the primary regulatory entity, the State plays a critical role in shaping who can deliver healthcare, how and where those services are provided, and how services are paid for within New York City. The City stands ready to partner with the State to implement changes to the healthcare system that will ensure high-quality, coordinated care for all New Yorkers.

Supporting Initiatives

A. Integrate patient data across healthcare systems

Since 2009, thousands of healthcare providers have adopted and are using electronic health records. However, few are connected to systems that enable sharing of medical and behavioral health information between care settings or with supportive services organizations. According to the New York eHealth Collaborative (NYeC), only two percent of clinical practice sites are connected in New York City and 14 percent across New York State. Furthermore, based on DOHMH’s health information connectivity data, only about five percent of 7,000 primary-care providers listed in its database are connected to a health-information exchange.

The lack of information-sharing is associated with duplicative testing, delays in care, and incomplete information—all issues that have resulted in poorer health outcomes and higher costs to the City and State. A recent study found that up to 32 percent of patient records reviewed had duplicative testing documented. This fragmentation of healthcare and supportive services affects New Yorkers across all five boroughs and is especially problematic for people with low health literacy, limited English-language proficiency, limited mobility, mental or behavioral health conditions, previous incarceration, or other factors that can make accessing care more difficult.

A call-to-action is needed to accelerate federal and state programs to integrate patient information of New Yorkers across healthcare delivery and supportive systems, as well as across jurisdictional lines. The City stands ready to partner with the State to implement changes to the healthcare system so all New Yorkers can receive high-quality, coordinated care.



We have already made strides in this direction. In 2006, the New York State Department of Health (NYSDOH), in cooperation with healthcare leaders in New York State, established a public-private partnership to develop and operate the Statewide Health Information Network of New York (SHIN-NY). SHIN-NY facilitates the exchange of patient information across health settings anywhere in the state. Additional effort is still needed to scale up the information exchange process to as many provider types as possible and incorporate data from related health and social support services (e.g., social work, community health, school health).

B. Transform the Medicaid reimbursement methodology

To change the way healthcare works, we need to change the way we pay for it. Currently, we pay less for preventive care that keeps people healthy and more for healthcare services when people get sick. In particular, payments for preventive care, including primary care, and other services delivered in outpatient settings need to incentivize greater provision of these services. In addition, services and supports that help keep people healthy, such as telemedicine, effective health information technology, and care coordination should be paid appropriately. The City will work with New York State in altering what and how Medicaid pays for these services.



INDICATORS + TARGETS

- ✔ Decrease the crime rate
- ✔ Decrease the average daily population (ADP) in jail
- ✔ Decrease the percentage of domestic violence victims turned away from shelters

Criminal Justice Reform

**Goal: Among large U.S. cities, New York will continue to be the safest, and will have the lowest rate of incarceration, with a criminal justice system that leads the nation in fairness and efficiency**

Overview

Twenty years ago, no one thought we could control crime. In 1993, there were 1,946 murders and 99,207 burglaries in New York City. In 2013, both of those numbers had dropped by more than 80 percent. The city ended 2014 with the lowest murder rate in the city’s history.

Plummeting crime has also meant a shrinking jail population. At the end of 2014, for the first time in thirty years, Rikers Island had fewer than 10,000 inmates, less than half of its high-water mark of 21,688 in 1991.

This extraordinary progress is proof we can have both more safety and less incarceration. And it is one of many things that set New York City apart: while incarceration climbed seven percent elsewhere in the country between 1996 and 2012, the city saved billions by reducing crime and unnecessary incarceration.

In the next twenty years, New York City will continue to be a national leader in public safety. This will mean continuing to strengthen the things we are already doing—such as data-driven policing—but it will also mean investing in people and neighborhoods. We will provide opportunities for individuals to lead productive lives. Cohesive, engaged neighborhoods are the crime prevention tools of the 21<sup>st</sup> century. In the next twenty years, New York City will pursue evidence-driven strategies and sophisticated technologies to both prevent crime well before it begins and ensure its criminal justice system is increasingly safe, fair, and effective. And we want to make sure that, of those populations affected by crime—particularly victims of domestic violence—we can provide the support they need when they most need it.

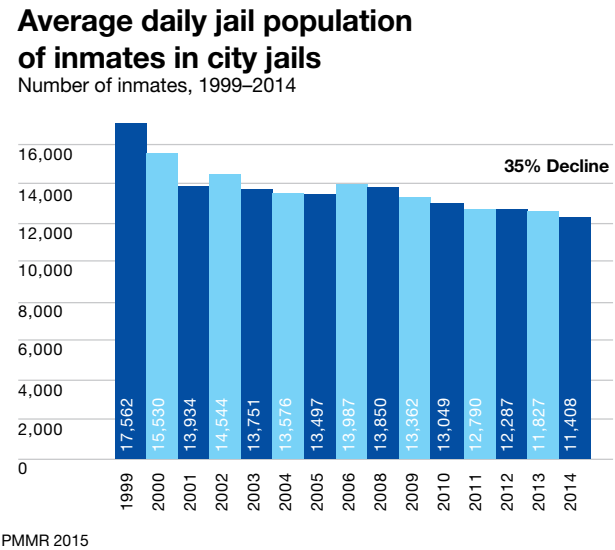
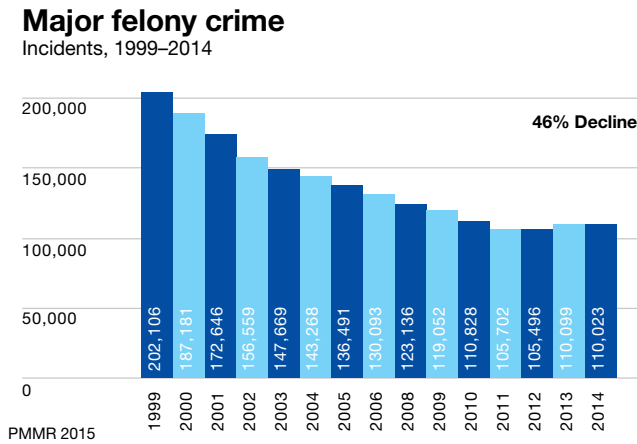
Initiative 1

Reduce crime and unnecessary incarceration

The key to safely reducing the jail population while keeping communities safe is to reduce crime well before it begins, which leads to both less crime and fewer people behind bars. To reduce crime and unnecessary incarceration, the City will implement a set of interlocking strategies to help ensure we are reducing crime in the most targeted way and using jails and programming wisely and effectively.



Red Hook Community Justice Center in Brooklyn



Supporting Initiatives

A. Use advanced technology and integrated data to accurately and effectively reduce crime

The cornerstone of the City’s crime reduction efforts is ensuring officers are able, in real time, to assess the risks and needs of individuals they encounter on the street, so they can effectively and accurately exercise discretion. This initiative will require both sophisticated mobile technology to access data as well as quality, reliable data.

The City is already working to put in the hands of every police officer and in every police car a tablet, phablet, or smartphone that can serve as a primary information source. Access to real-time information will allow them, while they are out on the beat, to both identify frequent offenders and deliver instantaneous information about crimes and other critical missions. For example, the City has already invested in ShotSpotter technology, a gunshot detection tool that triangulates the location of a gunshot to within 25 meters of where the shot was fired. Making this information immediately available on mobile devices will allow officers to deploy to a specific location instead of a general area, saving resources and increasing the chances that shooters will be caught.

This technology will also allow the police to become better informed when they exercise their discretion so that, consistent with public safety, officers know when to make an arrest or issue summonses. And finally, technology will give them better access to information about programming, so they can more effectively match individuals to services.

To enhance the quality of data available to first responders, the City is building an integrated data platform, described in the Integrated Government & Social Services goal, that will help facilitate the cross-agency coordination of programs and services to accurately match individuals to the right intervention. The goal is for this integrated





platform to connect City agencies, District Attorneys, defenders, courts, and providers to ensure all agencies that touch the population involved with the criminal justice system have data and analytics to drive wise decision-making, to reduce both crime and unnecessary incarceration.

**B. Reduce crime through changes to criminal justice facilities that will promote concepts of fairness and confidence in the law**

We will conduct an infrastructure survey of probation, police, and court facilities to ensure signage and physical design inform individuals of what to expect from the criminal justice process, provide the ability to voice concerns, and promote better interaction among the players in the justice system. For example, we will introduce waiting rooms that can separate victims from their alleged attackers, visiting rooms that can permit defendants and lawyers to consult meaningfully, and clear access that would permit corrections officers to escort inmates to court in a timely fashion.

**C. Enable crime prevention through environmental design**

Crime Prevention Through Environmental Design (CPTED) is an approach to deterring criminal behavior by altering the physical design of neighborhoods. Evidence-driven tactics range from the strategic use of parks and public spaces to designing apartment buildings to maximize the number of residents who can easily monitor their streets. To promote public safety in high-crime neighborhoods, New York City will implement CPTED surveys to develop plans for low- and no-cost changes to buildings, parks, and other features of the built environment that could reduce crime.



Officer on a T3 transporter

**D. Reduce incarceration by examining risk, needs, programming, and system flow**

An effective criminal justice system should have the ability to assess the level of risk at key system points. We will implement citywide risk-assessment instruments at arraignment and implement risk-classification and needs assessments within incarcerative settings.

We will provide effective programming during incarceration and appropriate services in the community. Physical space in detention and placement/jails for juveniles and adults will accommodate cost-effective programming to reduce re-offending. We will ensure supportive housing for “frequent flyers,” those who repeatedly cycle through the criminal justice system.

We will also design incarceration and justice system spaces to affect behavior and resolve system bottlenecks.



**Initiative 2**

**Build sustained neighborhood engagement to employ fairness as a crime reduction tool**

Smart reforms have made New York City the safest big city in the country. However, crime and violence disproportionately affect the city’s poorest neighborhoods, where confidence in government is low.

People are more likely to obey the law when they believe those who are enforcing it have the legitimate authority to do so. The public confers legitimacy on those in positions of authority who treat them with dignity and respect, give them a voice (even if that voice does not carry the day), make decisions that are neutral and fair, and convey their motives as trustworthy. The social cohesion of neighborhoods is associated with lower crime rates. To translate these well-founded theories into actionable steps that will reduce crime, the City will implement the following initiatives.

**Supporting Initiatives**

**A. Create neighborhood CompStats with residents and City agencies in high-distress neighborhoods**

CompStat, short for COMPLAINT STATISTICS, are the initials given to New York Police Department’s (NYPD) data-driven management tool and are now internationally known as a label for an accountability mechanism. In the neighborhoods in which distress is clustered, the City will create a regular CompStat to identify and solve problems with neighborhood residents. These CompStats will be supported by data and measured through key metrics. This data support will include the building of neighborhood-justice mapping centers that will engage residents and promote cohesion through joint action.

**B. Implement a regular citywide method of surveying resident engagement**

The City will create a survey system to gauge residents’ feelings about their communities. It will be operated online, where ease of use and other incentives will encourage residents to respond to periodic questions about neighborhood satisfaction and cohesion. This information will enable the City to track changes in attitudes and raise resident confidence in government responsiveness.



Initiative 3

Use criminal justice data-driven strategies to improve decision making and reduce crime and unnecessary incarceration

Leveraging the citywide integrated data platform, the City will build tools to ensure agencies that touch the population affected by criminal justice, inside and outside of Mayoral control, have data and analytics to drive wise decision making to reduce both crime and unnecessary incarceration. A range of analytic and data strategies designed to assess decision making at critical points throughout the spectrum of criminal-justice processes will support this goal.

Supporting Initiatives

A. Introduce strategic tools for health and neighborhood safety

Strong communities, with robust networks of programs and services, lay the groundwork for enduring safety. We will work to make neighborhoods safe through a set of strategies designed to support crime prevention and reduce conditions in some of the city’s most distressed neighborhoods.

To prevent crime, the City will also build a set of strategic tools designed to support people with behavioral health needs in chronic care treatment. These tools will help prevent an individual’s contact with the criminal justice system.

B. Build crime-and-incarceration reduction strategic tools

Once an individual is in the justice system, the City will build analytic tools to ensure fair and appropriate decision making throughout the deploy system. This will include strategies to reduce case processing times, improved matching of candidates to diversion programs, alternatives to detention and incarceration programs, pre-arraignment and pre-trial screening, and reduced warrants through, among other things, reminder systems for summons appearances.

Initiative 4

Ensure all victims of domestic violence have access to a shelter and necessary services

Domestic violence accounts for a significant percentage of the crime that occurs in New York City. In 2014, 40 percent of all felony assaults and 36 percent of all rapes were related to domestic violence. That same year, domestic violence accounted for 19 percent of murders. In total, the NYPD responded to 282,648 domestic violence incidents.



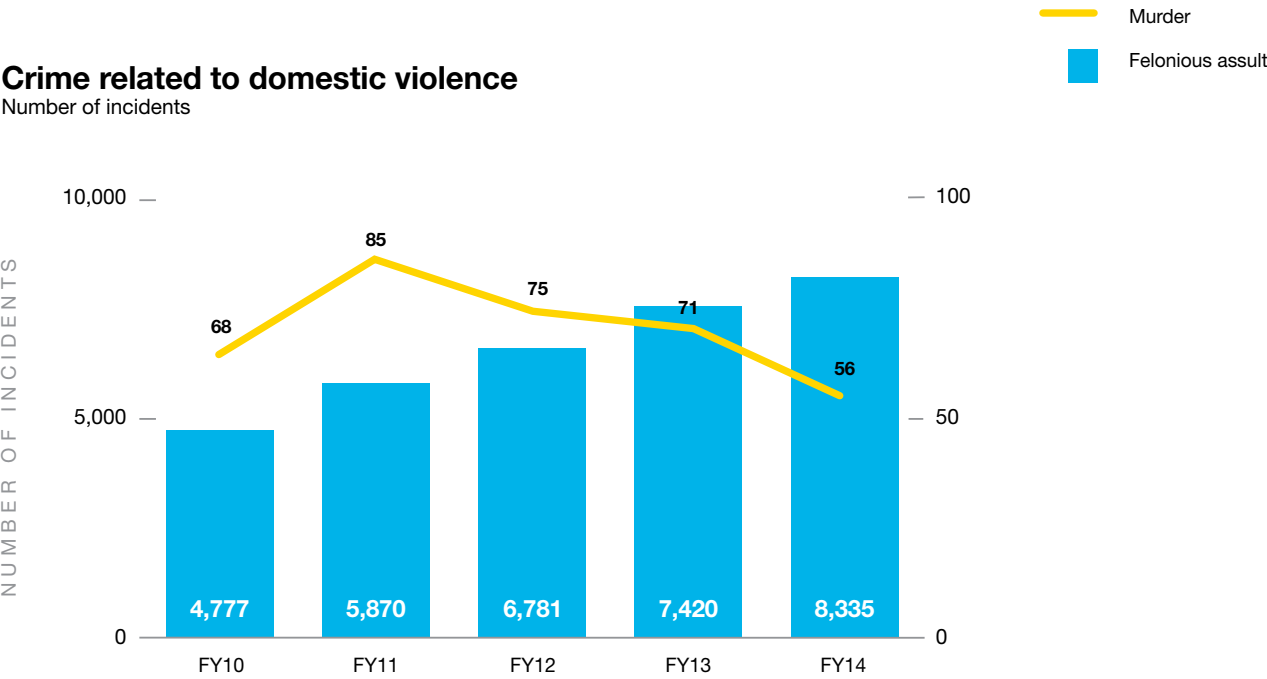
In addition to reducing crime and lowering incarceration, we also aim to provide services to victims of crime, so they can recover and re-participate fully in the city. While the City provides many services for victims of domestic violence, too many domestic violence victims still lack access to the services they need when they need them. The moment of exit from an abusive relationship is one of the most dangerous times for victims. In 2014, over 4,100 adults and children who needed emergency domestic violence shelter were not linked to one, with only 35 percent of single adults linked to a shelter in comparison with 52 percent overall.

The City must address the need for additional shelter space for any member of a vulnerable population subject to the threat of domestic violence: single adults, members of the LGBTQ community, sex-trafficking victims, and others. Accommodations including longer-term shelter beds must be made for victims with children. Placement in domestic violence shelters is limited to 180 days, and therefore, in the implementation of the City’s housing plan, the City will implement a sustainable plan for domestic violence victims to transition from shelters to permanent housing.

In key neighborhoods where domestic violence occurs more frequently, the City will build upon the community-based Family Justice Center model and expand into new neighborhoods. These centers will be able to provide comprehensive multi-agency services for domestic-violence victims, close to their homes.

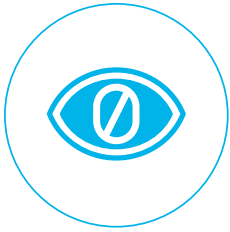
Crime related to domestic violence

Number of incidents



PMMR 2015





# Vision Zero

**Goal: New Yorkers will continue to embrace Vision Zero and accept no traffic fatalities on New York City streets**

INDICATORS + TARGETS

- ✔ Reduce the number of traffic fatalities to zero
- ✔ Reduce the number of serious injuries due to traffic collisions to zero

## Overview

Traffic fatalities in the city have fallen significantly—from 701 in 1990 to 381 in 2000, to an all-time low of 249 in 2011—and New York is internationally recognized as a leading innovator in safe street design. However, approximately 4,000 New Yorkers are still seriously injured and more than 250 killed in traffic crashes each year. Vulnerable populations are the most affected—being struck by a vehicle is the leading cause of injury-related death for children under 14, and the second-leading cause for seniors, who comprise 12 percent of the population but 33 percent of pedestrian fatalities.

In January 2014, the Mayor launched Vision Zero, a bold commitment to improving street safety in every neighborhood.

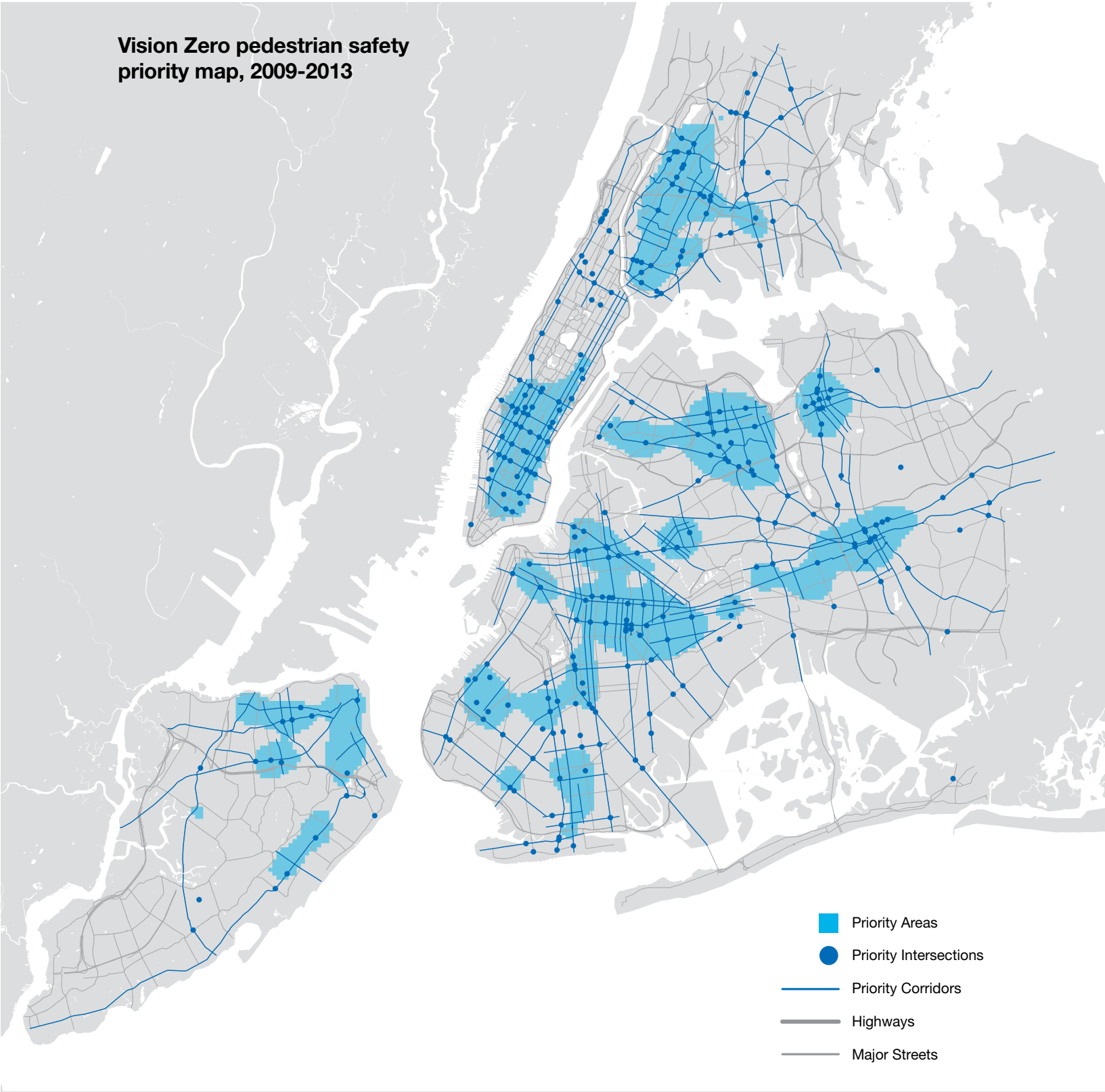
Vision Zero contains a robust portfolio of initiatives to make our streets safer, including expanded enforcement against dangerous moving violations such as speeding and failing to yield to pedestrians; new street designs and configurations to improve safety; broad public outreach and education; and a sweeping legislative agenda to deter dangerous driving. These projects include fifty street-improvement projects to reengineer intersections and corridors, speed cameras to reduce speeding in school zones, and upgrades to City fleet vehicles to monitor speeding and other dangerous driving behaviors. Together, these comprehensive initiatives are giving New York City control over the safety of our streets.

Vision Zero is already having an impact. 2014 was the safest year in New York’s history for pedestrians and one of the safest years for all New Yorkers since record keeping began in 1910. In 2013, 182 pedestrians lost their lives in traffic crashes, while in 2014, only 138 pedestrians were fatally injured. Despite this significant progress, the City recognizes there is more work to be done—and we are committed to a new set of initiatives to continue this work.

## Pedestrian traffic fatalities, 1984-2014



Vision Zero pedestrian safety priority map, 2009-2013



- Priority Areas
- Priority Intersections
- Priority Corridors
- Highways
- Major Streets

Department of Transportation



**Pedestrian traffic fatalities 2009-2013**

**Queens Boulevard**  
55 pedestrians killed or seriously injured

**4th Avenue**  
60 pedestrians killed or seriously injured

**Atlantic Avenue**  
64 pedestrians killed or seriously injured

**Grand Concourse**  
70 pedestrians killed or seriously injured

**Initiative 1**

**Continue implementation of the Vision Zero Action Plan**

The City will continue to execute and build on the portfolio of initiatives developed in the 2014 Action Plan, focusing on pedestrian safety, bicycle access, truck safety, and improvements to priority areas citywide.

Bike lanes are a fundamental aspect of the Vision Zero strategy to increase safety. Well-designed bike facilities protect bicyclists, reduce excessive speeding, organize traffic flow, and shorten crossing distances for pedestrians. And when bicycling feels safer, people are more likely to choose it as a transportation option. Therefore, the Department of Transportation (DOT) will work closely with communities around the city to expand a bicycle network that improves safety for all road users, including installing at least five miles of protected bicycle lanes annually. This supports our efforts to develop a multi-modal transportation system, further laid out in Vision 3.

Turning trucks pose a significant safety risk to pedestrians in crosswalks, so the City will launch a pilot program to test the effectiveness of truck side guards. Side guards are protective additions to vehicles that reduce the likelihood that pedestrians and cyclists will suffer severe injuries when struck by a turning truck. Department of Citywide Administrative Services (DCAS) will install truck side guards in more than 200 units within the City fleet—the largest side-guard program in the nation. If the initial rollout is a success, every new City truck will be designed to include them.

**Initiative 2**

**Use Borough Pedestrian Safety Action Plans to guide future engineering projects and enforcement priorities**

In an effort to drive down traffic fatalities, DOT and NYPD developed a set of five plans, each of which analyzes the unique conditions of one New York City borough and recommends actions to address the borough’s specific challenges to pedestrian safety. Each Borough Plan was shaped by a comprehensive community outreach process that included 28 workshops and 10,000 comments to the Vision Zero input map. Community input was combined with cutting-edge crash-data analysis and used to identify the predominant traffic safety issues at priority corridors, intersections, and areas of the city—the most crash-prone locations. This broad, participatory, data-driven process ensures an equitable approach to prioritizing safety projects. Each year through 2017, DOT will complete fifty Vision Zero safety projects at the priority corridors, intersections, and areas identified in the Borough Plans. These improvements will simplify complex intersections, discourage excessive vehicle speeds, add bicycle lanes, make pedestrians and cyclists more visible, increase accessibility, and shorten pedestrian crossing distances.



Vision Zero effort in Eastern Parkway



Residents at Queens Blvd. safety workshop in January 2015

**Queens Boulevard Redesign**

The Vision Zero Great Streets funding includes \$100 million for improving segments of Queens Boulevard, a 7.2 mile, complex, multi-roadway corridor that cuts across more than half the borough. The long crossing distances, high traffic speeds, and highway-like urban design have contributed to historically high crash rates. In January 2015, the DOT, NYPD, and one hundred residents, merchants, and other stakeholders participated in the first Queens Boulevard design workshop to identify safety solutions. The direction from the community was clear: calmed service roads, improved crossings, the addition of a protected bike lane, and beautification. DOT intends to design and implement fast-track design solutions this year, and simultaneously begin planning for the long-term capital-funded changes needed to permanently remake Queens Boulevard’s image.

To give pedestrians a “head start” while walking across the street and reduce conflicts with turning vehicles, DOT will expand exclusive pedestrian crossing time on all Priority Corridors by the end of 2017. Leading pedestrian intervals (LPIs) are a signal-timing treatment that provides pedestrian-only walk time before vehicles, including turning vehicles, receive the green light. They are a proven method of reducing pedestrian-vehicle incidents at high-pedestrian crash locations.

**Initiative 3**

**Transform dangerous arterial roads into Vision Zero Great Streets**

Many of the corridors with the highest rates of fatal and severe-injury pedestrian crashes per mile are wide roads that divide our neighborhoods and communities but have the potential to serve as connectors—including Queens Boulevard, 4<sup>th</sup> Avenue in Brooklyn, Atlantic Avenue in East New York, and the Grand Concourse in the Bronx.

The Vision Zero Great Streets program will rethink and redesign these major corridors in order to prevent serious crashes, enhance mobility, increase accessibility, and bolster neighborhood vitality. This comprehensive overhaul provides opportunities for improving safety such as shortening of pedestrian crossing distances through curb extensions and widened medians, physically separated bike lanes, and the addition of amenities such as benches and landscaping.

Great Streets capital projects will be fast-tracked in order to allow a permanent build-out of street improvements initially made with temporary materials. Capital construction projects are complex and develop over multiple years because of the extensive coordination and collaboration between DOT, DDC, and a host of other City agencies, utility companies, and the community. Each of these corridors presents special challenges because of high pedestrian volumes, heavy car, bus, and truck traffic, and the presence of subways underneath the road or elevated structures overhead. Under Vision Zero Great Streets, painted medians and temporary bollards will be built out in permanent materials faster, and New Yorkers will begin to see construction of expanded pedestrian space, beautified medians with trees, and physically separated bike paths on major streets by 2017.



Vision 3

# Our Sustainable City

New York City will be the most sustainable big city in the world and a global leader in the fight against climate change

New York City will...

- ✔ Reduce the city’s greenhouse gas emissions by 80 percent by 2050 relative to 2005 levels
- ✔ Reduce waste disposal by 90 percent by 2030 relative to 2005 levels
- ✔ Reduce risks of stormwater flooding in most affected communities

Goals



**80 x 50**  
New York City’s greenhouse gas emissions will be 80 percent lower by 2050 than in 2005



**Zero Waste**  
New York City will send zero waste to landfills by 2030



**Air Quality**  
New York City will have the best air quality among all large U.S. cities by 2030



**Brownfields**  
New York City will clean up contaminated land to address disproportionately high exposures in low-income communities and convert land to safe and beneficial use



**Water Management**  
New York City will mitigate neighborhood flooding and offer high-quality water services



**Parks & Natural Resources**  
All New Yorkers will benefit from useful, accessible, and beautiful open spaces



**“Invest even more in the public realm. These are the common spaces where we come together as people and as proud New Yorkers from all over. We need powerful public design that inspires, sustains, and catalyzes community vibrancy.”**

–Jeff B., Manhattan

## Introduction

**Sustainability means the activities we undertake today will not compromise the present generation’s or future generations’ ability to meet their own needs.** It is grounded in the recognition that people, economic development, and the environment are interconnected, and for any to thrive, all must thrive together. A sustainable city is connected by transportation systems that move people and goods to their destinations in a way that is both affordable and minimizes air pollution and greenhouse gas emissions. In a sustainable city, the air is breathable and the water drinkable. Waterways are clean and healthy food is available in any neighborhood. The power system is efficient and dependable, meeting the demands of an expanding population without the greenhouse gas emissions that contribute to climate change. Buildings provide healthy environments, and are well designed for comfort and minimal energy costs. The small amount of solid waste generated is recycled, composted, and/or turned into energy without affecting air quality. Contaminated land from our industrial history is cleaned up to create housing, parks, and opportunities for new jobs. Parks offer spaces for children to play in and adults to walk around, trees provide shade and absorb carbon emissions, and are a refuge from the clanging and concrete. To become the most sustainable big city in the world, we have to be conscientious of the resources we consume and the structures we build. We have to innovate, because our density and island status create special conditions. And we must remember that what we do now will have lasting effects for generations. **To become the most sustainable big city, we must all do our part today, for the sake of the future.**

Across the globe, greenhouse gas emissions are growing at an unprecedented rate, causing a rise in average global temperature and changes to climate patterns. In order to limit temperature increases this century to just 2°C and to avert the worst effects of climate change, as called for in the United Nation’s Framework Convention on Climate Change, we will need a 50 percent reduction in global emissions by mid-century—and up to an 80 percent reduction in developed countries. **New York City has signed on to meet this goal.**

Cities must play a leading role in addressing the problem as more than half the world’s population now lives in urban areas, with cities generating the majority of the world’s emissions. Many cities, especially those concentrated in coastal zones that face increasing threats of rising sea levels, have recognized the urgency to act now to reduce emissions, regardless of national or regional climate policies.

**We can take pride in the progress made to date toward our sustainability goals.** In a very short span since the end of the last century, we have already shaped New York City to be a model for the 21st century. Our city has its cleanest air in the last 50 years, and greenhouse gas emissions have dropped 19 percent from 2005 levels. We are but a few plantings away from the goal of a million new trees. Over 475 brownfield properties are being cleaned up and readied for new development, which is expected to bring 3,850 units of affordable housing. Our harbor is now the cleanest



Gowanus Canal



**“The city needs to work on ways to get businesses to use clean energy and to clean up the air and water... The city should also look at incentivizing building owners to build green and maintain green roofs, and find ways to cut down on using energy that comes from non-renewable sources.”**

–Michael G., Bronx

it has been in the last century. More than 500 miles of sewers have been constructed, or rebuilt, and we are activating a third city water tunnel to provide critical infrastructure redundancy to our water supply and the opportunity to repair older tunnels. Much of this work has stemmed from the emphasis on sustainability embedded in past PlaNYCs, and was enhanced by the initiatives developed since 2014. New York City has firmly established itself among the community of global urban leaders in sustainability. We share this leadership with the most progressive capitals of commerce and culture in the world, but there remains much more to be done if we are to stake our claim as the most sustainable big city in the world.

As New York City continues to grow, meeting sustainability objectives will become more challenging. We are consuming more goods and resources, and consequently risk generating more waste and pollution. Our businesses and lifestyles, the engines of our economy and the products of our creativity, also require increasing amounts of energy, most of which is still derived from carbon-intensive fossil fuels. Continuing combustion of fossil fuels compromises our air quality goals—adversely affecting vulnerable populations and neighborhoods—and our ability to reduce our emission of greenhouse gases that result in global climate change. New sites to develop are becoming increasingly scarce, and the basic services needed to support a city, from water to power to sanitation to transportation, are becoming increasingly strained under the weight of a growing population and aging infrastructure. We must figure out how all New Yorkers can sustainably and affordably live in clean, healthy environments. In building on the good work of our predecessors, we must enlarge the scale of our efforts to match the boldness of our ambitions.



Jamaica Bay Wildlife Refuge



Materials Recovery Facility at South Brooklyn Marine Terminal



Solar panels at the Port Richmond Waste Water Treatment Plant





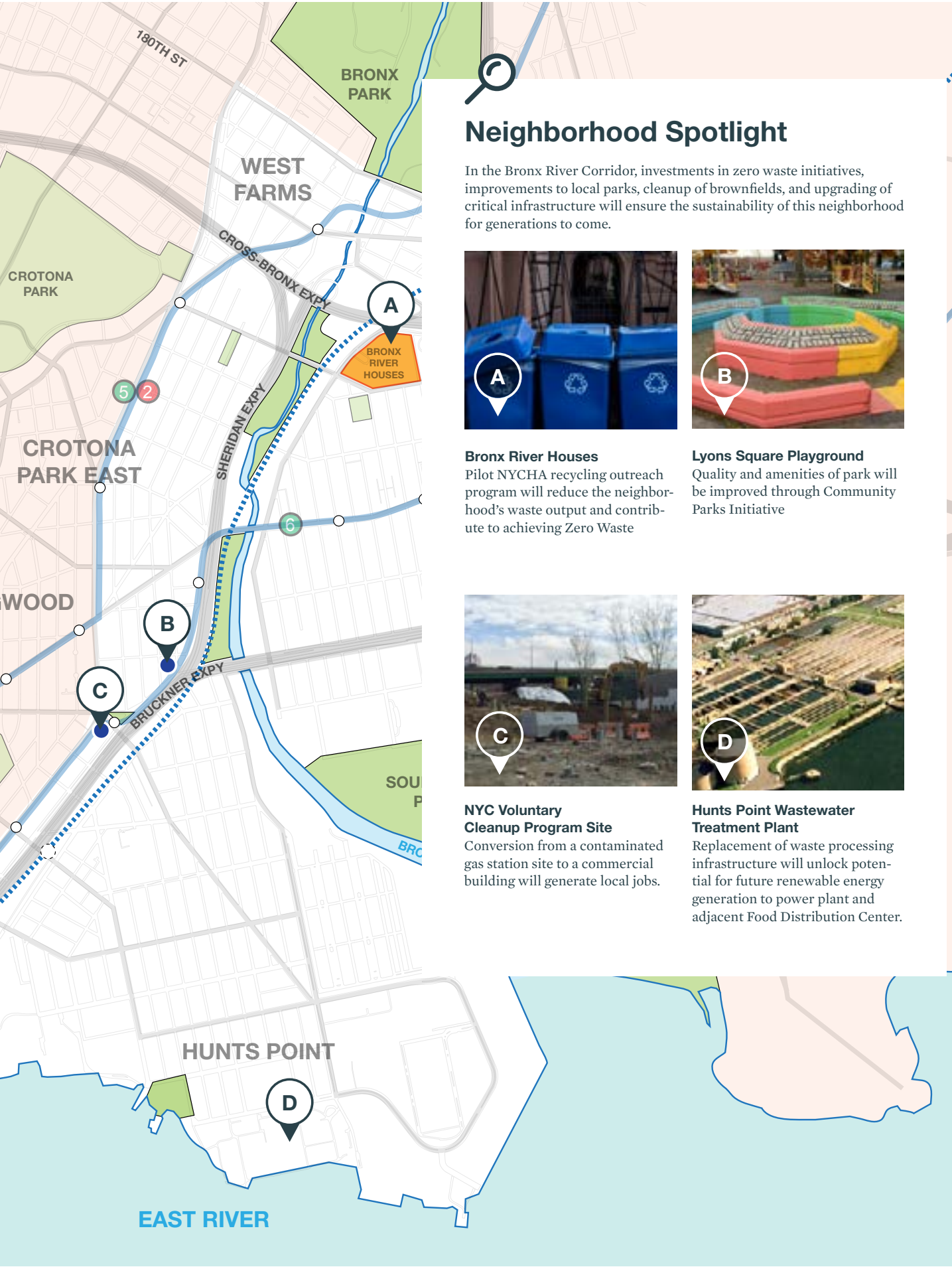
# Environmental Justice

We recognize that equity and environmental conditions are inexorably linked. Environmental hazards translate into poor health, loss of wages, and diminished quality of life, particularly for residents of low-income communities that have historically been burdened with a disproportionate share of environmental risk.

OneNYC addresses the sources of disparities in health outcomes such as asthma and cardiovascular disease, as well as the environmental impediments to economic opportunity and neighborhood stability. It calls for a more equitable and targeted approach to a broad variety of City services, such as solid waste and stormwater management, tending our open spaces, and environmental remediation. Through OneNYC, we are committed to:

- Improving air quality in vulnerable communities through reduced and diverted truck trips resulting from implementation of Zero Waste, increased barging of waste under the Solid Waste Management Plan, and a freight strategy to shift the movement of goods to rail and water transport. Air pollutant emissions will also be reduced through the accelerated conversions of boilers in buildings and the targeted expansion of mass transit and pedestrian and bicycle networks. (Visions 1 and 3)
- Addressing indoor health hazards in homes through initiatives such as New York City Housing Authority (NYCHA) mold remediation. (Vision 2)
- Improving parks that have received little capital investment and are located in areas of high need, based on higher-than-average poverty, density, and population growth. (Vision 3)
- Advancing an aggressive and participatory brownfields redevelopment program that protects human health for those living in close proximity while creating new opportunities for affordable housing development and job creation. (Vision 3)
- Reducing flooding in Southeast Queens and other highly affected neighborhoods through a combination of grey and green infrastructure as well as other water management services. (Vision 3)
- Developing new mentorship and job training programs to ensure that the city’s workforce benefits from and contributes to the City’s efforts to mitigate climate change and build a more resilient city. (Vision 1)

Finally, it is imperative that we empower communities through public dissemination of data and the creation of venues for participatory planning. We need the help of community stakeholders to identify at-risk populations, toxic “hot spots,” research gaps, and effective implementation strategies. Only through the joint deployment of scientific expertise and local knowledge will we achieve clean, healthy, livable, and sustainable communities across the city.





80 x 50

Goal: The New York City’s greenhouse gas emissions will be 80 percent lower by 2050 than in 2005

Overview

INDICATORS + TARGETS

✔ Reduce the city’s greenhouse gas emissions by 80% by 2050 relative to 2005 levels

**Climate change is an existential threat to humanity.** New York City, a city built primarily on islands and with 520 miles of shoreline, is particularly vulnerable to the effects of climate change in a number of ways. Rising sea levels, extreme storms, and heat waves are a few of the perils it faces. To combat these threats, the City is employing two strategies. First, we must reduce our own greenhouse gas (GHG) emissions, and second, we must adapt so that our neighborhoods, economy, and public services are ready to withstand, and emerge stronger from, the impacts of climate change. Here, we discuss how we will approach the first strategy: the reduction of our own emissions. The second strategy is addressed under Vision 4.

In September 2014, New York City committed to the goal of achieving an 80 percent reduction in GHG emissions from 2005 levels by 2050 (80 x 50). The city’s emissions have already dropped 19 percent, nearly two-thirds of the way toward an intermediary goal of reducing GHG emissions 30 percent by 2030. The majority of the GHG reductions achieved to date were the result of replacing coal and oil with natural gas for electricity generation, as well as other improvements to utility operations. These specific strategies cannot be replicated, and future reductions will be more challenging.

Every year, the City undertakes an inventory to monitor citywide GHG emissions. Nearly three-quarters of New York City’s GHG emissions are attributable to energy used in our buildings and how they are operated. Vehicles and emissions from decomposing solid waste make up the balance. By contrast, the national average has a far larger proportion attributable to vehicles. As a result, the City’s focus to-date has been on buildings and energy efficiency—and **we are committed to leading the way.**

However, the entire burden of reducing GHG emissions cannot be borne only by the owners and occupants of our buildings. The power they are receiving should be less carbon-intensive. Significant emissions reductions have already been achieved by increasing the share of natural gas in the city’s power mix. Nuclear power, which emits minimal GHGs, is also a large part of the city’s energy portfolio, representing 30 percent of the city’s power supply. Subtracting nuclear energy from our supply would raise issues of sourcing alternatives low-carbon energy, reliability, and cost. Beyond that, only a small fraction of the power the city receives comes from renewable sources of energy. Fragmented approval chains combined with limited knowledge about available resources and grid infrastructure stymie promising alternatives, such as geothermal and solar installations. Power regulators and others are looking at what a carbon-minimal future requires and what we need to do to get there, recognizing the difficulties of the status quo, including costs. Offshore wind, microgrids, and distributed energy generation can work here as they do in other cities, but

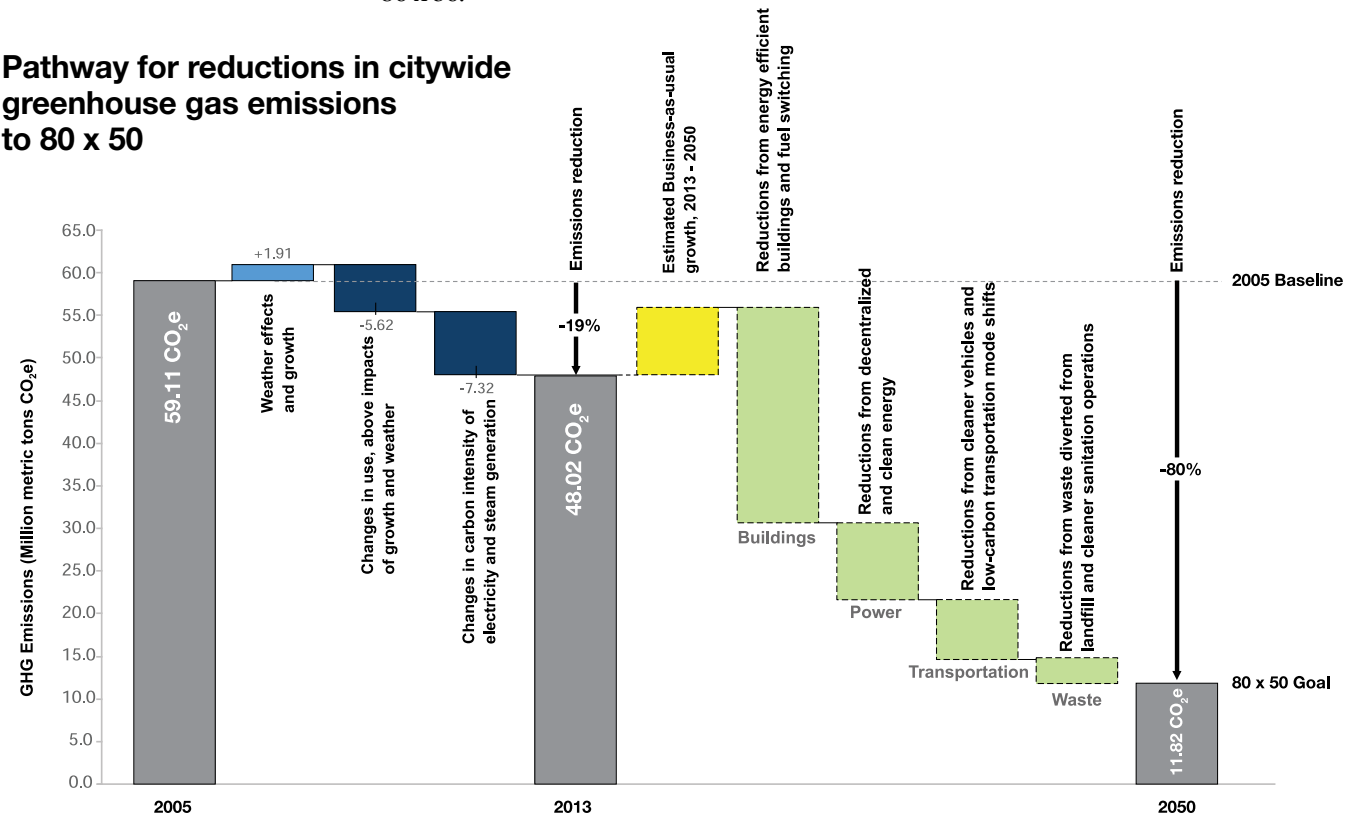
the roadblocks need to be removed. **Renewable energy sources must account for a significant proportion of the city’s energy mix.**

To reach 80 x 50, over 43 million metric tons of carbon dioxide-equivalent (CO<sub>2</sub>e) emissions reductions relative to business-as-usual trends will need to come from cleaner power generation, fossil-fuel-free modes of transportation, reducing solid waste, as well as improvements to the energy efficiency of buildings across New York City. By 2050, we must reduce nine million metric tons from power production, seven million metric tons from personal and commercial vehicles, two million metric tons from the disposal of solid waste, and the remaining 25 million metric tons from energy used in buildings. These numbers are the current estimated thresholds necessary to meet 80 x 50, but may change over time with technological advances, increased resources, and other factors.

**Focusing on all four key sectors—buildings, power, transportation, and solid waste—will get us to 80 x 50.** We will continue implementing existing GHG-reduction initiatives identified in former PlaNYCs, and in One City: Built to Last, the City’s blueprint to address emissions from the building sector.

New York City will substantially reduce emissions from electricity generation, transportation, and solid-waste management by 2025. The initiatives announced in this plan are a down payment on our efforts to dramatically reduce greenhouse gas emissions. In the next year, the City will develop a 2025 action plan of additional initiatives for each of these three sectors to set our power, transportation, and solid waste systems on a path to 80 x 50.

Pathway for reductions in citywide greenhouse gas emissions to 80 x 50



Source: NYC MOS



CANNONSVILLE  
RESERVOIR HYDRO-  
ELECTRIC FACILITY

The New York City Department of Environmental Protection (DEP) will develop a new hydroelectric facility at the City’s Cannonsville Reservoir, located in Delaware County. The 14-megawatt facility will advance New York City’s goal of developing affordable, clean, and renewable energy supplies that support economic growth, while reducing the city’s overall carbon footprint. By capturing the natural force of the millions of gallons of water released from Cannonsville Reservoir each year, the hydroelectric facility will generate enough electricity to power roughly 6,000 homes while avoiding the emission of 25,620 metric tons of greenhouse gases each year—the equivalent of carbon sequestered by 21,000 acres of U.S. forests in one year. The Federal Energy Regulatory Commission recently issued a license to DEP to build a hydroelectric facility at Cannonsville Reservoir. The facility will be comprised of four hydroelectric turbines generating an estimated 42,280 megawatt hours of electricity each year, situated inside a 9,000 square foot powerhouse. Constructing and operating the facility will also have a positive impact in the Delaware watershed that surrounds Cannonsville Reservoir, creating approximately 60 construction jobs and as many as five full-time green jobs for those who will operate the plant. The facility will help hold down electricity costs upstate and displace an equivalent amount of generation from higher-cost, fossil-fuel-fired sources. Such displacement not only reduces the emission of pollutants from burning fossil fuels, but also tends to reduce the overall wholesale market price of energy.

Initiative 1

Develop near-term local actions and long-term regional strategies to reduce greenhouse gas emissions from the power sector

The power sector has become significantly cleaner in recent years, but a fundamental reconfiguration is required to achieve a deep reduction in GHG emissions and move toward the 80 x 50 goal.

While a low carbon power sector is technically feasible, many hurdles remain. Much of our current energy supply and the barriers to cleaner generation lie beyond the geographic boundaries of the city. Therefore, our 80 x 50 plan will be based on a regional strategy. We will partner with other municipalities, utilities, transmission owners, generators, and energy services companies, as well as State and Federal regulators, in order to achieve significant GHG reductions.

Supporting Initiatives

A. Remove barriers to more efficient power generation and increased renewable power production

In-city power generation facilities are aging—76 percent of the facilities are over 40 years old. Replacing older generators represents a significant opportunity to increase efficiency, reduce GHG emissions, improve air quality, and maintain high levels of reliability and resiliency. However, current market rules do not value such externalities. We must work with the New York Independent System Operator (NYISO, manager of the bulk power system), regulators, and suppliers to change the market rules to value these benefits and provide incentives for newer, cleaner generators. The City will work with other market participants, NYISO, and State and Federal regulators to eliminate the barriers to entry that now exist.

B. Support the development of renewable power resources

Currently, most renewable resources require financial assistance to address high upfront costs. Such funding is available at the state level. For example, it is estimated that the Renewable Portfolio Standard, administered by the New York State Energy Research and Development Authority, could have an economic potential to support 3,348 megawatts (MW) of new renewable generation by 2020, and 15,594 MW by 2030. If this potential is realized, the state would achieve annual GHG reductions of 2.33 million metric tons by 2020, and 13.51 million metric tons by 2030. Funding is also available through the Regional Greenhouse Gas Initiative, which sets a regional carbon dioxide (CO<sub>2</sub>) cap for the power sector and sells CO<sub>2</sub> allowances to power generation facilities in participating states. The revenue is used to support cleaner fuel, renewable energy, and energy efficiency-related initiatives. RGGI funds have been used to invest in new equipment that will generate approximately 7.3 million fewer metric tons of CO<sub>2</sub> over the its useful life. We must work with the State to ensure these and future funds are fully used to support renewable and energy efficiency programs.

NEW YORK STATE PUBLIC SERVICE  
COMMISSION REFORMING THE ENERGY  
VISION PROCESS

Over the past two decades, the technology used to produce and provide electricity to customers has changed significantly. We are at the beginning of a new era with more power options for customers than ever before. The New York State Public Service Commission is at the forefront of developing the regulatory paradigm for the future of the electric power industry through the Reforming the Energy Vision (REV) initiative. REV aims to reorient both the electric power industry and the utility ratemaking paradigm toward a consumer-centered approach that harnesses technology and markets. The process promotes efficient use of energy; deeper market penetration of renewable energy resources; wider deployment of distributed energy resources such as micro-grids, on-site power supplies, and storage; and the use of advanced energy management products. We are actively participating in REV through filings and committees.

C. Increase the share of wind power in the City’s power mix

Wind power is a well-established renewable power technology but it only represents a small fraction of the City’s mix. The City will work to increase the amount of wind power supplied from the region. It will also work closely with key stakeholders to enhance the viability of large-scale wind projects by increasing demand, lowering costs to meet market electricity prices, and advocating for financial assistance. Key efforts include developing a regional commitment to a pipeline of projects to develop economies of scale and attract more interest from developers; ensuring wind power will be sold under long-term contracts, and working with regulators to change market entry rules to reduce risks and financing costs; identifying port facilities and other locations for assembly and construction staging sites; assessing the availability of interconnection points; and adopting local zoning or other means to streamline and support these projects.



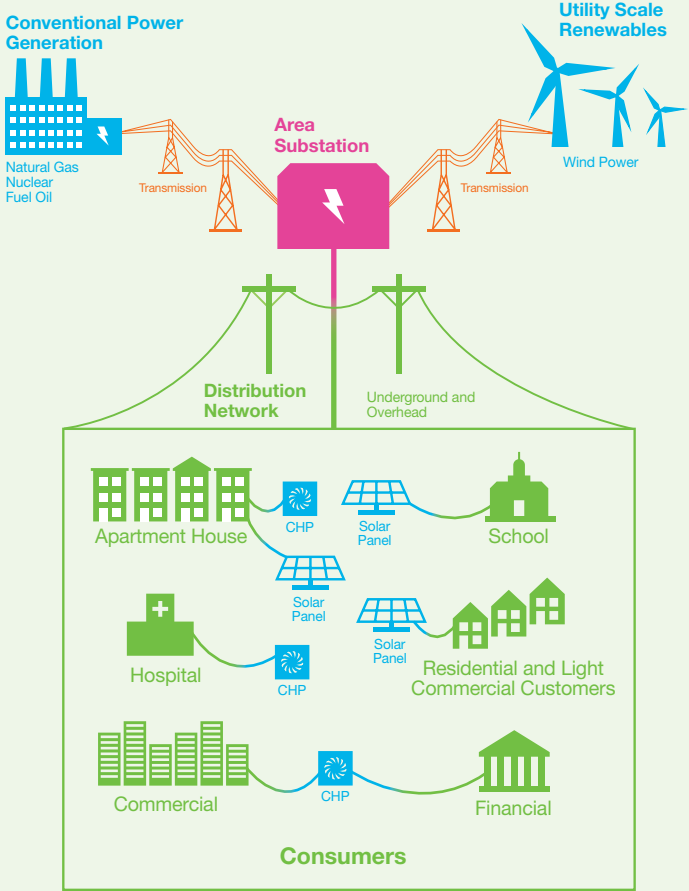
Electricity Delivery System

The bulk of New York City’s power comes from large conventional power plants running on natural gas, nuclear power, or fuel oil. However to achieve 80 x 50 the City will need to increase its reliance on utility scale renewable power sources.

Power produced in large, centralized plants is transmitted through high voltage transmission lines. To ensure smooth integration of a growing share of renewable energy, the transmission system must be maintained and enhanced. Substations convert electricity to lower voltage before distribution to consumers.

Distributed generation, such as from combined heat and power (CHP) or solar installations, also plays an important role in reducing GHG emissions. These are located closer to customers thereby reducing transmission and distribution losses.

Finally, by increasing the use of smart grid technologies, such as automated demand response and smart meters, consumers can reduce both peak and total demand.





North River Wastewater Treatment Plant Combined Heat and Power Facility

DECENTRALIZED ENERGY IN LONDON

Decentralized Energy (DE) is a core component of the London’s Climate Change Mitigation and Energy Strategy to reduce carbon emissions. Like New York City, London is committed to reducing emissions by 80 percent by 2050. London defines decentralized energy as the local generation of electricity and the recovery of surplus heat for such purposes as building space heating and domestic hot water production.

London’s goal is to use DE to develop a more sustainable, secure, and cost-effective energy supply, with a target of delivering a quarter of London’s energy through DE by 2025. This commitment emerged from a decentralized energy master-planning exercise across London. The target will be met through a combination of energy-efficiency measures, micro-generation renewable energy systems, and the use of CHP linked to heat networks. Heat generated as a by-product of electricity generation will be pumped into buildings, either as hot water or steam. Biomass is also a potential energy source.

D. Adopt smart grid technologies and reduce transmission bottlenecks

Bottlenecks in the transmission system from energy generated in western and northern New York to the east and south to the lower Hudson Valley and New York City restrict the ability of the city to rely on renewable energy generated in other parts of the state. The City will work with its neighbors and State agencies to develop solutions to transmission bottlenecks through transmission modernization, new facilities, and smart transmission technology.

Smart grid technologies can also enable greater integration of distributed generation technologies and allows consumers to better manage consumption, helping to reduce both peak and total energy loads. The City supports the development of a comprehensive strategy to deploy smart grid technologies. This is consistent with the New York State Public Service Commission’s efforts to develop a new vision for the region’s power grid.

E. Expand decentralized power production

Decentralized and district-scale clean energy also have a role to play in meeting our 80 x 50 goal. On-site power generation across a network of decentralized systems, such as CHP systems and community-shared solar photovoltaic (PV) systems can reduce losses associated with transmission and distribution, increase efficiency, and enable a more resilient power system. Through One City: Built to Last, the City committed to supporting community-shared solar PV projects. These installations would use net-metering to bring solar power to new neighborhoods and allow homes and businesses to feed unused energy back into the grid.

Additionally, the City will leverage direct capital investment, power purchase agreements, and emergent solar deployment models to attain the most cost-effective and comprehensive clean energy strategy. As the market develops and available incentives for solar and clean energy shift, the City will adjust its approach to assess and pursue the most desirable pathways to increasing cost-effective low carbon energy throughout its operations.

F. Achieve net-zero energy at in-city wastewater treatment plants by 2050

Emissions from the water and wastewater system are responsible for nearly 20 percent of City government emissions and wastewater treatment accounts for 90 percent of that. The City will work to dramatically reduce these emissions with an aim of net-zero energy consumption at in-city wastewater treatment plants by 2050. Improving the efficiency of wastewater treatment, increasing the production of biogas, and capturing and beneficially using all biogas as a renewable energy source will significantly reduce carbon emissions associated with flaring, as well as offset emissions from energy generated from traditional fossil-fuel sources. Over the next decade, the City will achieve further reductions in energy consumption across all of the wastewater treatment plants by decreasing demand, increasing on-site power generation, recovering and reusing biogas, and undertaking co-digestion of organic wastes.



Cogeneration at In-City Wastewater Treatment Plants

North River

Design is underway to install a 12 megawatt cogeneration system at the North River Wastewater Treatment Plant. This CHP system will use digester gas, produced on site, as well as supplemental natural gas to generate electricity that will meet the plant’s base electrical demand, while recovering enough heat for the plant’s heating needs. This project will offset the use of 90 percent of utility electricity and over 1.7 million gallons of fuel oil and double the amount of digester gas used. This will improve air quality, reduce carbon emissions by approximately 10,000 metric tons of CO<sub>2</sub>e per year, and reduce energy bills.

CHP is a good fit for a facility such as the North River Wastewater Treatment Plant because it operates 24 hours a day and continuously needs electricity and heat. Wastewater treatment plants produce digester gas as part of the treatment process, which is made up of 60 percent methane, and can be used as a renewable energy source for the CHP system. Furthermore, CHP systems offer electric reliability and resiliency benefits by being able to produce energy on-site and “self-power” in the event of an electrical grid disruption.

Wards Island

Wards Island Wastewater Treatment Plant was built in 1937. It is the second largest of the 14 WWTPs located across the city. The plant serves a population of over one million people and a drainage area of over 12,000 acres, which includes the western portion of the Bronx and the Upper East Side of Manhattan. The WWTP has an average load of just under 12 MW and consumes approximately 100 million kilowatt hours (kWh) a year—the equivalent of approximately 12,450 homes. In addition, in order to meet the WWTP’s thermal demand, it consumes about 30,000 million British Thermal Units (MMBTU) of fuel oil each year and 168,000 MMBTU of digester gas—combined, the equivalent of heating approximately 1,650 homes.

Because of the relatively constant power and thermal requirements necessary to operate the WWTP, and the need for a new heating system and backup power,

cogeneration offers a tremendous opportunity to meet all of these needs with a single solution. It is estimated that a cogeneration system fueled by digester and natural gas will reduce GHG emissions by almost 37,000 metric tons per year. This reduction represents a 68 percent reduction in the plant’s carbon footprint—the equivalent of removing nearly 7,600 passenger vehicles from the road. Using digester gas produced at the WWTP as the primary fuel source and recapturing the waste heat as part of the cogeneration system is estimated to save \$3.4 million per year.

Hunts Point

Built in 1952, the Hunts Point Wastewater Treatment Plant is located in a section of the Bronx adjacent to the Hunts Point Terminal Produce Market Center—the largest food distribution system in the world. The plant services a population of over 680,000 people across 16,660 acres in the eastern section of the Bronx. It has an average load of eight MW and consumes approximately 70 million kWh per year—the equivalent of powering approximately 8,700 homes. For its heating needs, Hunts Point uses approximately 169,300 MMBTUs of fuel oil, natural gas, and digester gas—the equivalent of heating approximately 1,400 homes a year.

The replacement of the plant’s digesters along with possible future cogeneration would produce over 70,000 MWh per year (enough to power 8,700 homes), yield cost savings of \$3 million per year, and reduce carbon emissions by 11,400 metric tons, per year – the equivalent of removing 2,300 passenger cars from the road. By providing digester capacity to accept high strength feedstocks (e.g., food waste), additional higher quality digester gas would be produced. This could allow the WWTP to meet all of its energy needs and potentially become net energy-positive, allowing excess energy to be supplied back to the Food Distribution Center. This would offset the need to purchase fossil fuel-generated energy, divert waste from landfills, and reduce long-haul trucking, thereby multiplying the environmental benefits associated with reducing GHG and criteria pollutant emissions.



Initiative 2

Develop a mode shift action plan to reduce greenhouse gas emissions from the transportation sector

New Yorkers produce fewer greenhouse gas emissions to get around than citizens of most other cities in the country, thanks to our 24/7 subway system, citywide bus network, and dense, walkable communities. But we can do more.

Despite widespread mass transit use, New York City’s transportation sector, which includes private vehicles, freight, and mass transit (subway, commuter rail, and bus), makes up 23 percent of the city’s total greenhouse gas emissions. Fossil fuels burned in passenger cars contribute 16 percent of the citywide total, while those in trucks are responsible for an additional four percent. On-road vehicles also emit particulates and other air pollutants such as nitrogen and sulfur oxides (NO<sub>x</sub> and SO<sub>x</sub>), which contribute to asthma rates and premature mortality.

The transportation investments detailed under Vision 1 of this plan are the first key steps to diversified low-carbon transportation options for New Yorkers. Select Bus Service, the expansion of bike networks and bike share, safer streets for walking and biking, expanded ferry service, and upgrades to the subway system all reduce the need for getting around by car and will have regional impacts on greenhouse gas as well as air pollutant emissions. These benefits will help create cleaner communities and reduce commute times, thereby enhancing livable neighborhoods and providing a better quality of life for all New Yorkers.

Beyond the currently planned investments in better buses, an expanded bike network, safer streets, and improved transit, the Department of Transportation (DOT), in partnership with the Mayor’s Office of Sustainability (MOS), will develop a long-term plan for further reductions in emissions from the cars and trucks in New York City to achieve the necessary GHG reductions on a trajectory to 80 x 50. This will include consideration of additional policies and investments that emphasize low-carbon and multi-modal options such as walking and biking; reduced dependency on private fossil fuel vehicles; greater use of low- or zero-emission vehicles; improved mass transit; and the continued development of zoning and parking policies to further these goals. The City is already working to encourage the use of alternative vehicles. For example, since the end of 2014, the electrical systems of all new parking garages and open parking lots, as well as those undergoing increases in electric service, must be capable of supporting electric vehicle charging stations. Other alternative vehicle programs are discussed under the air quality goal of this plan.



Initiative 3

Supporting Initiatives

A. Reduce carbon emissions from the City government’s vehicle fleet

As technologies such as electric vehicles, biodiesel, compressed natural gas, gas-electric hybrid, and hydrogen-powered vehicles come to market, they will contribute to the solution. As discussed in more detail in the air quality section of this plan, the City will continue to pursue clean vehicle technology adoption pilots and strategies.

Proper fuel management is paramount to reducing consumption and efficient operations, and the City will introduce new fuel use reporting protocols and anti-idling technologies and enforcement to control consumption.

For vehicles used for City government functions, the City’s current vehicle fleet-share program with Zipcar will be expanded to at least 1,000 vehicles by 2017, up from its current 600 vehicles across five City agencies.

Initiative 3

Build upon Zero Waste to reduce greenhouse gas emissions from the solid waste sector

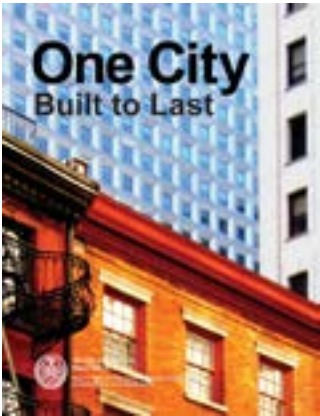
Every day, New Yorkers generate 18,500 tons of waste. Only a portion of this waste is recycled, composted, or converted to energy. Most of it is sent by truck to landfills, where it releases methane as it decomposes. Together, this adds up to over two million tons of CO<sub>2</sub>e a year, or four percent of the city’s total.

Emissions have decreased 22 percent in the solid waste sector since 2005, as New Yorkers generate less waste and some of the waste transport has shifted to rail and barge. However, to reach our 80 x 50 goal, additional GHG emissions reductions must be attained. In the near term, the City will focus on waste reduction, scaling up the processing of organic waste, improving recycling, addressing commercial waste, and identifying the waste destinations that result in the smallest emissions footprint. Achieving 80 x 50 will require changing behaviors through education and incentives, strengthening regulations, investing in new infrastructure, and working closely with the communities and industries that generate waste.

As detailed in the following section, the City is adopting a Zero Waste goal. The various initiatives required to meet this ambitious goal and divert all waste from landfills will be a key component of our 2025 GHG emissions reduction action plan. As with the other sectors, the 2025 action plan will aim to put the city on a trajectory toward 80 x 50 and will identify further initiatives to close the remaining gap.



Methane capture at Fresh Kills Landfill



One City: Built to Last report cover

Initiative 4

Continue implementation of *One City: Built to Last* to reduce greenhouse gas emissions from buildings by 30 percent by 2025, and chart a long-term path away from fossil fuels

Our effort to achieve 80 x 50 began through One City: Built to Last. This comprehensive ten-year action plan aims to retrofit public and private buildings to reduce GHG emissions, generate jobs and business growth in construction and energy services, and provide operational savings to owners and tenants. One City: Built to Last has established an interim target to reduce emissions from energy used in buildings by 30 percent by 2025 from a 2005 baseline and reduce emissions by 35 percent in City-owned buildings to maintain a trajectory toward the 80 x 50 goal. In 2015, the City convened the Buildings Technical Working Group, with leaders in real estate, architecture, engineering, labor, affordable housing, and environmental advocacy to help develop the indicators, interim metrics, high performance construction standards, and potential mandates for existing buildings. The goals of the Buildings Technical Working Group are closely linked to the City’s affordable housing plan, Housing New York, as utility costs continue to rise and disproportionately impact low-income residents.

The initiatives mentioned above for the power, transportation, and solid waste sectors follow the One City: Built to Last model in determining interim targets and developing long-term GHG reduction policies to ensure 80 x 50. For the buildings sector, the City will retrofit every City-owned property with significant energy use and will install 100 MW of renewable power by 2025. For privately-owned buildings, the City will create a thriving market for energy efficiency and renewable energy investments and services, establish world class green building and energy codes, and make New York City a global hub for clean energy technology and innovation. In 2015, the City will launch the Energy and Water Retrofit Accelerator, which will offer technical assistance and education programs to help building owners make energy- and water-saving retrofits. Coupled with access to innovative financing and incentives, these programs will generate demand for private sector energy efficiency and renewable energy services. The City will also launch a specific initiative for small and midsize buildings, with an initial focus on neighborhoods within Con Edison’s Brooklyn/Queens Demand Management Zone, which includes Brownsville, East New York, Cypress Hills, and Ozone Park. The City will work to accelerate customer-side solutions, including demand reduction at scale, energy storage, and distributed generation, to help ensure the reliability of the electricity network and realize energy use reductions in neighborhoods facing disproportionate affordability pressures. The City will also bring access to energy use information to mid-size buildings by requiring energy benchmarking and audits to identify the greatest opportunities for conservation and savings.

To serve the specific needs of the affordable housing sector, the Department of Housing Preservation and Development, in conjunction with the Housing

Development Corporation, will implement the Green Housing Preservation Program to integrate energy audits and conservation measures into its moderate rehabilitation projects. NYCHA will implement a series of Energy Performance Contracts projected to total over \$100 million, representing the largest energy savings program for any public housing authority in the country. The first in the series, expected to total \$40 to \$60 million, will target inefficient lighting and boilers within the Housing Authority portfolio.

A number of One City: Built to Last initiatives are already underway, including the NYC Carbon Challenge—a voluntary carbon reduction program among universities, hospitals, commercial offices, and multi-family buildings to reduce emissions by 30 percent or more in 10 years. The City is also expanding educational opportunities to improve building operations and maintenance. The City continues to implement data-driven GreeNYC public education campaigns to foster energy-consumption reduction for residents. Through these initiatives, the City will continue to work with commercial building owners and tenants to raise awareness of tenants’ energy use and encourage investments in energy-efficient retrofits. Low-cost measures such as using sensors and smart controls to turn off lights in commercial and retail spaces at night will reduce energy waste, commensurate GHG emissions, and light pollution.

The City has taken steps to expand renewable power on buildings. City government is leading by example with a target to install 100 megawatts of renewable energy on City-owned buildings by 2025. Through the Department of Citywide Administrative Services Energy Management, twenty-four schools across the five boroughs are already slated for solar photovoltaic (PV) installations. The City is actively surveying over 80 City properties for rooftop solar PV potential, with another 50 assessments already identified for the coming years. Feasibility studies will also target innovative, non-roof-mounted solutions such as parking canopies; ground mounted and other building deployments; development of resilient solar PV resources through incorporation of energy storage technologies; and piloting wind, geothermal, and other clean-energy resources across City properties. In the private sector, the City has expanded the NYC Solar Partnership to facilitate solar PV adoption on private sector buildings and reach previously underserved areas through innovations in community-shared solar. The goal is to reach 250 megawatts of production capacity by 2025.







## Zero Waste

**Goal: New York City will send zero waste to landfills by 2030**

### Overview

Every week, the average New Yorker throws out nearly 15 pounds of waste at home and another nine pounds of waste at work and in commercial establishments. Altogether, in New York City this adds up to more than three million tons of residential waste and three million tons of commercial waste generated per year. To manage all of this waste, the City has developed a complex system to collect, transport, and dispose of waste. It is a system with an enormous impact on our neighborhoods, our environment, and our economy.

The things New Yorkers throw away contain potentially valuable resources. For 25 years, the City has offered curbside recycling programs to divert certain materials, including paper, metal, plastic, and glass, from the refuse stream. However, these programs divert only 15.4 percent of the waste collected by City workers.

**But we are moving in the right direction.** In 2013, the City began a pilot curbside collection program for organic waste, such as food scraps, yard waste, and soiled paper. This program will continue to expand to serve a total of 133,000 households in all five boroughs. In addition, many New Yorkers already choose to donate or sell used clothing, furniture, and other household goods. These efforts reflect a changing focus—how we export and dispose of waste has become an opportunity for us to build industries and develop a local economy around materials that can be recovered.

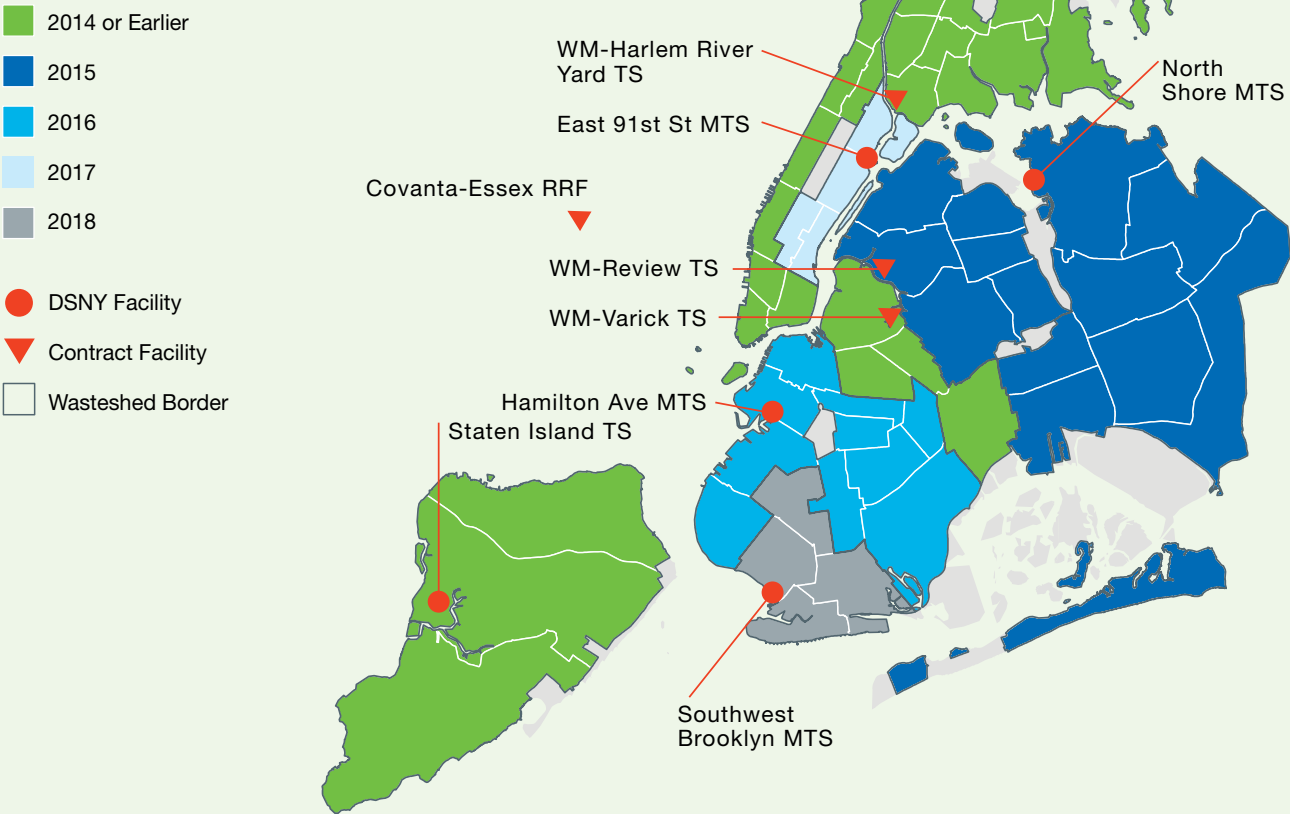
**Building on these achievements, the City will become a worldwide leader in solid waste management by achieving a goal of Zero Waste by 2030.** We will eliminate the need to send our waste to out-of-state landfills, thus minimizing the overall environmental impact of our trash. To measure our progress toward this goal, we will track the extent of our waste reduction and how much we divert waste away from landfills. We have set an ambitious target of reducing the amount of waste disposed of by 90 percent by 2030 from a 2005 baseline—and we are already taking steps to get there. For example, the decision to ban expanded polystyrene foam was a positive step in this direction.

This report charts the full path to Zero Waste by enumerating several bold initiatives, including the expansion of the NYC Organics curbside collection and local drop-off site programs to serve all New Yorkers by the end of 2018. It also aims to implement single-stream recycling collection for metal, glass, plastic, and paper products by 2020.

### INDICATORS + TARGETS

- ✔ Reduce volume of DSNY-collected refuse (excluding material collected for reuse/recycling) by 90 percent relative to 2005 baseline of ~3.6M tons
- ✔ Increase curbside and containerized diversion from a rate of 15.4 percent in 2014
- ✔ Increase citywide diversion rate (including all streams of waste: residential, commercial, construction and demolition, and fill) from current state of ~52 percent

### Solid Waste Management Plan Implementation



### In the 1970s and '80s, New York City came to symbolize the modern “garbage crisis.”

In 1973, the National League of Cities and the U.S. Conference of Mayors issued a report documenting the skyrocketing volume of solid waste and the sharp decline in available urban land for disposal sites. The notorious Fresh Kills Landfill in Staten Island became the largest in the country, and the City’s incinerators burned garbage without the environmental controls of today’s energy-from-waste facilities. With the gradual closure of Fresh Kills beginning in the 1990s, low-income and minority neighborhoods in the South Bronx, northern Brooklyn, and southeast Queens increasingly bore the burden of the City’s waste processing facilities.

Over time, the City improved waste management operations, closing its incinerators and landfills and, in 1989, creating the nation’s largest mandatory recycling program. The 2006 adoption of the City’s comprehensive Solid Waste Management Plan (SWMP) was a landmark achievement for long-term waste planning and environmental justice. The plan was championed by grassroots environmental justice organizations, who long advocated for the City to switch from a truck-based waste export system that overburdened low-income communities to an equitable network of marine and rail transfer stations located in all five boroughs.

In 2015, the City opened the North Shore Marine Transfer Station in College Point, the first of four converted marine transfer stations that will open under the SWMP. At the North Shore facility, Department of Sanitation (DSNY) employees transfer waste from collection trucks into sealed shipping containers to be shipped out by barge. Once it operates at full capacity, that facility will shift nearly 1,000 tons of waste out of the overburdened neighborhood of Jamaica, Queens.



Initiative 1

Expand the New York City Organics program to serve all New Yorkers by the end of 2018



NYC potting soil



Staten Island compost facility

Food scraps, yard waste, and soiled paper not suitable for recycling make up 31 percent of the city’s residential waste stream. In landfills, this organic material decomposes, releasing methane gas, a greenhouse gas six times more potent than carbon dioxide. However, this material can be composted and converted into a nutrient-rich natural fertilizer that can replenish our city’s soil, strengthen our parks and street trees, and enrich community gardens. Energy-rich food waste can also be processed through anaerobic digestion, wherein microbes break down complex fats and carbohydrates, releasing methane gas that can be captured and used as an alternative to natural gas.

In 1993, the City created the NYC Compost Project to educate New Yorkers about the benefits of composting their food and yard waste, as well as foster community-scale composting initiatives in all five boroughs. In 2013, DSNY began a pilot program to offer curbside organic-waste collection service to residents of Westerleigh, Staten Island, to test the feasibility of collecting the material directly from residents’ homes. Today, the program serves more than 100,000 households in all five boroughs, covering 240,000 New Yorkers. In 2015, the program will expand once again to an additional 33,000 households with nearly 100,000 residents.

**To meet our goal of Zero Waste, we will expand the NYC Organics program by increasing curbside organics collection and convenient local drop-off sites.** To do this, DSNY will complete the evaluation of the curbside organics collection pilot required by Local Law 77 of 2013. In 2015, DSNY will submit a report to the Mayor and City Council, detailing the results of the pilot and the Department’s plans to expand curbside collection service.

Supporting Initiatives

A. Develop additional organics sorting and processing capacity in New York City and the region

Currently, material collected on Staten Island through the City’s curbside organics collection pilot is delivered to the City-owned composting facility on the site of the Fresh Kills Landfill. There, workers sort out non-compostable contaminants such as plastic bags, and pile the material into long piles called windrows where organisms break down the organic waste into a nutrient-rich soil-like product. Material collected in the other boroughs is transported to compost facilities in upstate New York and Connecticut. However, these facilities don’t have the capacity to take all the waste we generate.



To meet the growing quantities of source-separated organic waste collected through the NYC Organics program and other initiatives, the City will work with local non-profit organizations and private-sector partners to develop additional capacity for sorting and processing organic waste.

In addition, we will expand and upgrade the Staten Island Compost Facility and explore additional sites for developing City-owned compost facilities in the other four boroughs.

B. Process 250 tons of food waste per day at City WWTPs and assess long-term feasibility of scaling up processing of organic food waste

In 2013, the City launched a pilot program at an existing WWTP to process food waste in anaerobic digesters, boosting the production of renewable biogas on-site. DSNY and DEP will expand that pilot to process up to 250 tons of organic waste per day over a three-year demonstration period. DEP and National Grid will construct gas-processing infrastructure to feed the high-quality renewable natural gas into the surrounding grid to heat homes and businesses.

If the demonstration project is successful, the WWTP has the capacity to treat up to 500 tons per day of organic waste – about eight percent of the city’s total food waste (i.e., residential and commercial combined). This scale is unprecedented anywhere in the country and has the potential to produce enough energy to heat 5,200 homes and reduce annual greenhouse gas emissions by 90,000 tons. Together, DSNY and DEP will assess the long-term feasibility of scaling up the processing of organic food waste through anaerobic digestion. The City will also explore options to beneficially use biosolids resulting from the processing of organic waste at WWTPs.

C. Expand community composting opportunities in all five boroughs

Long before the City began curbside organics collection, community groups such as the Lower East Side Ecology Center and Build It Green! NYC offered local residents the opportunity to drop off food scraps for composting. Although community composting diverts only a small amount of organic waste compared to curbside collection, it plays a big role in engaging and educating New Yorkers about the importance of composting. It raises awareness of what compost is and what benefits it provides through both outreach and education, and how to use it to grow food and care for green spaces in New York City neighborhoods. Making and using compost locally demonstrates to New Yorkers firsthand that apple cores and eggshells are not garbage, but rather useful resources. Today, New York City has 225 community composting sites, and we will work to expand this number by establishing new sites in neighborhoods across the five boroughs.





Initiative 2

Enhance the City’s curbside recycling program by offering single-stream recycling by 2020

Mixed paper, magazines, newspapers, and cardboard make up 18 percent of the City’s residential waste stream. Metal, glass, and all rigid plastics make up another 14 percent. Almost all of the products collected through the traditional green-bin and blue-bin curbside recycling programs can be cleaned and remade into new products. Paper collected in Manhattan, for example, travels by barge to a plant on Staten Island where it is made into pizza boxes and other cardboard products. However, last year, New Yorkers recycled only 42 percent of these materials.

**To achieve our goal of Zero Waste, we will make it easier for New Yorkers to recycle and expand our recycling education and outreach.**

When the City began offering curbside recycling collection in 1989, we collected newspapers and cardboard separate from bottles and cans. Today, the two-bin collections continue, but advances in sorting and recycling technology have made it easier to separate comingled material into high-value, single-commodity streams. Most other large cities in the U.S. have already combined their recycling streams into one, and these cities have seen improvements in recycling rates. In New York City, we expect that offering single-stream recycling will increase diversion rates by as much as 20 percent, up from 16 percent. Single-stream recycling means not only fewer recycling bins in the home, but also fewer trucks to collect the material, reducing neighborhood truck traffic and air pollution. We will work in partnership with our recycling vendors to develop a plan to convert all curbside recycling collections from dual-stream to single-stream in the next five years.

Supporting Initiative

A. Create and expand markets for recycled materials

Separating and collecting recyclable materials is a huge first step toward reaping the environmental and economic benefits of recycling. However, many of the products we buy do not contain recyclable materials, and markets for recycled materials remain poorly defined. We are working with trade associations, industry groups, waste management companies, and some of the world’s largest consumer goods manufacturers and retailers to identify barriers to increasing recycled content of new products and to identify product designs that make it even easier to recycle. Through these partnerships, we will push an aggressive agenda, including everything from clear, easy-to-understand recycling instructions on packaging to products made from 100 percent post-consumer recycled material. **Through these steps, New York City will become a global leader in the movement to develop a “circular economy” where resources are used again and again, rather than mined from the earth and dumped into landfills.**



Waste sorting at South Brooklyn Marine Terminal





Initiative 3

Reduce the use of plastic bags and other non-compostable waste

In January 2015, the City announced that it would move forward with a ban on all expanded polystyrene foam food-service containers and packing peanuts after a thorough market analysis determined that recycling markets do not exist for those products. Expanded polystyrene foam is a lightweight material that often contaminates the organic material collected from homes and schools. It is a major source of neighborhood litter—the City currently collects more than 28,000 tons of expanded polystyrene foam per year. The ban will encourage residents and businesses to switch to reusable, recyclable, or compostable alternative products. We will continue to identify hard-to-recycle products in the City’s waste stream and develop programs to reduce their use and encourage more sustainable alternatives.

Single-use plastic bags make up 2.3 percent of the City’s waste and cost the City nearly \$10 million per year to dispose of in landfills. They are a major component of street litter and can clog storm drains, jam the machinery at the City’s recycling sorting facility, and end up in New York Harbor. Even single-use paper bags, which are recyclable in the paper recycling stream, are only recycled at a rate of five percent, and are often made from virgin trees and not recycled paper. Cities such as San Francisco, Portland, and Los Angeles have already banned the use of plastic bags and implemented fees for the purchase of other types of bags. Other cities, including Washington, D.C., have instituted a flat fee for all single-use bags. Because so many viable alternatives to plastic bags exist—including reusable, compostable, and paper bags—we will work with the City Council to reduce the overall impact of these products on our local environment.

Initiative 4

Give every New Yorker the opportunity to recycle and reduce waste, including at NYCHA housing

Today, recycling diversion rates vary widely from neighborhood to neighborhood. Older, denser residential neighborhoods often have buildings that lack adequate space for recycling bins. In NYCHA developments, small and inconvenient recycling bins have gone unused for much of the last decade. This spring, NYCHA has begun to tackle this challenge head-on, so as to allow residents the opportunity to recycle like every other New Yorker by constructing new recycling centers at all NYCHA developments. DSNY and GrowNYC will work with NYCHA to train residents, community leaders, and staff on recycling and waste reduction practices. Through partnerships with private and non-profit organizations, NYCHA will continue to support improvements in recycling rates as part of a comprehensive waste management strategy.

In addition to working with NYCHA developments, we will expand outreach to



Commuter composting at a subway station in Long Island City, Queens



low-income and immigrant communities with the goal of doubling recycling diversion rates in these communities over the next five years. We will translate recycling mailers and pamphlets into the City’s eight most commonly spoken languages and work with local community organizations, block associations, and community-garden groups to give people the tools they need to reduce waste and recycle more.

Initiative 5

Make all schools Zero Waste Schools

**New York City schools are educating our next generation of recyclers.** There is a tremendous opportunity to reduce landfill waste from schools, which generate more than 40,000 tons of refuse per year. Setting up the infrastructure in the schools, as well as teaching the City’s 1.1 million students about proper recycling practices, can also help improve waste reduction reuse and recycling, and instill sustainable practices that last a lifetime.

The Departments of Education (DOE) and DSNY will collaborate to launch the first 100 Zero Waste Schools, with the ambitious goal of diverting all recyclable and compostable waste from those schools within five years. Through the collaboration of students, parents, teachers, principals, custodians, and cafeteria staff, these schools will become models for others and advance a culture of recycling and sustainability throughout the school system.



PS 32 Samuel Mills Sprole School  
2014 Golden Apple Award winners





Initiative 6

Expand opportunities to reuse and recycle textiles and electronic waste

Used clothing and textiles can be readily reused. Non-profits such as Goodwill and the Salvation Army collect, clean, and distribute used clothing to those in need. The City’s re-fashionNYC program, operated in partnership with Housing Works, offers in-building collection for apartment buildings with 10 or more units and currently serves more than 100,000 households in 553 apartment buildings and complexes. Even with these readily available reuse and recycling options, used clothing and textiles still make up six percent of the city’s waste. **We will continue to grow and develop the City’s non-profit reuse sector,** connecting potential donors with organizations that reuse or resell material to support the arts, public health, and other causes. We will expand the re-fashionNYC program to serve even more New Yorkers.



Clothing carts from re-fashionNYC

Although it contributes less than one percent of the total waste stream, electronic waste contains many toxic materials, including mercury, cadmium, lead, and other heavy metals. Recycling electronic waste not only keeps these toxins from polluting the air, soil, and water, it also reduces energy and water use associated with manufacturing new materials. In January 2015, a New York State law banning the disposal of electronic waste took effect, barring the City from collecting these materials as refuse. New Yorkers now have many convenient options for recycling their electronic waste, including drop-off programs at more than 95 retailers citywide.

The City has also created the e-cycleNYC program, which offers room cleanouts, storage bins, and recycling events to apartment buildings with 10 or more units at no cost to residents. Since the program began in 2013, more than 4,000 buildings have signed up; we will continue to reach out to property owners, superintendents, and cooperative boards to expand the program. In 2015, the City will double the number of Solvents, Automotive, Flammables, and Electronics (SAFE) disposal events held in each borough to give residents an opportunity to drop off electronics and other household hazardous waste, including chemicals and prescription drugs. The City will explore opportunities to partner with other organizations to collect and recycle electronic waste from residents who may be unable to bring it to a drop-off location.



Initiative 7

Develop an equitable blueprint for a Save-As-You-Throw program to reduce waste

The City anticipates spending more than \$350 million a year to dispose of waste in out-of-city landfills and energy-from-waste facilities. While the amount of waste we create has decreased steadily over the past decade, the costs of disposing and transporting that waste has increased, while space in landfills has decreased. However, New Yorkers are largely insulated from the growing cost of disposing of their waste, since transportation and disposal are funded through the City’s general fund. Volume-based incentives for residents and property owners can lead to reduced waste volumes and higher recycling rates, thereby reducing disposal costs and cutting back the environmental impacts of landfilling waste. Other cities, including San Jose and Seattle, have seen large decreases in waste generation and increases in recycling rates as a result of implementing use-based incentives for refuse. For example, in San Jose, recycling more than doubled in the three years after a user-fee program was implemented in the early 1990s. In New York City, implementing a Save-As-You-Throw program that would reward those who waste less and recycle more could reduce waste generation by as much as 30 percent. The program would represent the largest potential contribution toward our Zero Waste goal.

To evaluate this policy and develop a fair, equitable blueprint for waste reduction, the City will assemble a working group of representatives from the Administration, City Council, affordable housing advocates, tenant associations, property managers, environmental advocates, good-government groups, and many others. This group will be tasked with evaluating the range of options available to help New Yorkers save money as they reduce waste, and recommending solutions to address the mounting costs of disposing of and transporting waste.



## Initiative 8

### Reduce commercial waste disposal by 90 percent by 2030

New York City’s commercial establishments—offices, restaurants, hotels, shops, and manufacturers—create an estimated three million tons of waste per year, less than one-third of which is currently recycled. Waste and recyclables from these businesses are collected by private waste hauling companies. Through a combination of legislative reform, public-private partnerships and incentives, the City will aim to reduce commercial waste by 90 percent by 2030.

#### Supporting Initiatives

##### A. Conduct a comprehensive study of commercial waste collection zones

New York is unique in that it has a commercial waste collection system completely separate from the municipally controlled residential waste system. A fully privatized system drives down prices through competition, which is good for small businesses but can also result in additional trucks on the road. The City is taking steps to clean up the commercial fleet. For example, it recently enacted legislation that will hold commercial waste haulers to stricter emissions standards.

In recent years, cities such as Los Angeles and San Jose have established an exclusive commercial solid waste franchise system with exclusive hauler districts/zones. Proponents of this system believe this model empowers municipalities to achieve multiple environmental, economic, and labor-related policy goals by setting quality and cost-of-service terms in exchange for exclusive carter contracts. The impacts of drawing up commercial waste zones and bidding them out to an exclusive waste hauler, or haulers, would certainly be significant. To evaluate the feasibility and appropriateness of this course of action, the City will conduct a study to determine if there are substantial inefficiencies in the way waste is collected and if so, whether exclusive collection zones would reduce those inefficiencies and possibly create ancillary benefits such as improved recycling rates, working conditions, and wages.

##### B. Encourage periodic waste audits for large commercial buildings

Solid waste generation is unlike energy and water consumption in that it cannot be metered or easily measured. That said, the primary way for an entity to improve its sustainable operations and potentially lower the costs associated with waste management is by taking stock of its waste generation. Additionally, knowing what a business throws away is as important as knowing how much it disposes.

In just a few years, the City has begun to see energy reductions in large commercial buildings as a result of making energy auditing, and now retrofitting, a requirement. As a first step, the City will develop a voluntary audit program to track commercial waste generation trends. The City will also explore working with the City Council on a measure requiring large commercial buildings to periodically conduct waste audits and report their findings. These efforts represent a critical step in determining the waste generation characteristics of businesses, an area that historically has been short of reliable data.



##### C. Create a Zero Waste Challenge program for large commercial waste generators

New York City launched a voluntary commercial food-waste diversion program in 2013 with the support of more than 100 New York City restaurants. The participants committed to a 50-percent food-waste diversion goal, as well as ongoing reporting of their progress. Within the first six months of this public-private partnership, the Food Waste Challenge reduced organic waste citywide by 2,500 tons—the largest single source of food waste diversion at the time—demonstrating the potential impact of voluntary programs. Building on the success of the Food Waste Challenge, the City will create a Zero Waste Challenge program for large commercial waste generators.

##### D. Revise the commercial recycling rules to make recycling easier for businesses

Recycling is the law in New York City for residents and businesses alike. Existing commercial recycling regulations designate recyclable materials based on the business type. However, this presents a disconnect between what is required for New Yorkers at home versus their places of work or entertainment, thus creating confusion for businesses.

By 2016, working closely with the City Council, DSNY will initiate commercial recycling regulation and enforcement system reforms. By permitting single-stream recycling and holding commercial entities responsible for diverting the same materials residents are obliged to recycle, the City hopes to achieve behavioral step changes and increase diversion rates citywide.

##### E. Require all food service establishments to source-separate food waste

New York City’s commercial waste stream is comparable to its residential waste stream in terms of the share of food waste it’s comprised of. With organics constituting over one-third of the total waste stream, diverting this material for beneficial use—as a soil amendment through composting or as feedstock for clean, renewable energy through anaerobic digestion—is a major opportunity area. However, the lack of food-waste processing capacity in New York City and the region has presented a challenge for both businesses and haulers wishing to divert food waste.

In 2013, New York City Council passed a law requiring select large food waste generating businesses to separate their organic waste and ensure its diversion from landfills. This legislation has a phased approach to catalyze the expansion in industrial processing-capacity needed to make organics diversion viable long-term. In 2015, DSNY will begin identifying the first set of businesses that must source-separate their organic waste. As processing capacity in the region continues to grow, the City will require all food-service establishments and related businesses to separate their organic waste for composting.





# Air Quality

**Goal: New York City will have the best air quality among all large U.S. cities by 2030**

## Overview

New York City’s air is becoming progressively cleaner. Over the past several decades, actions taken at the federal, state, and local levels have dramatically improved air quality. New York City’s particulate matter (PM2.5) concentration has decreased more rapidly than in most other big U.S. cities, declining by about 25 percent between 2008 and 2013. As a result, the city’s air-quality ranking among major U.S. cities improved from seventh place as recently as 2008-2010 to fourth place in 2011-2013.

**Despite this progress, air pollution remains a leading environmental threat to the health of New Yorkers.** Levels of air pollution in New York City continue to cause serious health problems, contributing to a number of hospital admissions and deaths, mainly from heart and lung problems. It is estimated that particulate matter (PM2.5) contributes to more than 2,000 deaths and over 6,000 emergency visits and hospitalizations for cardiovascular and respiratory disease each year.

All neighborhoods are affected by these health impacts, but they disproportionately occur in high poverty communities and among vulnerable populations. The rate of emergency room visits due to PM2.5-attributable asthma is three times higher in the most disadvantaged neighborhoods compared to more affluent ones. The public health benefits of even modest improvements in air quality are substantial because everyone is exposed to air pollution.

**Our goal is for New York City to have the best air quality among all large U.S. cities.** We are committed to reducing disparities in ambient pollution level exposures within the city by 20 percent for PM2.5 and 50 percent for sulfur dioxide (SO<sub>2</sub>) by 2030 relative to 2013. Meeting this goal will require significant reductions in air pollutant emissions. We will need to implement local strategies, as well as continue working with state and federal partners to reduce emissions from upwind sources. In addition, New York City will need to outpace improvements in other cities to attain this goal.

**Improving our air quality is feasible and has been demonstrated in recent years.** Reducing the disparity in pollutant levels across the city is also attainable, as demonstrated by declining differences in community SO<sub>2</sub> concentrations. Between 2008 and 2013, the difference between the highest and lowest community district SO<sub>2</sub> concentrations declined by more than half while overall concentrations declined by 70 percent, mainly due to State efforts to reduce sulfur content in heating oil and the City’s efforts to phase out the use of heavy heating-fuel oil in buildings.

### INDICATORS + TARGETS

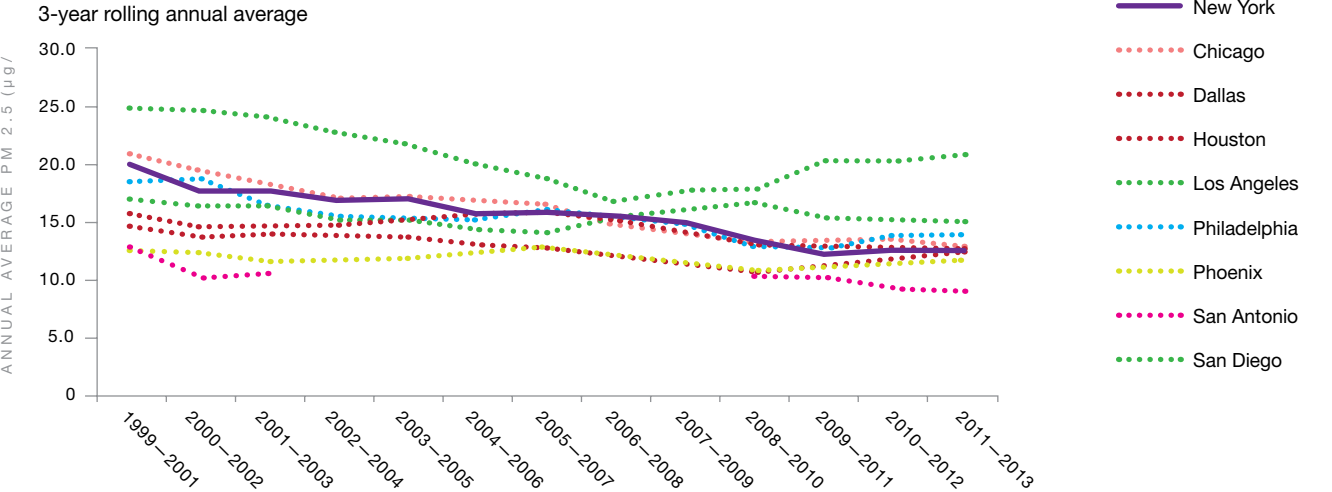
- ✔ Achieve best air-quality ranking among major U.S. cities by 2030 (PM2.5)
- ✔ Reduce disparity in SO<sub>2</sub> across city neighborhoods by 50 percent by 2030, relative to 2013
- ✔ Reduce disparity in PM2.5 across city neighborhoods by 20 percent by 2030, relative to 2013



There are many sources of air pollution, mainly derived from fuel combustion within and outside the city. Based on best estimates of current emissions, for PM2.5, 49 percent of emissions are from buildings, 24 percent from traffic, 19 percent from non-road mobile sources, and 7 percent from electric-power generation (one percent from other sources). For SO<sub>2</sub>, 61 percent of emissions are from buildings, five percent from vehicles, 14 percent from non-road mobile sources, 17 percent from electric power generation, and 3 percent from other sources.

This plan focuses on reducing local PM2.5 and SO<sub>2</sub> emissions. While they are not the only harmful pollutants, they are the two most important pollutants for public health that the City is able to substantially reduce through local emission controls.

## PM2.5 concentrations for New York City and other large cities (over one million residents)



Source: US EPA, Air Quality System

## Initiative 1

### Enforce the updated DEP Air Pollution Control Code

The recently updated DEP Air Pollution Control Code controls emissions from currently unregulated sources such as commercial charbroilers, wood boilers, refrigeration trucks, and mobile food trucks. Altogether, these unregulated sources account for 14 percent of local PM2.5 emissions.

Reducing emissions from commercial charbroiling is a cost-effective way to address a currently unregulated and significant pollution source. An analysis based on 2005-2007 data estimated that installing existing control technology could reduce charbroiler emissions in New York City by 85 percent and result in over 300 avoided deaths and 500 avoided emergency department visits and hospitalizations for cardiovascular and respiratory disease annually. The code also provides incentives to use clean technologies for auxiliary power units (APUs) for mobile food trucks and refrigeration trucks through registration-fee waivers and stricter controls on idling for vehicles without APUs.

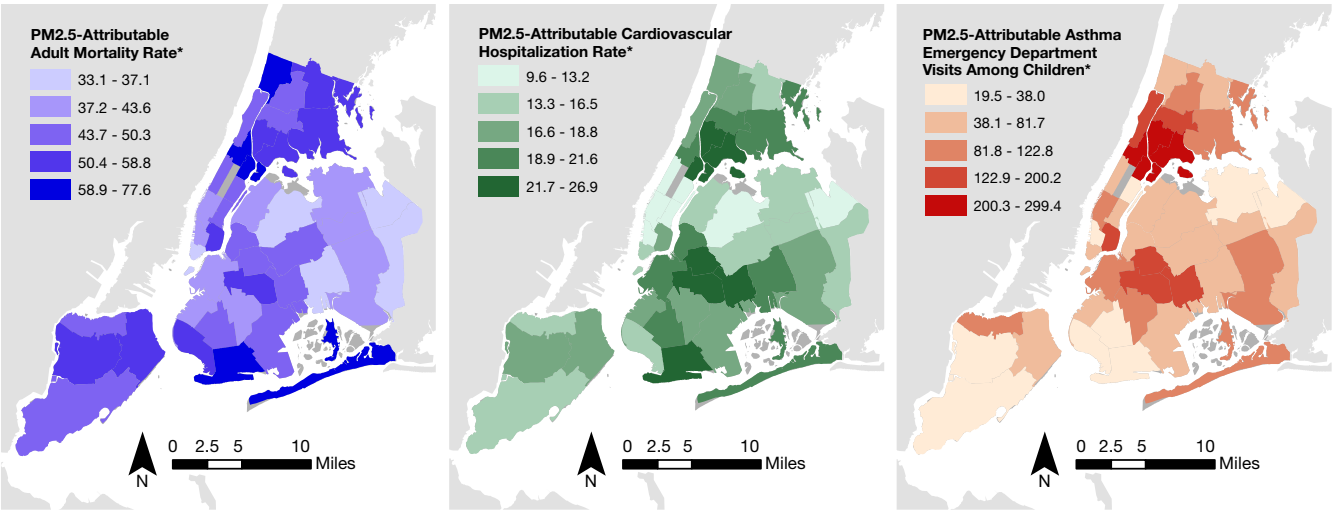
Initiative 2

Identify additional targeted air quality improvements through data analysis and community engagement

Since December 2008, the Department of Health and Mental Hygiene (DOHMH) has monitored criteria for air pollutants at street-level sites around the city through the New York City Community Air Survey. This survey has provided essential data to design sound policy and inform research.

Persuant to available funding, DOHMH will seek to build on this success by developing a community air quality “citizen-science” toolkit that will include how-to guides for accessing available data on emission sources, designing neighborhood air pollution surveys using new, low-cost technologies, and sharing data online. DOHMH also plans to expand its Environment and Health Data Portal to incorporate neighborhood-level sustainability indicators, create a neighborhood-level “Sustainability and Health” report, and develop an educational module on sustainability and health for outreach in public schools and CBOs. These efforts can provide valuable data on air pollution hot-spots and local emissions sources that may be used to inform future control measures beyond those proposed in this plan.

Mortality and morbidity from selected conditions due to PM2.5 in New York City



\* 2009-2011 Annual Average, Rate per 100,000 persons

DOHMH

Initiative 3

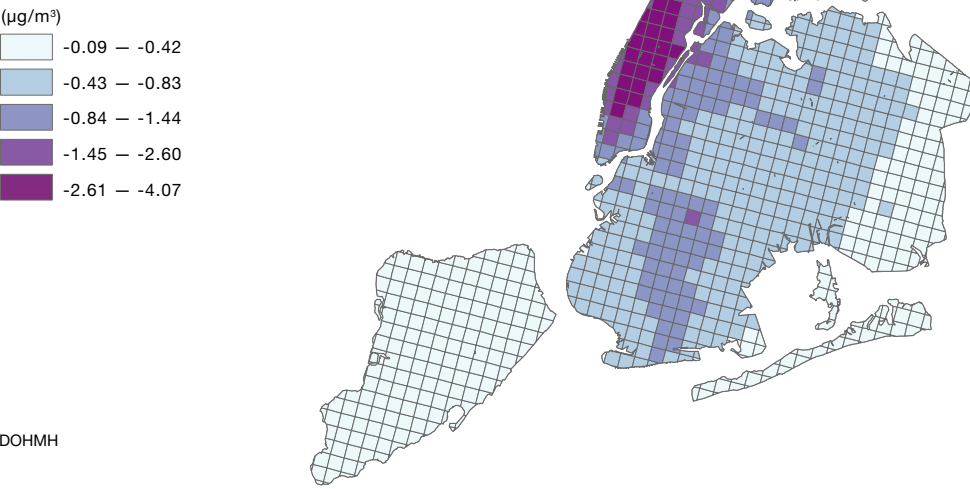
Accelerate conversions of residual heating oil boilers in buildings

At the beginning of 2012, there were about 5,300 boilers in the city that still fired #6 fuel oil, the heavy heating oil associated with the highest levels of air pollutant emissions. By July 2015, the City will no longer issue permits to use #6 fuel oil, so all boilers must switch to gas, #2 oil, or #4 oil. As a result of the City’s targeted outreach and enforcement efforts, approximately 90 percent of boilers on #6 have been converted.

Nonetheless, residual oil (#4) will continue to be used by several thousand devices as owners have until 2030 to switch from #4 oil to the less-polluting #2 oil, or gas. Complete phase out of heavy heating oil (#4 and #6) in New York City could prevent 80 deaths per year and avoid 200 hospitalizations and hospital emergency department visits for heart and lung disease. In addition, it is estimated that 39 percent of the boilers in buildings over 25,000 square feet that still use heavy oil are located in the highest poverty neighborhoods in the city.

We will therefore explore the feasibility of accelerating the phase out of #4 oil in boilers in advance of 2030. In addition, through the Retrofit Accelerator program, which, under the 80 x 50 goal, provides technical assistance, financing, and incentives for building owners to shift from the most polluting heating fuel to cleaner fuels, the City has the opportunity to both reduce GHG emissions and achieve considerable public health benefits by targeting buildings in specific high-poverty neighborhoods. The Mayor’s Office of Sustainability (MOS) will formalize a screening methodology to select projects with the highest co-benefits across greenhouse gases and air pollutants and to track air pollution benefits as buildings convert under the Retrofit Accelerator program.

Predicted reductions in PM2.5 concentrations due to heating oil programs



DOHMH





Initiative 4

Cut emissions from mobile sources

Supporting Initiatives

A. Reduce emissions from the City fleet

The City is currently on track to replace or retrofit 90 percent of its diesel on-road vehicles to meet 2007 emissions standards or better by 2017. The impact is significant—it is estimated that replacing or retrofitting a vehicle to 2007 standards reduces emissions by approximately 90 percent over the previous standard. The City will consider targeting the remaining 10 percent of its diesel on-road vehicles.

The City is also promoting the adoption of new technologies through a variety of innovative projects, including increasing electric vehicles in its fleet. This follows a legacy of leadership in technology development and adoption. For example, DSNY tested state-of-the-art technology and alternative fuels and helped pioneer the improvements in heavy-duty diesel emissions that are now taking place nationwide. At present, the City operates over 800 Electric Vehicle (EV) plug-in units of some type and plans to reach at least 1,000 EV units in operation by 2017. The City currently operates 203 EV chargers, which is the largest network in the state of New York. We plan to have at least 250 chargers in operation by 2017. By 2016, the City also plans to introduce fast-charging chargers and at least one solar carport, an EV charger that draws all its power from solar panels.

B. Reduce emissions from private truck fleets and for-hire vehicles

Currently, the City’s Hunts Point Clean Trucks Program offers rebates to trucks servicing the Hunts Point market for voluntary upgrades to cleaner vehicles or fuels, including diesel replacements. Rebates are offered for the costs of upgrading or retrofitting to a CNG or hybrid, and old “dirty” trucks are being scrapped to ensure they are not resold. As of March 2015, the Hunts Point Clean Trucks Program has funded diesel replacement for close to 450 trucks, reducing their particulate matter emissions by 97 percent. The City will consider replicating the Hunts Point Clean Trucks Program in other industrial areas, with a focus on environmental justice communities and including private waste haulers serving those communities.



For many years, New York City’s private for-hire transportation has operated on a two-tier system: the limited-quantity yellow taxi industry—known for regulated, metered fares, street hails, and uniform vehicles—and the uncapped for-hire vehicle (FHV) industry. In recent years, the FHV industry has grown tremendously, from 38,600 vehicles in 2011 to nearly 60,000 vehicles in 2015 (a 53 percent increase). Trip data from FHV’s shows that, among the biggest FHV bases, a large share of trips are taking place in the Manhattan core (around 72 percent). Between 2010 and 2014 average traffic speeds in Manhattan have declined significantly, down to 8.51 MPH in 2014 from 9.35 MPH in 2010 (a 9 percent decrease). The Taxi and Limousine Commission will evaluate the impacts of continued growth in the car service industries, including impacts on parking, traffic congestion, and air quality.

C. Reduce emissions from vehicle idling and toll crossing

Vehicle idling is a major source of pollution in New York City. According to the Environmental Defense Fund, air pollution from idling engines is a contributor to elevated levels of air pollutants, and people who live near heavily-trafficked roadways face significantly greater risks of suffering from asthma and heart diseases, among other conditions. Existing laws need to be enforced, and we will work with the City Council to explore new ways to address this serious problem.

Finally, the City will work with the MTA to expand the use of gateless tolling—a system that dramatically speeds up the process of toll payment—to reduce congestion and the attendant vehicle emissions at major bridge and tunnel crossings in New York City.



NYC Parks electric vehicle



INDICATOR + TARGET

✔ Increase number of tax lots remediated since beginning of 2014 to 750 by 2019

DEFINITION OF BROWNFIELD

A brownfield is a vacant or underutilized property whose redevelopment is impeded by the presence or perception of environmental contamination.



Brownfield development

Brownfields

**Goal: New York City will clean up contaminated land to address disproportionately high exposures in low-income communities and convert land to safe and beneficial use**

Overview

New York City has over 3,000 vacant commercial and industrial properties and more than 7,000 properties designated by the City as subject to mandatory environmental study and management. Perhaps as many as 40 percent of these properties are chronically vacant or underutilized contaminated land, commonly known as brownfield sites.

Comprehensive brownfield management has the potential to address many environmental, social, and economic problems in New York City. As our need for space grows, we must use our existing stock of land more effectively. Brownfield cleanup and redevelopment represents one of our best opportunities to engage communities and reclaim land for development in the city. It also offers an opportunity to simultaneously benefit the environment, improve the health of our neighborhoods, and attain more equitable and sustainable economic development.

We aim to clean up contaminated land to eliminate exposure to environmental toxins and alleviate social inequality caused by disproportionately high occurrences of brownfields in low-income neighborhoods.

This disproportionate impact of brownfields is endemic in cities across the U.S. These properties remain vacant or underutilized because prospective developers fear the risks of environmental liability and government enforcement, as well as construction delays and cost over-runs caused by unpredictable land pollution. Brownfields result in lost opportunities to create small businesses, new jobs, affordable housing, and healthy open space in areas where these opportunities are needed most. Oftentimes, their presence leads to a cycle of financial disinvestment and a downward economic and social spiral.

Brownfields can contain a wide variety of heavy metals, organic solvents, and other pollutants that remain a legacy of past industrial land uses and lax pollution management practices that predate modern standards for environmental protection. If left abandoned, these properties are a source of heightened public exposure to environmental toxins for our most disadvantaged citizens.

Until recently, no city in the U.S. operated its own regulatory brownfield cleanup program. Under PlaNYC 2007, New York City launched the nation’s first municipal



Brownfields

PROGRESS OF THE NYC VOLUNTARY CLEANUP PROGRAM

The NYC Voluntary Cleanup Program (NYC VCP) follows the New York State’s stringent cleanup standards and delivers the same high-quality cleanups. Projects enrolled in the NYC VCP receive liability protection against government environmental enforcement and the convenience of one program to address all government cleanup responsibilities. Since its launch in 2011, the NYC VCP has spurred an unprecedented period of land cleanup in NYC, with remediation of over 260 projects on over 475 tax lots completed or in process. These projects will produce safe land for over 23.5 million square feet of new building space, hundreds of small businesses, and over 4,500 permanent new jobs. Approximately 23 percent of these projects will also produce new units of affordable housing. The average vacancy of properties enrolled in the NYC VCP is over 11 years, and 57 percent are located in low- and moderate-income neighborhoods, where housing and economic growth are needed most.

brownfield cleanup program—the NYC Voluntary Cleanup Program (NYC VCP). In consultation with environmental and social-justice advocates, the City also established over thirty brownfield programs to promote social equality that now constitute our Land Cleanup and Revitalization Initiative (LCRI). LCRI is unique as it allows the City to manage all steps of the brownfield revitalization process. The City no longer has to rely on outside government agencies to achieve local environmental, social, and economic goals on brownfields.

Initiative 1

**Accelerate cleanup of brownfields to improve public safety and encourage private investment in new development on brownfield sites**

The City will continue our efforts to clean up brownfields by leveraging city and state brownfield programs. Over the next four years, we aim to clean up 750 properties through our remediation programs, including at least 375 in low- and moderate-income communities. This will enable \$14 billion in private investment and create 5,000 new units of affordable housing.



We will certify each of these remediated properties in the NYC Green Property Certification Program. This certification provides the City’s formal recognition that new buildings on cleaned properties are among the most environmentally protective places in New York City to live and work. The certification is designed to demonstrate our confidence in the safety of remediated brownfields and encourage developers to clean up properties using government programs. Brownfield cleanup programs can be complex, especially for those unfamiliar with the cleanup process. To increase predictability of cleanups, to lower the time and cost of cleanup projects, and to encourage greater enrollment in the NYC VCP, we will launch EPIC (Environmental Project Information Center) Environment, a web application that automates and streamlines cleanup-project navigation.

To achieve our ambitious goals for both affordable housing and industrial development, the City will need to increase the use of both the NYC VCP and the State Brownfield Cleanup Program (State BCP). We will encourage the New York State Legislature to pass legislation to stabilize the tax credits offered by the State BCP; provide a gateway to those tax credits for affordable and supportive housing and industrial development projects; lower costs for cleanups, such as providing exemptions for unnecessary state fees and taxes that currently apply to cleanup in the NYC VCP; and continue State funding for the Brownfield Opportunity Area program for community engagement. We will also encourage Congress to reauthorize the IRS Section 198 Brownfield Cleanup Tax Deduction, which expired in 2011, to lower cost for cleanup in the NYC VCP.





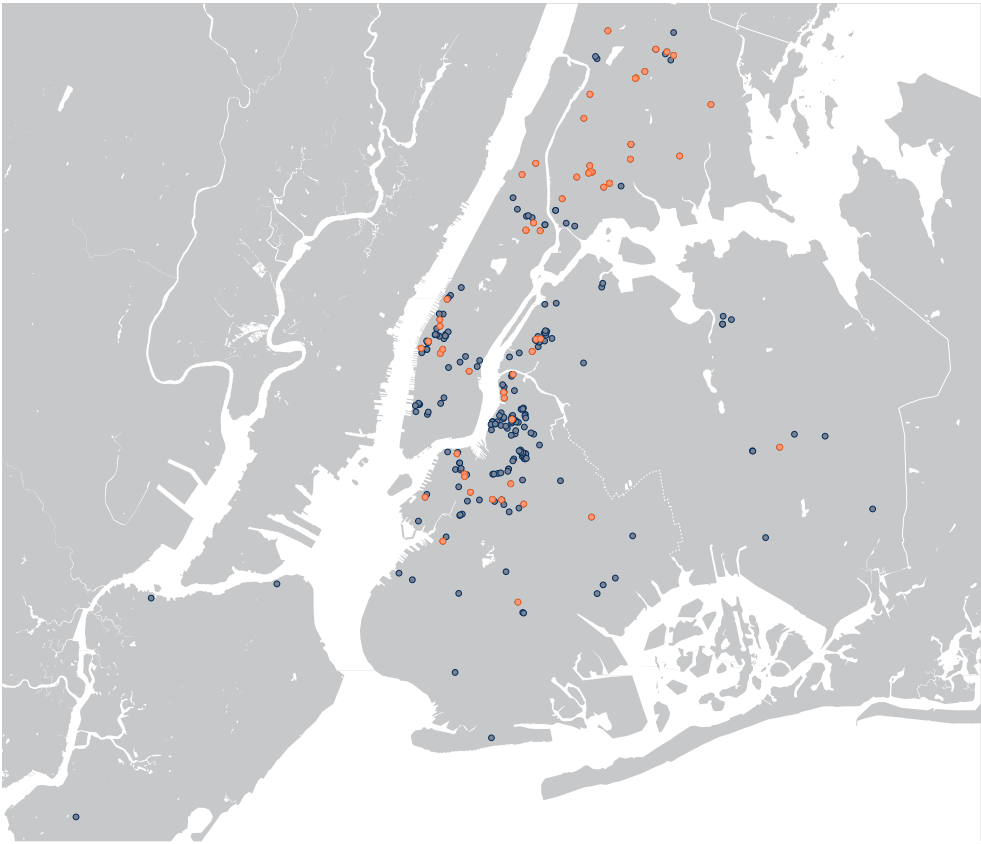
NEW YORK CITY  
GREEN PROPERTY CERTIFICATION

The NYC Green Property Certification program was established to provide formal recognition for properties that have met strict government standards and ensures that these properties are safe for new occupants and everyone in the surrounding community. When a cleanup in the NYC VCP is complete, the property receives the NYC Green Property Certification. This land certification program is administered by the NYC Mayor’s Office of Environmental Remediation (OER)—a group of experienced scientists and engineers—and symbolizes the City’s confidence that the property and its new buildings are among the most environmentally protective places in New York City to live and work.

To get this certification, a landowner must first perform a comprehensive evaluation of the property’s history and then perform chemical testing of soil, groundwater, and soil vapor. Environmental remediation under government oversight is required to ensure there will be no threat of exposure to any environmental contaminants. To symbolize this achievement, an NYC Green Property Certification plaque is provided to all certified properties. The plaque serves as a highly visible symbol of the positive environmental role land cleanup has played in the community. Since 2014, over 71 properties have received NYC Green Property Certification, and OER is on track to certify 750 properties in the next four years.

Citywide Voluntary  
Cleanup Program  
(VCP) Sites

- Affordable Housing Projects  
Enrolled VCP: 60
- Sites Enrolled in VCP: 263



Source: NYC OER



CASE STUDY OF AFFORD-  
ABLE HOUSING CLEANUP

New York City has established the NYC VCP and now offers a wide variety of incentives to promote the clean-up of brownfields for development of affordable and supportive housing. To date, we have enrolled 60 projects for affordable housing in the NYC VCP that will produce over 3,850 new units of housing to serve over 12,000 New Yorkers. One such project is Norman Towers, an 18,000 square-foot property at 161st Street in Jamaica, Queens. Prior to enrolling in the NYC VCP, this property was vacant and undeveloped. Cleanup of this site involved the removal of over 11,000 tons of soil and two leaking underground petroleum tanks, and placement of a plastic liner beneath the building to prevent leakage of underground vapors from the surrounding area. Cleanup at the property achieved the State’s highest cleanup standard, and the site was formally certified in the NYC Green Property Certification Program.

To assist site remediation in the NYC VCP, Norman Towers received \$100,000 in environmental investigation and cleanup funding from the NYC BIG Program. The affordable housing was funded by tax-exempt bond financing and low-income housing credits from the NYC Housing Development Corporation (HDC), state low-income housing credits from NYS Housing and Community Renewal, and program subsidy funds from HDC and NYC Housing Preservation and Development. Norman Towers is now a thriving 101-unit affordable housing apartment building with a mix of retail, office, and parking. Its affordable apartments are available to New Yorkers at a wide range of income levels, and the building is home to the new offices of the building’s developer, The Bluestone Organization, providing 25 permanent jobs.

Initiative 2

Support community engagement by establishing  
additional place-based community brownfield  
planning areas

To ensure the City provides authentic engagement of communities, we currently support place-based community brownfield planning in low-income neighborhoods that have a disproportionately high occurrence of brownfields.

Over the next four years, we will double the number of place-based community brownfield planning areas by designating twenty new neighborhoods and focusing our incentives to help them better identify strategic brownfield properties and implement community development projects. We will assist in the identification, cleanup, and redevelopment of community-supported projects on 40 properties in four years.

For up to nine of these neighborhoods, we will assist community brownfield planning by preparing an existing conditions study to identify land uses and geographic and demographic conditions that will become a strong foundation for community brownfield planning.

To build the capacity of community-based organizations to perform cleanup and prepare strategic properties for development, we will launch a Pro Bono Environmental Assistance Program with the NYC Brownfield Partnership to provide no-cost environmental expertise for community developers and brownfield planners interested in cleaning up and developing brownfield sites in New York City, and provide guidance on the use of these new resources to achieve community vision for brownfield properties.

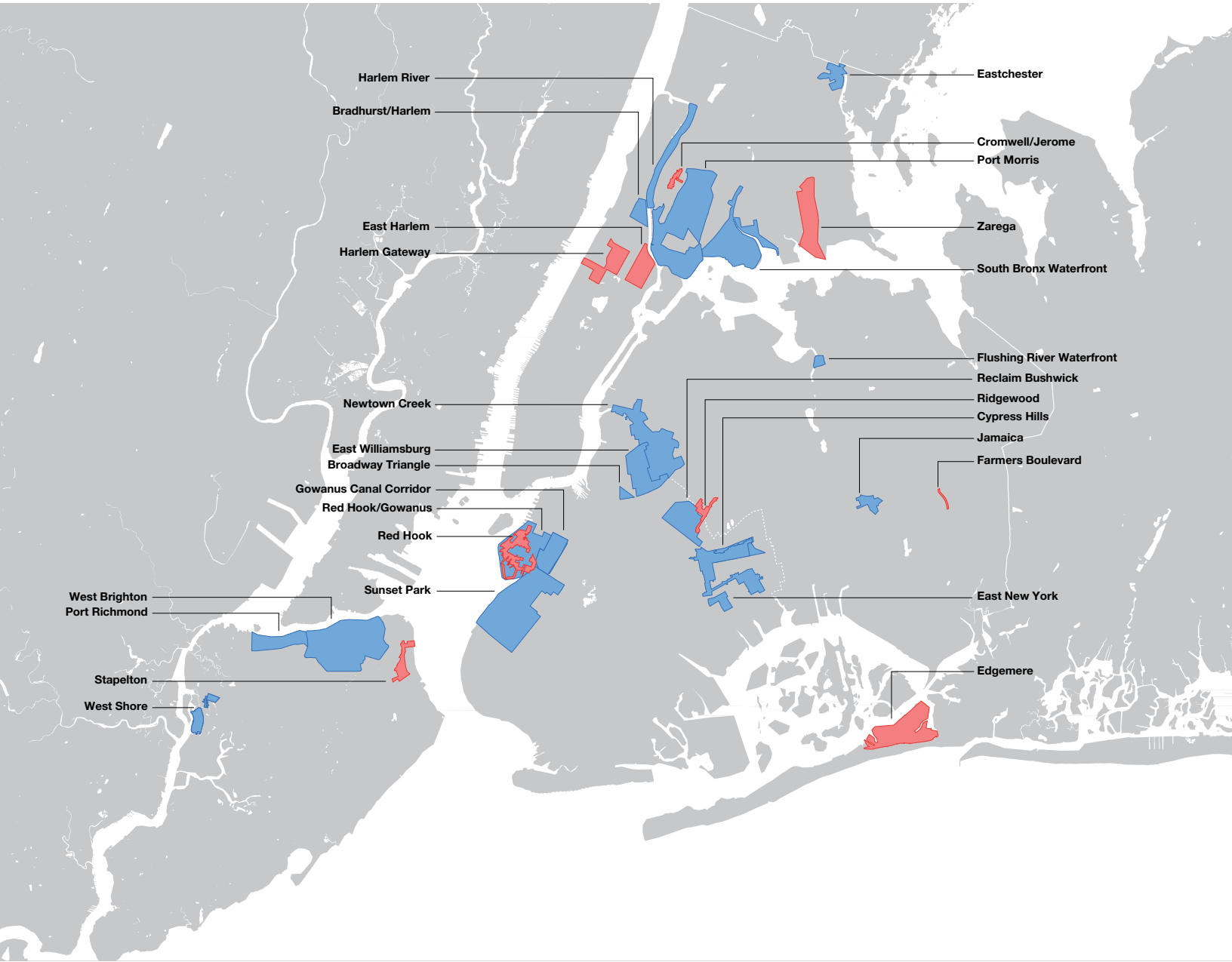
The City will launch EPIC Community, a web application that will provide place-based community brownfield planning organizations with the means to communicate with each other, with city agencies, with local residents, and with developers working in their community. EPIC Community will also provide the ability to store and share data, reports, and other related documents.

We will also launch SPEED<sup>2.0</sup>, an update to SPEED (Searchable Property Environmental Electronic Database), the City’s award-winning web mapping application and environmental research engine that combines City information on every property with a compilation of Federal, State, and City government environmental databases.



Place-Based Community  
Brownfield Planning Areas

- Established Areas
- New Areas



EPIC COMMUNITY

Place-based community brownfield planning is essential to engage the public and promote community-driven brownfield redevelopment. We plan to double the number of communities we serve, and will bring new tools and resources to help community brownfield planners identify strategic sites and achieve community-driven redevelopment. One such tool is EPIC Community, a new web application that will bring state-of-the-art digital communications to community brownfield planners working in 40 neighborhoods throughout the city. With EPIC Community, community brownfield planners will be able to work with each other in a well-coordinated network, reach more citizens in their communities, and easily communicate with government agencies and developers working on cleanup and redevelopment projects in their area. EPIC will provide discussion forums to share best practices and enable document sharing with peers. It will offer easy access to all work plans and reports for cleanup projects in the NYC VCP and provide notifications to keep community brownfield planners up-to-date on the latest developments on cleanup projects in their neighborhoods—making the NYC VCP one of the most transparent cleanup programs in the country.

Initiative 3

Facilitate cleanup of properties in 100-year floodplain to reduce environmental risks from storm surges

Brownfields in low-lying waterfront areas present a greater risk from erosion as coastal flooding is projected to become more frequent. Flood waters can cause contaminants to be dispersed into surrounding communities, including environmental justice areas already overburdened with pollution. We will facilitate the environmental cleanup of 100 properties in the 100-year floodplain over the next four years to lower the contamination risk from future tidal storm surges.

To accelerate cleanup of flood-prone areas and improve public safety, we also expanded the BIG program to establish new small grants to support cleanup activities in the 100-year floodplain in the NYC VCP.

In 2014, the City established new regulations to strengthen standards for cleanup of industrial properties on the waterfront. These new rules reduce the level of contaminants that can be left on these sites when cleanup is complete, and are intended to lessen the pollution impact of future storm surges on communities in coastal industrial areas.

We will expand our support for grassroots planning for climate resiliency by establishing four new community brownfield planning areas in neighborhoods heavily impacted by flooding during Hurricane Sandy. SPEED2.0 will also improve online access to maps of current and projected floodplains, wetlands, and emergency evacuation zones.

In 2014, we began performing free climate-change resiliency surveys of brownfield development plans for projects in the NYC VCP. These surveys are performed by knowledgeable building resiliency experts and are provided to brownfield developers to educate them on the most protective building design practices to lower vulnerability of both the buildings and the surrounding community to storm surge and other effects of climate change and about financial incentives available to help achieve these goals.





# Water Management

**Goal: New York City will mitigate neighborhood flooding and offer high-quality water services**

## Overview

Water is one of our most precious resources and must be valued and managed wisely. Water is essential to our daily life and public health. We must preserve New York’s water from contamination, the risks of aging infrastructure, and the impacts of climate change.

The New York City DEP operates one of the most complex water and wastewater systems in the world. It manages a network of 19 reservoirs and three controlled lakes that cover approximately 2,000 square miles of watershed land as far as 125 miles upstate. The City’s drinking water system is the largest unfiltered water supply in the world, delivering approximately one billion gallons of high-quality drinking water each day to nine million New Yorkers.

New York City has approximately 7,000 miles of water mains and over 7,500 miles of sewer mains that incur substantial maintenance, replacement, and management costs. Fourteen large municipal WWTPs treat an average of 1.3 billion gallons of wastewater every day.

To safeguard this invaluable natural resource and more efficiently deliver critical water services, the City has adopted a holistic approach to water management. This is anchored in an understanding of local water cycles and an appreciation for the contributions of smaller-scale, decentralized projects aimed at optimizing the performance of existing large-scale systems. For example, the City has spent approximately \$1.7 billion since the 1990s in watershed protection. These investments have helped protect our natural resources and ensure high-quality affordable drinking water, while also avoiding the need for an estimated \$10 billion new filtration plant. Similarly, instead of exclusively relying on expensive, energy-intensive traditional engineering controls to capture stormwater runoff, the City has adopted a Green Infrastructure program to construct and maintain curbside gardens—also known as bioswales and stormwater greenstreets—and has promoted other green infrastructure such as permeable paving, which absorbs stormwater before it enters the sewage system.

Delivering high-quality drinking water, wastewater services, and stormwater management to residents of New York City requires substantial capital and operating investments. The City has been tracking and analyzing trends in population, water consumption, waterfront use, and changing environmental conditions. Although the cost of New York City’s water and wastewater services is below the national average, the cost of safeguarding drinking water quality and

### INDICATORS + TARGETS

- ✔ Maintain full compliance with Safe Drinking Water Act
- ✔ Maintain backlog of catch-basin repairs under 1 percent. Backlog of catch-basin repairs reflects the state of good repair of the catch basin system and capacity to address flooding
- ✔ Increase the Combined Sewage Overflow (CSO) capture rate from 78 percent in 2014



### Water Management

managing storm water is likely to increase. This is particularly hard to bear for low-income homeowners and providers of affordable housing. In order to balance the goals of investment and equity going forward, DEP will continue to develop rates that support policy goals, and will invest in the technology to support innovative fee structures. The City will update the water and wastewater billing system, and evaluate its financial framework to ensure we have a sustainable financial model.

We will continue to manage the city’s drinking water supply to maintain its world-renowned drinking water quality. In addition, the City will manage its wastewater treatment, stormwater management, and drainage systems to improve the quality of our local waterways and beaches, as well as ensure every neighborhood receives a high level of infrastructure services.



Ashokan Reservoir, Catskill water supply system



Water Supply

New York City is one of only five large cities in the country that has a surface drinking-water supply that does not require filtration as a form of treatment—although the water is still disinfected to reduce microbial risk. The City’s next Filtration Avoidance Determination (FAD) is expected in 2017. The FAD is a Federal Environmental Protection Agency (EPA) ruling that allows the City to continue with the measures it currently uses to ensure clean drinking water rather than redoing its entire system and building a large, costly, energy-intensive filtration plant. Issuance of the FAD is not a given and requires comprehensive watershed evaluation and protection.

The City must also meet increasingly stringent regulations and requirements for simultaneous compliance with the Clean Water Act and Safe Drinking Water Act to protect the quality of our drinking water and aquatic resources, as well as to protect recreational opportunities in our waterways.

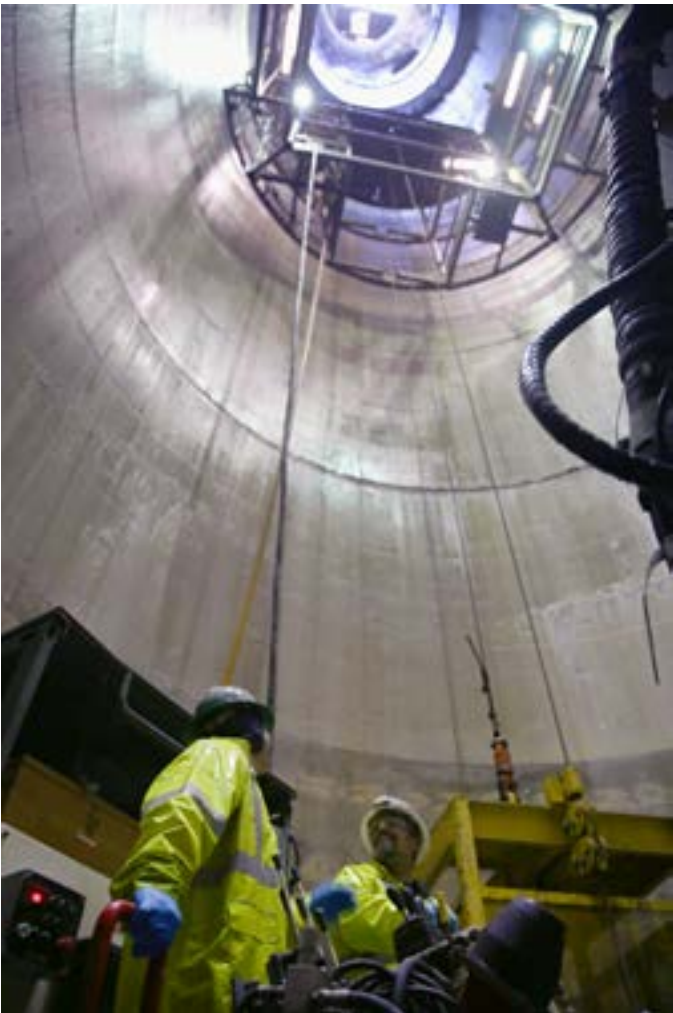
In addition, since the 1990s, DEP has been monitoring leaks in a portion of the Delaware Aqueduct and identified two areas of significant leakage in the Rondout-West Branch Tunnel portion of the Aqueduct. Together, these areas leak approximately 35 million gallons of water every day. Work is underway to construct a bypass tunnel and repair the leak.

Stormwater Management and Drainage

Local topography, dense urban development, the capacity of our aging sewer system, and increasingly extreme weather are some of the biggest contributing factors to flooding. Some communities throughout New York City, including sections of Queens, Staten Island, the Bronx, and Brooklyn, have been prone to flooding and drainage problems.

Stormwater runoff is generated from rain and melting snow conveyed over impervious surfaces such as rooftops, streets, and sidewalks. Rather than being absorbed into the ground, water flows to catch-basins in the streets, and from there into the sewers. These impervious surfaces cover approximately 72 percent of New York City’s 305 square miles of land area. During wet-weather events, runoff from hard surfaces of the city can cause flooding, carry pollutants to waterways through the Municipal Separate Storm Sewer System (MS4), or overwhelm the combined sewer system leading to combined sewer overflows (CSO). As with many older cities, New York City has a drainage system that combines waste from buildings with stormwater in its combined sewers; the system can overflow with high volumes of stormwater.

Different neighborhoods in New York City have different infrastructure requirements. The initiatives in this plan have been screened to address priority projects, as well as the need to improve on the delivery of infrastructure services while also addressing community levels of service.



Bypass tunnel and shaft construction, Delaware Aqueduct

Initiative 1

Protect the city’s water supply and maintain the reliability and resiliency of the water supply system

DEP received its first 10-year FAD in 2007. The 10-year FAD represents a strong endorsement by our regulators that the City’s innovative strategy of source-water protection is an effective and sustainable approach to protecting water quality and public health. The longer time horizon also gives DEP and its many partners more certainty of the stability of the water supply protection programs and allows for more effective long-range planning, budgeting, and contracting. In preparation for the 2017 FAD, the City will compile a comprehensive summary of all program activities and an assessment of water quality status and trends.

**The City is undertaking several major water infrastructure projects.** We will construct a Kensico-Eastview Tunnel to provide necessary redundancy between the Kensico Reservoir and the Catskill-Delaware UV Treatment Facility to meet current and future flow requirements. DEP has also begun repairing the Delaware Aqueduct. The work necessary to construct a bypass tunnel beneath the Hudson River is proceeding ahead of schedule. Shutdown and repair of the leaking portion of the Delaware Aqueduct, i.e., the Rondout-West Branch Tunnel, is scheduled to begin in 2022.

The City will initiate a grant program of up to \$1 million per year through 2020 to encourage on-site water reuse on private properties. Potential applications include greywater, blackwater, and rainwater reuse in non-potable water processes such as toilet flushing, cooling tower waters, and irrigation. The program is part of the City’s broader water demand management efforts. The City will also examine its own regulatory and permitting processes, and update as required.





Initiative 2

Install or repair 500 water fountains and water bottle refilling stations across the five boroughs

Water is essential to all human physiologic processes, and maintaining proper hydration has numerous health benefits. Functioning and accessible water fountains promote healthy beverage habits among New Yorkers. Moreover, water is a healthy and free alternative to sugary drinks, the single largest source of added sugar in our diets. Sugary drinks provide no nutritional value, and have been linked to weight gain, type 2 diabetes, and heart disease. In our city, it is estimated that over half of adults consume sugary drinks on a daily basis.

Our water should be the first choice for quenching thirst in the home, workplace, or on the street. To encourage proper hydration and healthy water consumption, the City is committing to installing or repairing water fountains across the five boroughs. DEP will commit \$5 million over the next ten years toward the goal of increasing water-bottle filling fountains and stations to eliminate drinking water drought and reduce single-use plastic bottles across the city.

There are also important environmental advantages to water fountains. Many fountains cannot be used to fill water bottles or are underused because filling is slow. This contributes to single plastic bottle use and adds to the costs and pollutant emissions associated with collecting, transporting, recycling, and disposing of the plastic bottles. We will promote drinking water and fountain use with signage and messaging to encourage water bottle refilling.

To promote the new water fountains, the City will enlist the help of GreeNYC to launch a multi-media strategic marketing campaign that includes signage, out-of-home advertising (including subway, bus, and billboard), radio, and digital media. In addition, the City will launch or promote an existing phone app that allows residents and visitors to find water fountains and stations around the city. The City will also develop a plan to increase the number, quality, and popularity of water fountains in schools.

Initiative 3

Expand green infrastructure and smart design for stormwater management in neighborhoods across the city

To alleviate the impact of storms on public infrastructure, DEP will work with partner agencies to institutionalize stormwater management into the design of public property, including streets, parks, schoolyards, and public housing. The City will also continue the NYC Green Infrastructure Program, including the installing of 9,000 curbside garden bioswales by 2018 in areas served by the combined sewer system. The City will use demonstration projects to explore expanding the use of



Water bottle refilling station and fountain



Bioswales, Hutchinson Neighborhood Demonstration Area

green infrastructure in other parts of the city served by the separate storm-sewer system. In addition, the City will assess and implement green infrastructure opportunities at municipal facilities.

To encourage more private property stormwater retrofits, the City will streamline or expand the existing Green Infrastructure Grant Program in areas served by the combined sewer system or both. It will also conduct a study to assess new private property stormwater-retrofit incentive programs to strengthen or expand the effectiveness of the existing stormwater performance standard through institutional controls.

Supporting Initiative

A. Alleviate flooding in Southeast Queens

DEP is developing an action plan to resolve long-standing flooding conditions that affect over 400,000 city residents in Southeast Queens. The area has more 311 flooding and confirmed sewer backup complaints than any other area of the city, and in certain neighborhoods, experiences recurring flooding conditions. The plan will consist of intensive and accelerated long-term sewer build-out, complemented with innovative, site-specific solutions, such as Bluebelts and green infrastructure. It will serve as a model for other flood-prone neighborhoods of the city.

Initiative 4

Reduce pollution from stormwater runoff

The DEP is developing a comprehensive plan to address pollution from the MS4 and improve water quality. This citywide plan will include, among other things, adopting measures for public outreach and involvement, finding and eliminating illicit sewer connections, managing stormwater during and after construction, managing industrial/commercial stormwater sources, controlling floatables, and adopting pollution prevention practices for municipal facilities.

Plastic bags and other litter in our waterways are a major concern for the City. Therefore, as part of the citywide stormwater management plan, the City will conduct a study to identify sources of floatables (i.e., trash) carried to waterways by stormwater, and implement a program to reduce these floatables. In addition, we will launch a citywide media campaign for floatables, settleable trash, and debris reduction.





INDICATOR + TARGET

✔ Increase percent of New Yorkers living within walking distance to a park from 79.5 percent to 85 percent by 2030

Parks & Natural Resources

Goal: All New Yorkers will benefit from useful, accessible, and beautiful open spaces

Overview

A high-quality, easily accessible open space is a foundation of vibrant neighborhoods. It is part of the city’s public realm and includes all outdoor spaces, such as our city’s parks, public spaces, streets, and natural habitats, which together make up more than 40 percent of New York City’s land area. As an integrated system, a great open space can attract residents and businesses, and promote greater use of recreational, civic, cultural, and natural resources.

All New Yorkers experience open spaces every day—whether on the street, in a park, or just looking out the window. Access to high-quality outdoor spaces, streets, and sidewalks produces tangible benefits. Parks and public space are essential to economic development, civic engagement, and community revitalization, promoting interaction with neighbors, attracting visitors, and providing a venue for art and culture. In addition, these resources have significant public health and environmental benefits, providing active and passive recreation opportunities, reducing pollution, and helping to minimize the impact of climate change.

New York City strives to make its open spaces more useful, accessible, and beautiful. To accomplish this, we will develop a data-driven improvement strategy to ensure a deep understanding of existing assets and then make targeted investments to deliver the greatest benefits to the most New Yorkers.

Many of New York City’s parks and public spaces were designed 50 or 100 years ago and now require significant investment to meet changing demands, including new patterns of development, demographic trends, and park users’ interests. Unfortunately, both the quantity and quality of these resources vary, with too many New Yorkers lacking access to neighborhood parks and more than 200 parks having received less than \$250,000 each in capital investment over the last 20 years.

Beautiful parks and public spaces improve quality of life, attracting residents and businesses to New York City. In addition, enhancements to our city’s natural environment generate environmental benefits, including reduced pollution and improved stormwater management and flood resiliency. These resources help reduce stress, lower asthma rates, improve focus and mood, and, for children, are related to improved academic performance.



Prospect Park

Investment in open spaces has often been disjointed, resulting in disparate projects with their own distinct priorities. By planning for the city’s open spaces as a unified system, we can increase quality and efficiency, enhance park access, and improve neighborhood connections. A more cohesive and coordinated strategy will target high-impact projects to underserved neighborhoods, improve access to recreational amenities, and bring the beauty of our parks to other public spaces, including streets, sidewalks, and pedestrian plazas.

Significant investment, directed by a data-driven, equity-focused framework, is needed to ensure that the quality of our open space keeps pace with the city’s growing population and changing needs.





Initiative 1

Strengthen the utility of parks and public space in under-resourced and growing neighborhoods

Released in October 2014, NYC Parks: Framework for an Equitable Future set forth a strategy to invest capital, programming, and maintenance resources in parks where the need is greatest. This data-driven, equity-based approach identifies parks that have received little capital investment and are located in areas of high need, based on higher-than-average poverty, density, and recent population growth, to ensure investment in projects that will produce the most benefits for New Yorkers.

Through the Community Parks Initiative, New York City Department of Parks and Recreation (NYC Parks) has already launched major capital investments in 35 small parks with the input of local residents. The City will expand the Initiative to include additional sites, with the goal of impacting more than three million New Yorkers across 24 community districts, focused on low-income, growing, and high-density neighborhoods.

To expand NYC Parks’ ability to prioritize essential capital projects across the park system for repair and strategic investment, a new capital needs assessment will be developed to generate information about asset conditions and capital needs.



South Oxford Park, Fort Greene

Initiative 2

Improve open spaces through Parks Without Borders, a new strategy to enhance neighborhood access and connectivity

Parks Without Borders is a new effort to make our city’s outdoor spaces more welcoming, accessible, and better connected to surrounding neighborhoods.

The quality of a city’s outdoor space depends on an integrated system in which parks, sidewalks, pedestrian plazas, and other open spaces are connected to each other, improving access to neighborhood resources and promoting community interaction.

To make Parks Without Borders a reality, NYC Parks will take a new approach to park entrances and boundaries where they most directly interact with the surrounding community. NYC Parks will improve fences and gates and add other amenities, such as public art and landscaping, to make entrances more inviting. Along park boundaries, we



Father Demo Square



will identify opportunities to remove or reduce fencing and barrier vegetation in order to make the natural beauty of parks more visible from their neighborhoods.

As part of Parks Without Borders, NYC Parks, in cooperation with DOT and other agencies, will also find new ways to bring the beauty of the park into the community by greening key intersections and entrances, and by identifying new opportunities to activate underused public spaces with temporary art and programming. We will also look for opportunities to extend park amenities to adjacent sidewalks and pedestrian plazas.

Parks Without Borders is a key strategy to help ensure the livability of neighborhoods and the strength of our communities.

Initiative 3

Reduce light pollution from large buildings at night

Light pollution exists in every borough and is worse in areas with many commercial office buildings and unshielded exterior lighting. It has a detrimental impact on the quality of life, according to complaints registered with 311. Moreover, studies suggest light pollution has a detrimental effect on animal migratory patterns. The Hudson River is one of the most important migratory flyways for birds in North America, and New York City’s parks and ponds are favorite rest stops. Twice a year, New York City is one of the great places to see rare birds and a favorite destination for birdwatchers. Light pollution from buildings, however, interferes with migrations.

In addition, light pollution is also linked to inefficient use of energy, which contributes to greenhouse gas emissions. Offices and retail spaces that are empty at night yet leave the lights on both create light pollution and waste energy.

Municipalities in Massachusetts, California, Connecticut, and Arizona have successfully reduced light pollution and even increased the ability to view the night’s sky, ultimately helping to preserve the natural environment and reduce greenhouse gas emissions.

The City Council recently introduced the Lights Out Bill (Intro. 578/2014) to require vacant offices and retail spaces to shut off their lights at night. The City will work with the Council to pass a version of this bill that reduces energy-wasting light pollution from large buildings. In 2009, the City enacted Local Law 88 (LL88) requiring upgrades to lighting in all non-residential spaces of large buildings. This requires office and retail spaces to comply with current Energy Code standards by 2025. With full compliance with the law, the city can expect to reduce greenhouse gas emissions by approximately an additional two percent from 2005 levels. Through the existing Retrofit Accelerator Program (discussed earlier in Vision 3), the City can assist building owners through loans and incentives to comply with LL88 lighting upgrades and install modern lighting and controls.



Light emanating from office building at night





Initiative 4

Expand the use of our streets as places to play, congregate, and be together

To better serve our neighborhoods, the City will continue to work with communities and other partners to convert underused streets into pedestrian plazas and explore ways to transform underused areas below elevated roads and train lines to more attractive and inviting public spaces. Programs like Weekend Walks, Play Streets, and Summer Streets will continue to provide more opportunities for New Yorkers of all ages to get outdoors and into the public realm.

Children taking advantage of the city's Play Streets



Initiative 5

Create beautiful and well-tended streets in neighborhoods across the city

To further improve our streets and sidewalks, we will invest in new street trees and other plantings, benches, way-finding signs, and other amenities. We will focus on rezoned and growing neighborhoods. As part of our street safety and affordable housing initiatives, the City will also invest in streetscape improvements on major corridors, such as landscaped medians, to improve pedestrian safety and the urban environment. Two new City programs will bring technical assistance and other resources to improve plaza maintenance and the condition of planted medians in low-to-moderate income or otherwise under-resourced communities.





Initiative 6

Green the city’s streets, parks, and open spaces

To protect, maintain, and enhance the city’s green canopy, NYC Parks will continue to plant new trees in parks and neighborhoods citywide. Greening the public realm brings new beauty to our parks and neighborhoods, sustains ecological diversity, and adds permeable areas that enhance stormwater management. These natural systems provide valuable environmental benefits to all residents, including passive indoor and outdoor cooling; cleaning of air, water, and soil; and improved resiliency to natural events and climate change—true public health and quality-of-life benefits.

The City will be guided in these efforts by a number of research initiatives designed to ensure a better understanding of ecosystems, natural resources, and how they benefit New Yorkers and improve air and water quality. Research initiatives include an update to the City’s state-of-the-art street tree census and an ecological and social assessment of the city’s natural areas, conducted in partnership with the Natural Areas Conservancy.

The City will also use LiDAR technology—land cover mapping based on aerial remote imaging. LiDAR technology helps inform policy decisions among different agencies and policy areas. For instance, past LiDAR data has been used by the City to assess ecosystem decline and prioritize tree planting and forest restoration; impervious surface cover for green infrastructure planning; the solar energy potential of rooftops; and coastal flood hazards. The landscape of the city has changed since we last used LiDAR data in 2010 due to natural forces and human interventions, and new data will help to inform our understanding of and investment in the City’s resiliency and sustainability. The City is currently working to secure 2013 LiDAR data from the federal government.



Expansion of the East River Esplanade



Environmental Education



The City will continue to provide environmental literacy programs to support the next generation of environmental stewards and to ensure widespread awareness of the environmental impact of OneNYC sustainability initiatives.

Several City agencies—including DOE, DEP, and Parks— offer environmental literacy programs. The City is supported in this work by hundreds of non-profit organizations, including Jamaica Bay Science and Resilience Center, GrowNYC, the Horticultural Society of New York, and 1,800 park stewardship groups.

These education programs equip both students and teachers with the tools they need to become engaged community and environmental stewards. The Natural Classroom, NYC Parks’ environmental education program for students in grades K-8, is a series of inquiry-based, hands-on programs led by the Urban Park Rangers and developed in partnership with National Geographic and Columbia University. NYC Parks also offers free instruction and resources in neighborhood tree care. These efforts support the investments made in improving the city’s urban forest, and works with partner organizations to provide hundreds of hands-on stewardship opportunities each year. The DEP Office of Education also provides a range of free programs and resources—pertaining to water and wastewater, green infrastructure, sound and noise, environmental stewardship, and climate change—and will soon offer complementary online teacher and student resources.



Watershed Classroom

Vision 4

# Our Resilient City

Our neighborhoods, economy, and public services will be ready to withstand and emerge stronger from the impacts of climate change and other 21<sup>st</sup> century threats

New York City will...

- ✓ Eliminate disaster-related long-term displacement more than one year of New Yorkers from homes by 2050
- ✓ Reduce the Social Vulnerability Index for neighborhoods across the city
- ✓ Reduce average annual economic losses resulting from climate-related events

## Goals



### Neighborhoods

Every city neighborhood will be safer by strengthening community, social, and economic resiliency



### Buildings

The city's buildings will be upgraded against changing climate impacts



### Infrastructure

Infrastructure systems across the region will adapt to maintain continued services



### Coastal Defense

New York City's coastal defenses will be strengthened against flooding and sea level rise



## Introduction

In late October 2012, Hurricane Sandy roared into New York Harbor with unprecedented force, causing record-breaking water levels. Many neighborhoods were devastated, with homes and businesses becoming flooded, public services interrupted, and infrastructure damaged. After the storm passed and the water receded, a new reality emerged: New Yorkers must confront the implications of living in a coastal city.

Sandy claimed the lives of 44<sup>1</sup> New Yorkers and caused \$19 billion in damages and lost economic activity. It also highlighted the vulnerability of New York City—as well as the entire region—to the risks posed by coastal storms. As the city counted the costs and pushed ahead with a robust recovery effort, a new conversation began: Recovery must also result in a city better able to face a wider range of risks—not just the “next Sandy.”

**The first of these risks is climate change.** Rising sea levels, increased temperatures and precipitation, and a growing likelihood of more intense storms pose unique challenges to a coastal city like ours. In 2015, the New York City Panel on Climate Change (NPCC) released an updated set of climate projections for the region. Among its findings, the report noted that sea level rise for New York City, which had averaged 1.2 inches per decade (a total of 1.1 feet since 1900), is nearly twice the observed global rate over a similar time period.

### Climate change projections through 2100

Chronic Hazards		Baseline (1971-2000)	2020s		2050s		2080s		2100		
			Middle Range	High End	Middle Range	High End	Middle Range	High End	Middle Range	High End	
Average Temperature		54°F	+2.0 to 2.8 °F	+3.2 °F	+4.1 to 5.7 °F	+6.6 °F	+5.3 to 8.8 °F	+10.3 °F	+5.8 to 10.3 °F	+12.1 °F	
Precipitation		50.1 in.	+1 to 8%	+11%	+4 to 11%	+13%	+5 to 13%	+19%	-1 to +19%	+25%	
		Baseline (2000-2004)	2020s		2050s		2080s		2100		
			Middle Range	High End	Middle Range	High End	Middle Range	High End	Middle Range	High End	
Sea Level Rise		0	+4 to 8 in.	+10 in.	+11 to 21 in.	+30 in.	+18 to 39 in.	+58 in.	+22 to 50 in.	+75 in.	
Extreme Events		Baseline (1971-2000)	2020s		2050s		2080s		2100		
			Middle Range	High End	Middle Range	High End	Middle Range	High End	Middle Range	High End	
Heat Waves & Cold Events	Number of days per year with maximum temperature at or above 90° F	18	26 to 31	33	39 to 52	57	44 to 76	87	-	-	
	Number of heat waves/year	2	3 to 4	4	5 to 7	7	6 to 9	9	-	-	
	Average duration (days)	4	5	5	5 to 6	6	5 to 7	8	-	-	
	Number of days/year with minimum temperature at or below 32°F	71	52 to 58	60	42 to 48	52	30 to 42	49	-	-	
Intense Precipitation		Days per year with rainfall exceeding 2 inches	3	3 to 4	5	4	5	4 to 5	5	-	-
		Baseline (2000-2004)	2020s		2050s		2080s		2100		
			Middle Range	High End	Middle Range	High End	Middle Range	High End	Middle Range	High End	
Coastal Floods at the Battery	Future annual frequency of today's 100-year flood	1%	1.1 to 1.4%	1.5%	1.6 to 2.4%	3.6%	2.0 to 5.4%	12.7%	-	-	
	Flood heights (feet) associated with 100-year flood	11.3	11.6 to 12.0	12.1	12.2 to 13.1	13.8	12.8 to 14.6	16.1	-	-	

Source: New York City Panel on Climate Change, 2015

<sup>1</sup>In June 2013, the City published A Stronger, More Resilient New York, which identified 43 Sandy-related fatalities in New York City. In July 2013, the Office of the Chief Medical Examiner classified one additional fatality as Sandy-related, bringing the total to 44.

## DEFINITIONS

When we speak of **resiliency**, we are referring to the ability of people, the places where they live, and our infrastructure systems—such as transportation and energy—to withstand a stress or shock event, to recover, and emerge even stronger. **Mitigation** reduces the impact of a stress or shock event or prevents the impact altogether, such as bolstering the defenses of coastal communities to withstand flooding. In response to future threats, **adaptation** takes place to change the physical form or function of a structure, a place, or a community, such as hardening power supplies to withstand the effects of extreme weather and a changing climate.

According to the middle range of these projections, sea levels are expected to rise 11 inches to 21 inches by the 2050s, and 22 to 50 inches by 2100. Using the highest estimate of current projections, sea levels could rise as much as six feet by 2100. With this projected rise in sea level, the city’s floodplain will continue to expand, creating more frequent and intense flooding, and underscoring the city’s growing vulnerability to the many impacts of climate change. For instance, a similar Sandy-like event in 2050 could cause \$90 billion in damage and lost economic activity—compared to Sandy’s \$19 billion—due to the rise in sea level alone.

As outlined in the City’s recent report, NYC’s Risk Landscape: A Guide to Hazard Mitigation, an additional set of **natural hazards** like winter weather, water shortages, earthquakes, and pandemics all pose risks to the city—as do human-induced hazards.

**Next, an evolving economy means we can no longer rely on the same sectors for job growth, or to comprise the city’s tax base.** Climate change endangers both small businesses and commercial corridors in our coastal communities. A diversified economy, as detailed in Vision 1, is vital to maintaining the city’s economic resiliency, and enables those impacted by emergencies to recover more quickly.

**Finally, growing economic inequality poses challenges to the city’s social fabric.** Inequality threatens to disrupt the connections between our neighbors, institutions, and communities that we rely on in times of crisis, prolonged stress, and difficult life events. Without these connections, recovery becomes even more difficult.

Over the years, New York City has been no stranger to shocks and stresses. For instance, in the years between the attacks of 9/11 and the 2014 Ebola infections, the city has endured, among other traumas, two hurricanes, a global economic downturn, and an earthquake. In each case, New Yorkers have joined together to face these challenges and come back stronger. **In other words, New Yorkers have been resilient.**

Since Hurricane Sandy, New York City has strengthened its commitment to resiliency. We are in the vanguard of a new global movement that is changing the way cities respond to 21<sup>st</sup> century threats, both acute and chronic. In partnership with 100 Resilient Cities (an organization pioneered by the Rockefeller Foundation dedicated to fostering the resiliency of cities), New York City will continue to lead the way toward a more resilient future. And with half of the world’s population now living in cities, and two-thirds expected to live in cities by 2050, it is more urgent than ever for New York City to demonstrate global leadership in developing and utilizing the tools that will make all of us more resilient against future risks.

What we seek to accomplish now is to build a stronger, more resilient New York City—one that is ready for anything. This means we will continue to strengthen our communities, work to reduce the impacts of the risks we face, and improve recovery times when the unexpected happens. The future of New York City will indeed be resilient.



**“Sandy made it clear that Jamaica Bay communities need flood protection. The City should coordinate with state and federal agencies to make sure coastal projects for this area are funded and move forward.”**

—Roger W.,  
West Hamilton Beach

To achieve this vision, New York City must adapt. A growing population, aging infrastructure, an evolving economy, and increasing economic inequality will continue to challenge our ability to adapt. But the news is not all bad. The right investments can be leveraged to strengthen communities while we rebuild. It is understood that every dollar invested in risk mitigation can repay itself four or more times over in future damages avoided. With the funds available after Sandy, the City has a unique opportunity to buy down future risk—that is, to invest now by working with communities, upgrading buildings, protecting infrastructure, and reducing flood risks—to enhance the city’s resiliency. In fact, building on the City’s comprehensive \$20 billion climate resiliency program, we will advance that program, expand our efforts, and prepare our city for the impacts of climate change and other 21<sup>st</sup> century threats.

The Evolution of the City's Resiliency Program

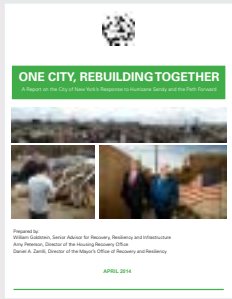
The City’s vision for resiliency and climate adaptation is rooted in nearly a decade of innovative and proactive planning that commenced with the release of A Greener, Greater New York in 2007. In June 2013, the City released its comprehensive climate resiliency plan A Stronger, More Resilient New York that outlined a 10-year, over \$20 billion program with 257 initiatives for adapting the city’s infrastructure systems and its hardest-hit neighborhoods after Hurricane Sandy. A Stronger, More Resilient New York provides a detailed analysis of what occurred to New York City’s communities, buildings, infrastructure, and coastlines during Sandy and sets forth a risk assessment that informs our program to prepare for a future with climate change.

As part of the city’s recovery from Sandy, Build it Back, run by the Mayor’s Office of Housing Recovery Operations and supported by federal funding, was established in 2013 to oversee housing recovery in New York City. To provide financial or construction assistance to those in need, Build it Back developed several programs, integrating lessons from other disaster recovery programs. Houses that were substantially damaged were elevated or, in some cases, completely reconstructed. Houses that suffered moderate damage were offered financial and construction assistance for repairs, including reimbursement for those repairs completed in the first year after Sandy. Home acquisitions and repairs to multi-family buildings are also underway. Over 20,000 residents applied and nearly 12,000 applications are currently active.

In April 2014, the City committed to enhancing and expanding the resiliency and housing recovery programs with the release of One City, Rebuilding Together. This report created the Office of Recovery and Resiliency, which is dedicated to advancing the City’s resiliency vision. It also implemented critical improvements, including expedited reimbursement checks and more construction starts, to the Build it Back program and expanded economic opportunities for residents impacted by Sandy, such as the expansion of Sandy Recovery Workforce1, and developing a pipeline for pre-apprenticeship programs in the construction trades.

To date, Build it Back has sent out over 3,200 reimbursement checks and started construction on over 1,100 homes, of which more than 500 were already completed.

The appendix of this report describes our current progress on the City’s resiliency program.



What's New in the Plan

A comprehensive climate resiliency plan for New York City was announced in June 2013 and continues to serve as the roadmap for the city’s climate adaptation efforts. With OneNYC, the City expands and accelerates that roadmap to build a stronger, more resilient New York City with several new concepts and focus areas, including:

Community Strengthening

This plan enhances the focus on strengthening communities by building the community, social, and economic resiliency of our neighborhoods. It will include a new emphasis on deepening resident, non-profit, and business participation in emergency planning, and exploring social cohesion as a strategy for resiliency, which would include forming a task force to study the role of community institutions, like houses of worship and community-based organizations, in resiliency planning.

New Climate Projections

The City is committed to using the best available scientific knowledge to inform its policy. In 2015, the NPCC released Building the Knowledge Base for Climate Resiliency, which included updated climate projections and recommendations on climate indicators and monitoring protocols. New topics covered in this report include public health, with a focus on extreme heat events and coastal storms, and enhanced dynamic coastal flood modeling, which incorporate the effects of sea level rise.

Focus on Heat

Based on the NPCC’s work, the City is putting a new emphasis on protecting New Yorkers from acute and chronic heat, including an urban heat island working group, efforts to understand the need for better ambient air temperature data collection across the city, and an analysis of natural infrastructure and its impact on the urban heat island effect.

Land Use Policy

The City’s 2013 climate resiliency plan recommended further study into how land use policy can be a tool for resiliency. Ten neighborhoods impacted by Sandy across the city are currently involved in planning studies to generate resiliency recommendations and land use changes, on both a local and citywide level. These recommendations are expected to reduce long-term vulnerability by smartly managing growth and development in vulnerable parts of the city.

An Updated Federal Agenda

Since 2013, the federal government has reformed the National Flood Insurance Program (NFIP), slowing increases in insurance premiums, but failing to solve the problem of long-term insurance affordability. NFIP is expected to be reauthorized in 2017, providing a unique opportunity to institute new reforms. In advance of reauthorization, the City continues to evaluate a variety of policy changes and outcomes that provide incentives for risk-reduction investments and promote affordability. At the same time, the city’s flood maps are being updated, showing that more of the city is vulnerable to flooding. Finally, the U.S. Army Corps of Engineers (USACE) has released its two-year North Atlantic Coast Comprehensive Study, recommending further action to reduce coastal vulnerability in the city. The City will continue its work to ensure that the USACE is able to launch a new feasibility study in New York Harbor and its tributaries. This study is expected to lead to new authorized projects ready for construction.



# Resiliency Indicators

To measure our progress, the City will continue to consider ways to measure the impacts of its resiliency efforts. The field of resiliency does not yet have a rigorous standard for indicators and performance measures, but the City will commit to creating a methodology to develop and test indicators for resiliency. This might include simple metrics, scenario analysis tools, or computational modeling techniques to determine whether and how the City is improving its resiliency. To implement a specific set of monitoring tools, the City will continue its work with 100 Resilient Cities.

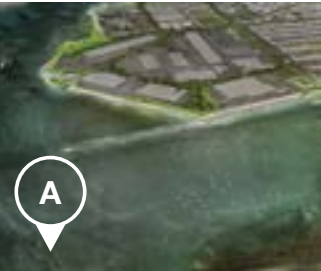
In order to advance Vision 4 effectively, the City has identified the following indicators through which we can monitor our progress. This Vision aims to reduce or eliminate the following:

- ✓ Eliminate disaster-related long-term displacement (more than one year) of New Yorkers from homes by 2050
- ✓ Reduce the Social Vulnerability Index for neighborhoods across the city
- ✓ Reduce average annual economic losses resulting from climate-related events



## Neighborhood Spotlight

In the Bronx River Corridor, the City is working with local communities to plan for a more resilient future. This includes a range of investments and planning initiatives to prepare of the impacts of climate change and other 21<sup>st</sup> century threats.



**Hunts Point Resiliency**  
Investing in coastal and energy resiliency, in partnership with local business and resident stakeholders, can protect critical assets and supply chains while creating new community amenities.



**Harding Park Resilient Neighborhoods Study**  
Planning with the Harding Park community about the area's short- and long-term resiliency aims to mitigate the risks of coastal flooding for this vibrant bungalow community.



**Bronx River Shoreline at Starlight Park**  
Creating wetlands, soil cleanup, and ecosystem restoration will protect and strengthen an existing community asset.



# Neighborhoods

**Goal: Every city neighborhood will be safer by strengthening community, social, and economic resiliency**

## Overview

### INDICATORS + TARGETS

- ✔ Increase the capacity of accessible emergency shelters to 120,000
- ✔ Increase the rate of volunteerism among New Yorkers to 25 percent by 2020

New Yorkers come together during emergencies to support each other and begin the recovery process. And while significant disruptive events like Hurricane Sandy affect all New Yorkers, they ultimately expose and exacerbate underlying vulnerabilities in many communities. Across every corner of the city, everyday New Yorkers, along with local institutions, energize the recovery process and voluntarily help their neighbors without waiting for official assistance. In short, these residents, organizations, and community leaders anchor neighborhood recovery, and continue to provide support long after official resources are no longer available.

Unquestionably, official resources are vital for community preparedness. One of the most critical components to disaster preparedness and response is effective communication between government and community stakeholders. This means the City must continue to work with local organizations **before** disasters strike. By establishing communication links; emergency on-call contracting authorities; off-the-shelf recovery programs for communities, residents, and businesses; disaster recovery assets, and strengthened shelter services, we can be better prepared. Additionally, as medium- and long-term recovery proceeds, the City must work with local communities to address the lingering effects of disasters on residents, businesses, and communities, all of which require new efforts to ensure recovery doesn't stall when attention turns elsewhere.

The strengthening of social networks and planning within a community are also critical to enhancing resiliency. This can entail building relationships with, and checking in on, neighbors and the availability of adequate neighborhood gathering and resource centers. How New Yorkers interact with one another can be an important factor in guarding against many risks. Heat, for example, presents a unique challenge to New York City. As we learned during the Chicago heat wave of 1995, neighborhoods with more robust social infrastructure, such as community centers, safe streets, and schools had better health outcomes than those without. And as mean annual temperatures in New York City are projected to increase by 4.1° to 5.7°F by the 2050s, neighborhoods without social networks and infrastructure are at an even greater risk, particularly where heat-vulnerable populations, such as children and seniors, are increasing.



Finally, because communities can't do this all on their own, it is important that the City's emergency communication and preparedness programs, in partnership with communities, maintain their ability to respond to any disaster. As the city has seen, it is vital for first-responders and other essential personnel to be able to have emergency access to restricted areas: response and recovery operations, logistics and support zones, and critical emergency facilities. The opportunities that come from long-term recovery operations ensure residents impacted by disasters are able to participate in the recovery of their neighborhoods through hiring programs and workforce development.



Sandy Recovery Opportunity and Resource Fair at the Challenge Preparatory Charter School in Queens



## Community Resiliency in Red Hook

The morning after Hurricane Sandy hit Red Hook, Sheryl Nash-Chisholm, a resident of Red Hook Houses, decided to check on her place of employment, the Red Hook Initiative (RHI), a community-based organization serving Red Hook in Brooklyn. Once inside, she realized that RHI had not been damaged by the storm. She immediately opened the center to serve as a gathering place, charging station, and supply-distribution center. By taking this initiative, Sheryl became a key part of the Red Hook community's recovery.

For the next three weeks, Sheryl and two dozen neighbors worked tirelessly to serve their community, returning each night to their own apartments that were still without heat, running water, and electricity. RHI was open for up to 14 hours per day during those three weeks, with RHI volunteers and partner organizations providing supplies and meals to thousands of area residents, as well as free Wi-Fi and legal and/or medical assistance to nearly 300 home-bound people in the community. With long-lasting local relationships and community awareness, RHI and their partners demonstrated that community-based organizations and their members are often able to mobilize quickly and provide meaningful, critical support for neighborhoods in times of crisis.



Sheryl Nash-Chisholm





Initiative 1

Strengthen community-based organizations

Social infrastructure plays an important role in making communities ready for the unexpected, and neighborhoods vary in the level of social cohesion and available resources. To address this situation, the City will work to build capacity in communities by strengthening community-based organizations that serve their neighbors and by working to expand civic engagement and volunteerism.

First, the City will seek to develop a comprehensive, interactive web-based platform to map both small and large community organizations and activities, as well as local government services and initiatives, across New York City. The platform will allow for the identification of both gaps and duplication of efforts, as well as opportunities for integrating existing community-based and government initiatives. It will also encourage more effective coordination, collaboration, and decision-making in these efforts, in addition to linking to tools for connecting organizations and aiding in community-based emergency planning between government and communities.

Next, the City will seek to bolster neighborhood resiliency and civic participation by strengthening community-based organizations’ services, information capacity, and ability to conduct community-level emergency and resiliency planning. The City will study a model for social empowerment zones, which aim to increase residents’ resiliency in under-resourced neighborhoods by targeting funds and capacity-building support to critical local service providers in geographically defined areas.

In partnership with the City Council, the City will establish a Hurricane Sandy Task Force to make recommendations on expanding the participation of community-based organizations and faith-based groups in local emergency planning and resiliency efforts.

Finally, the City will expand volunteerism opportunities in neighborhood-based initiatives run by community-based organizations, neighborhood institutions, and the City. An enhanced NYC Service platform will connect organizations and programs in need of support with available volunteers, including linking volunteers with emergency response and recovery efforts.



A Community Emergency Response Team (CERT) volunteer spreads the word about the City’s “Know Your Zone” campaign



Initiative 2

Improve emergency preparedness and planning

Resiliency starts with preparation. Securing physical assets for emergency response such as a power generators, light towers and others are a critical first step. The City, through NYC Emergency Management (NYC EM), will expand public education efforts so that all New Yorkers know the risks they face during extreme weather events and other disasters, and how to prepare and respond.

The City will invest in emergency shelter sites to accommodate 120,000 vulnerable New Yorkers—an improvement on the current capacity of 100,000—including retrofits for the accessibility of existing shelters. We will strive to ensure vulnerable populations that need shelter are provided with adequate transportation services. The City will also continue working to identify additional accessible sites throughout the five boroughs that can serve as emergency service centers.

During large-scale emergencies and disasters, getting the right resources to the right place at the right time saves lives and helps New Yorkers recover faster. The City can ensure this happens by expanding the existing Corporate Emergency Access System (CEAS), a program recognized by New York City Police Department (NYPD) and NYC EM that allows emergency access for businesses, into an emergency access credential for City Agency staff and other essential personnel. The City will convene an inter-agency working group to evaluate, and make recommendations for, the development of this credential and its procedures during a disaster.

In the summer of 2014, the City launched a comprehensive review of its 911 emergency response system. The first assessment examined the technological and facilities improvements already underway as part of the Emergency Communication Transformation Program. The second assessment examined the operations, procedures, and call volumes of the 911 system. Through the operational assessment, improvements in emergency care emerged as a top priority.

New York City ambulances respond to over a million calls each year, 40 percent of which are for life-threatening emergencies. As that volume continues to increase, the challenge of maintaining optimal coverage in every part of the city, at all times, only becomes greater. To address this problem and reduce response times, the City will explore options to provide additional support where the need is greatest. This year, the City added 45 additional ambulance tours and deployed additional resources to station areas, focused in southern Bronx, western Queens, and Staten Island. The City is also building out a fully redundant, second 911 answering center in the Bronx, increasing staffing of dispatchers and supervisors, and improving governance and quality assurance protocols to ensure a more robust and efficient emergency response system.

Service providers, such as in-home food and health service organizations, could play an essential role in emergency preparedness and planning. To ensure service providers are equipped with the necessary tools and training to serve vulnerable



populations during emergencies, the City will include front-line staff in emergency planning, training on public communications, and table-top exercises. In addition, the City will modify standardized contracts to require service providers to participate in the City’s emergency protocols (such as Advance Warning System), develop a training program to incorporate community-based organizations in response and recovery operations, and assign all available City employees a response role for emergencies.

The City will continue to integrate its Hazard Mitigation Plan with climate resiliency plans so that we are planning for and acting on the full array of hazards and risks our city faces. Additionally, the City will launch its third NPCC in 2015, which will include a climate risk analysis to inform planning and decision making on resiliency efforts focused on equity and regionalism.

Finally, the City will work with the design and construction industries to develop a system of standardized on-call contracts, with agreed upon payment and risk management terms, in order to deploy construction and other services such as effective and efficient debris removal and building repairs during and after a major disruptive event. And we will work to improve long-term case management for those impacted by disasters to connect survivors with the services they need.

**Initiative 3**

**Support small businesses and local commercial corridors**

Small businesses form a critical part of any community, providing jobs as well as goods and services. After Sandy, the disruption to businesses in affected communities meant lost earnings for business owners, displaced jobs for workers, and reduced access to vital goods and services. As a result, residents in many communities were left with limited options to meet their daily needs.

In response, the City provided financial and technical assistance to more than 650 businesses in the immediate aftermath of Hurricane Sandy. In addition, the Hurricane Sandy Business Loan and Grant Program will have served more than 250 businesses before the end of 2015. As of April 2015, the City has approved awards worth \$35 million to more than 200 businesses.

In Spring 2015, the City will announce the winners of RISE : NYC, a \$30 million competition that leverages innovative resiliency technologies in energy infrastructure, telecommunications, and building systems for small businesses. Additionally, the City will launch a new Business PREP program to provide tailored resources and technical assistance in preparing and planning for future disruptive events to businesses

A local business on Richmond Terrace in Staten Island



citywide and thereby enhancing their resiliency.

The City will also invest \$30 million toward commercial corridor enhancements in Coney Island and the Rockaways, including storm water management, streetscape and place-making projects to enhance the connectivity of these places, and improvement of local infrastructure that provides basic services to businesses.

**Initiative 4**

**Ensure that workforce development is a part of all resiliency investments**

As the City advances its more than \$20 billion resiliency capital investment program, residents impacted by Sandy will have opportunities to access employment and the training needed to be eligible for the construction jobs these investments will create. To realize this opportunity, the City will build on the model designed for the Build it Back program that established the Sandy Recovery Workforce1 program, which encourages the hiring of Sandy-impacted residents and provides training vouchers for residents to access pre-apprenticeship programs.

Specifically, the City will ensure all investments that strengthen the city’s resiliency will create job opportunities for residents and low-income applicants. This will require the City, in cooperation with the Law Department and Mayor’s Office of Contract Services (MOCS), to adopt standardized language for all procurement documents and contracts for resiliency-related work, and require contractors and consultants to report on efforts and outcomes related to local hiring and training. Working with the Department of Information Technology and Telecommunications (DoITT), the City will develop a centralized tool for tracking and reporting on this data with the goal of improving the hiring of Sandy-impacted residents and low-income applicants.

Additionally, community outreach and workforce development services will be further integrated with development projects in partnership with industry and labor organizations. For example, a new and long-awaited agreement between the New York City Housing Authority (NYCHA) and unions from the building and construction trades covering an estimated \$3.5 billion of investment will secure access to jobs and training opportunities for many Sandy-impacted residents, including NYCHA residents, through both pre-apprenticeship and apprenticeship programs. The City’s Department of Small Business Services (SBS), will secure additional State funding for community-supported workforce development services in several Sandy-impacted neighborhoods.

Workers constructing a home







Initiative 5

Mitigate the risks of heat

The effects of urban heat are well known. Extreme summer heat kills, on average, over 100 New Yorkers annually from heat stroke and the heat-related exacerbation of chronic health problems. Hundreds more need hospital care for serious heat-related illness. The risk of death from extreme heat is highest among those without air conditioning, in neighborhoods with higher poverty rates, and where there is less land covered by trees and other vegetation. By greening neighborhoods and increasing access to air conditioning, we aim to reduce heat-related illnesses and deaths, and reduce disparities in vulnerability to climate change.

In partnership with The Nature Conservancy, the City is developing strategies to evaluate the best available science on the urban heat island effect in order to invest in better data collection and develop effective capital investment and operational strategies to adapt our city to the increasing impacts of urban heat. First, the City will identify urban heat mitigation and adaptation strategies to benefit the city’s most heat-vulnerable communities by coordinating through a new Urban Heat Island Working Group that has already begun to meet.

The Working Group will make recommendations for the creation of a citywide air temperature monitoring system to enable the collection of community-level temperature data to guide urban heat mitigation and emergency response activities.

In order to measure heat mitigation activities accurately across the five boroughs, the City will seek updates to its 2010 LiDAR dataset, which will involve aerial data collection through remote sensing. This will help the City to quantify the investments that have already been made and will inform future strategies about how to plan the built environment. Additional insights from LiDAR data will include the extent of the tree canopy across the five boroughs, and better detail for the City’s public mapping data, among others. The City is already working to secure federally-provided 2013 LiDAR data.

Additionally, the City will call on the State to ensure cooling access during extreme heat for low-income, heat-vulnerable populations through an expanded allocation of Federal Low Income Home Energy Assistance Program funds to assist with air conditioning purchase and installation, and utility costs. These air conditioners will be as energy efficient as possible, and are a life-saving resource for seniors and those with pre-existing health conditions.

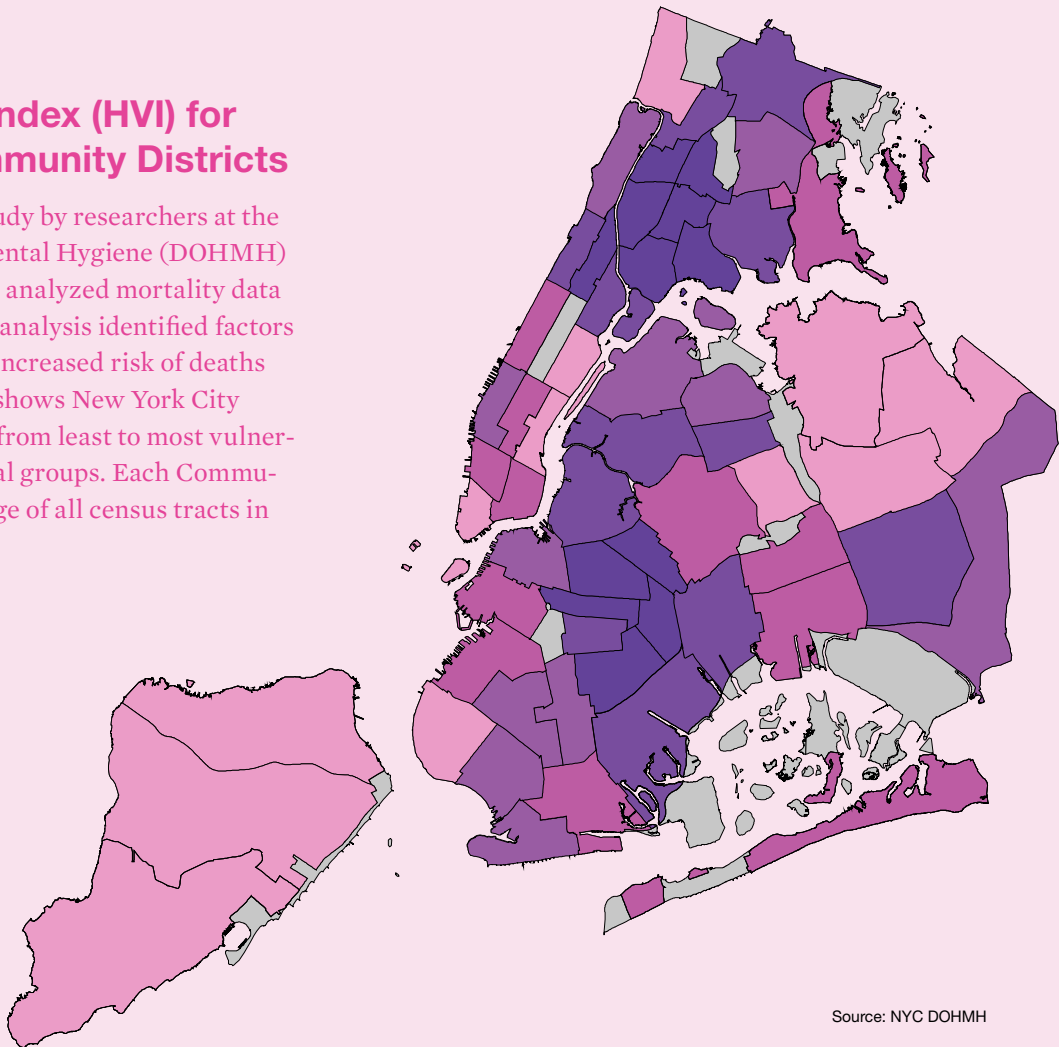
Finally, the City will propose that the New York City Board of Health amend the health code to establish maximum allowable temperatures in residential facilities and supportive housing for vulnerable people to protect against heat-related illness.



Heat Vulnerability Index (HVI) for New York City Community Districts

The HVI is adapted from a study by researchers at the Department of Health and Mental Hygiene (DOHMH) and Columbia University who analyzed mortality data from 2000 through 2011. The analysis identified factors that were associated with an increased risk of deaths during a heat wave. The map shows New York City Community Districts ranked from least to most vulnerable and divided into five equal groups. Each Community District HVI is the average of all census tracts in the Community District.

- Low Vulnerability
- Moderate Vulnerability
- High Vulnerability



Heat-related illness and death rates, by neighborhood poverty in New York City

Neighborhood Poverty	Average annual ED visit rate per million, excluding admissions and deaths (2005–2010)	Average annual hospital admission rate per million, excluding deaths (2000–2010)	Average annual death rate per million (2000–2011)	Percentage Aged 65+ Without Air Conditioning (2013)
Low (<10%)	36.7	12.7	1.2	8.1
Medium (10 to <20%)	52.4	18.5	1.4	9.3
High (20 to <30%)	55.2	19.0	1.5	18.9
Very High (30%+)	76.5	21.1	1.9	18.8

Notes: Data on heat-related deaths, hospital visits, and emergency department visits are restricted to events in the months of May through September for the years indicated. Neighborhood poverty rates are based on zip code and are defined as the percentage of residents with incomes below 100% of the Federal Poverty Level per the American Community Survey 2007-2011. Population estimates for incidence are based on 2010 census data. Source: NYC DOHMH



# Buildings

**Goal: The city’s buildings will be upgraded against changing climate impacts**

## Overview

Newly constructed buildings in New York City are designed to meet current codes that promote safety and energy efficiency. But the vast majority of city buildings—our homes, schools, workplaces, businesses, and places of worship—were constructed before most modern standards were in place. There is a significant need to adapt buildings across the five boroughs to withstand and recover from extreme weather events and other hazards, while continuing to serve residents and businesses during normal conditions.

The Mayor’s Office of Housing Recovery Operations is making significant investment in homes across the city through the Build it Back program, supporting the recovery of single-family homeowners and multi-family building residents. Eligible homeowners may repair, elevate, rebuild, or sell their homes. This program was dramatically improved in 2014 and is continuing to serve Sandy-impacted residents.

Other buildings across the city are also subject to ongoing climate risks, particularly the flooding associated with storm surge and sea level rise, as well as wind and heat. When the Federal Emergency Management Agency (FEMA) released its first Flood Insurance Rate Maps for New York City in 1983, it defined the 100-year floodplain—the area that has a one percent or greater chance of flooding in any given year—as an expanse that today includes approximately 35,500 buildings. However, Sandy’s extensive flooding encompassed over 88,700 buildings, and according to current

FEMA updates to these maps, the new 100-year floodplain is expected to include approximately 71,500 buildings. These expanding floodplains will bring flood construction and insurance requirements into neighborhoods that were not built to such standards.

Looking ahead, with new flood maps and rising flood insurance premiums, it will be critical to align new zoning and land use changes with existing building codes to mitigate the risk of flooding, upgrade against other threats, and ensure mitigation and insurance options remain available and affordable in the city’s coastal communities.

Using white roofs to adapt buildings at the Brooklyn Navy Yard



A Build it Back home elevation in Broad Channel, Queens

## Initiative 1

### Upgrade public and private city buildings

Many of New York City’s nearly one million buildings are not as prepared as they need to be against evolving risks. To address this, we will adapt vulnerable building stock to withstand the risks of climate change and extreme weather events.

The City will implement the Build it Back program to demonstrate how best to prepare homes and neighborhoods for the future. In addition to elevating houses, the program is exploring other protective strategies to improve single-family homes and upgrade multi-family buildings, including the relocation or hardening of building systems, and flood-proofing of lower levels. The City’s multi-family housing component of Build it Back provides comprehensive resiliency retrofit measures necessary to protect vulnerable residents from the loss of critical building services in the event of a storm, such as raising electrical equipment and other building systems, flood-proofing lower levels of buildings, and ensuring the redundancy of building systems.

The City will also invest in increasing the resiliency of public housing. NYCHA has secured over \$3 billion from FEMA to execute a comprehensive resiliency program across 33 public housing developments, which will include the elevation and hardening of building systems, flood-proofing, and upgrading infrastructure.

The City will also continue to repair and upgrade City-owned buildings to mitigate the impacts of future climate changes. In all cases, the City is committed to maximizing the allocation of federal funding for building resiliency and will identify all required local match funding to secure those funds.





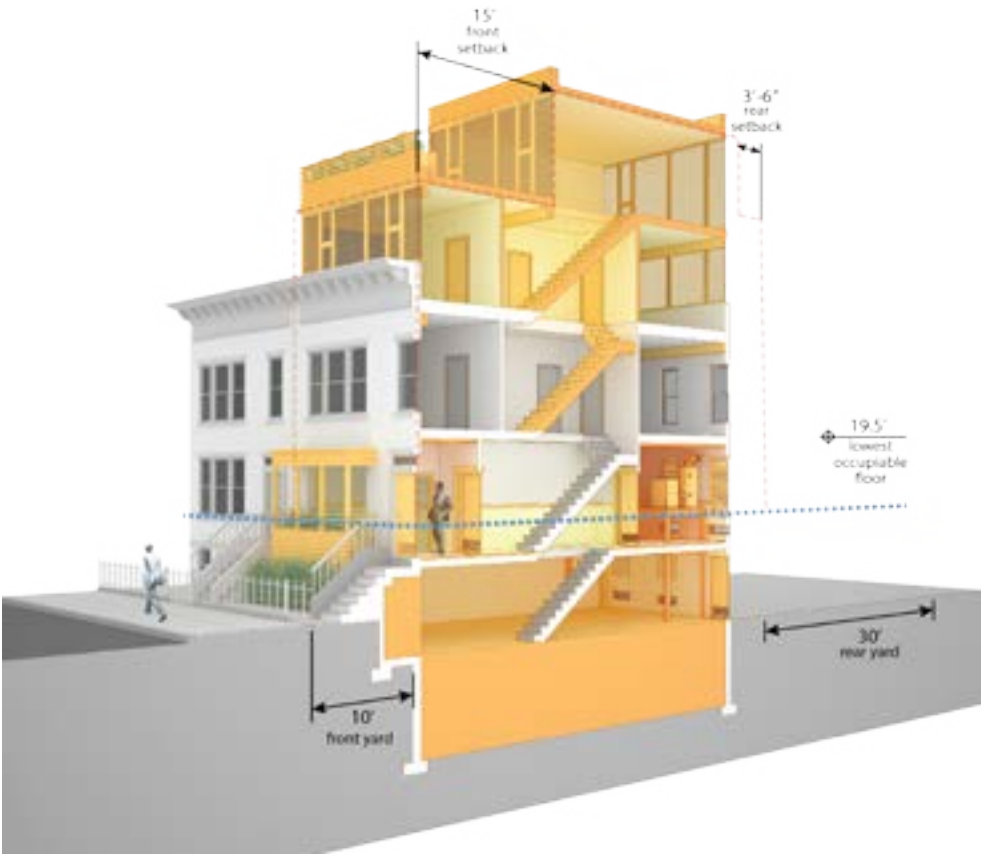
Initiative 2

Adopt policies to support building upgrades

The City’s efforts to upgrade buildings for climate resiliency must be supported by policies that enable the right investments in building resiliency. Overall, new zoning requirements, updated building codes, and reforms to flood insurance programs are already having an effect on the built environment, with the City coordinating these efforts across government stakeholders and with the community.

The City will continue to align zoning and building code updates with reforms to the National Flood Insurance Program (NFIP) and expected changes to the Flood Insurance Rate Maps (FIRMs). A working group focused on resiliency is already active within City government, with representatives across capital and planning agencies, and will lead this program.

By 2018, the City will work to develop and adopt consistent resilient design guidelines for buildings in areas vulnerable to flooding, extreme wind, and heat. With our changing climate, these standards will need to be developed based on an evaluation of the inherent uncertainty of future climate projections, the lifespan of assets, and their criticality in order to develop cost-effective design guidelines. These guidelines will ensure what is built adheres to the highest performance standards.



Retrofit strategy for an attached home from Retrofitting Buildings for Flood Risk



As part of this effort, the City will explore funding for loans and grants to finance and encourage resiliency retrofits such as home elevations and other building upgrades for building owners who were unable to participate in current programs.

Another important aspect in this effort is land use. The City continues to evaluate land use as a tool to promote resiliency across the city. The Department of City Planning’s ongoing Resilient Neighborhoods studies are engaging communities in ten areas across the five boroughs that face flooding and other resiliency challenges. In this process, the City will evaluate and establish a framework for adaptive land use planning based on a range of coastal hazards and with consideration of climate change projections. This will include updates to local land use regulations and citywide zoning to promote resiliency investments in buildings and infrastructure, including commercial and industrial buildings, and will explore incentives to balance the costs of improvements.

Finally, the City will increase the capacity of owners and operators of buildings located in the floodplain to align investments around both sustainability and resiliency investments when capital improvements are made. This will coincide with investments being made in the City’s municipal and private building stock to promote energy efficiency and reduced greenhouse gas emissions, as detailed in Vision 3.



“I live in Red Hook, Brooklyn, where flood insurance affordability is a concern. FEMA should reduce insurance premiums if homeowners take action to mitigate flood risk, like elevating mechanical equipment. We’re really excited about the Integrated Flood Protection System for Red Hook and all such resiliency projects across the city.”

—Andrea S.,  
Red Hook

Initiative 3

Work to reform FEMA’s National Flood Insurance Program (NFIP)

As the city’s coastal communities continue to be threatened by escalating flood risk and rising FEMA NFIP premiums, the City will pursue a comprehensive set of activities to promote investments in physical risk reduction and better policies, including those that promote NFIP affordability. This includes conducting several studies to evaluate recent NFIP changes and their impacts on urban environments, reviewing federal studies while they are being drafted, and working with FEMA to institute reforms based on the results of these studies.

The City wants to be sure the public understands its flood risk and flood insurance purchase requirements, and is already conducting frequent outreach meetings and developing further public education campaign materials for city residents living in and near the floodplain. This flood insurance consumer education campaign seeks to inform as many people as possible about their flood risk through advertisements on public transportation and radio, as well as at community events and through elected officials, with two key messages for consumers: understand your risk and flood insurance purchase requirements and purchase flood insurance.



Based on this program, the City will also work to build a regional and nationwide coalition in advance of the 2017 reauthorization of the NFIP to achieve reforms that will ensure residents are better educated about their risk, more incentivized to mitigate risk, and better able to afford flood insurance premiums.

At the same time, the City will continue to explore participation in FEMA’s Community Rating System (CRS), which could reduce premiums for the city’s flood insurance policyholders.

Today's population in the current and projected floodplain

	2013 (Preliminary FIRMs)	2050s (Projected)	2080s (Projected)	2100 (Projected)
Manhattan	89,100	214,500	275,600	317,700
Bronx	16,300	51,200	113,900	143,800
Brooklyn	164,800	331,100	466,200	515,400
Queens	99,100	167,200	201,500	219,100
Staten Island	30,700	44,900	56,300	63,100
Citywide Total	400,000	808,900	1,113,500	1,259,100

Today's buildings in the current and projected floodplain

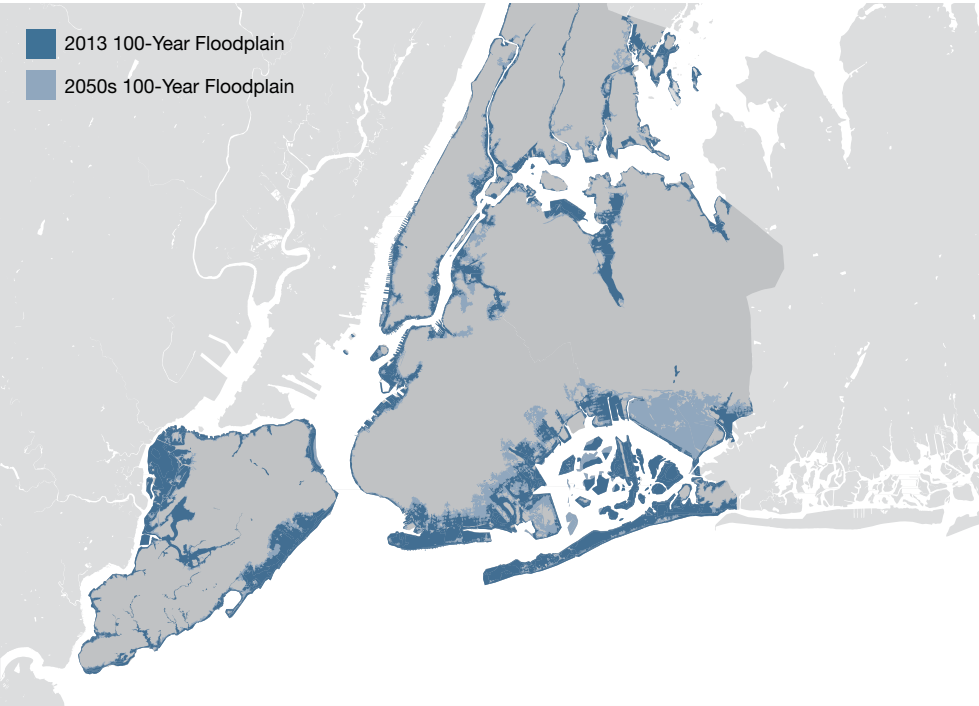
	2013 (Preliminary FIRMs)	2050s (Projected)	2080s (Projected)	2100 (Projected)
Manhattan	3,100	5,900	7,600	8,800
Bronx	4,500	8,200	13,700	16,500
Brooklyn	26,900	51,600	70,700	80,100
Queens	25,200	35,600	41,100	44,800
Staten Island	11,800	16,700	19,800	21,500
Citywide Total	71,500	118,000	152,900	171,700

Floodplain Source: FEMA (Current Floodplain) New York City Panel on Climate Change (NPCC) 2015 (2050s Floodplain)



Expanding floodplains due to rising sea levels

There are currently an estimated 400,000 residents and 71,500 buildings in the city’s 100-year floodplain. By the 2050s, the 100-year floodplain will expand to include an area that today has 808,900 residents and 118,000 buildings. This expansion of the floodplain, caused by sea level rise, is expected to continue through the end of the century.



New York City Panel on Climate Change, 2015



FEMA’s National Flood Insurance Program (NFIP)

Recent changes to the National Flood Insurance Program (NFIP), including the Bigger-Waters Flood Insurance Reform Act of 2012 and the Homeowner Flood Insurance Affordability Act of 2014, will have drastic consequences for the city’s coastal communities, including rising insurance premiums, increasing risks for home foreclosures, and loss of value for affected homes. To address this challenge, the City will continue to invest in risk reduction and work with FEMA to improve four critical aspects of its National Flood Insurance Program:

- 1. Improve FEMA's Flood Mapping Process:** The City’s new Preliminary Flood Insurance Rate Maps, issued in December 2013, had not been updated since they were first created in 1983, and as a result, when Hurricane Sandy hit, the flood maps severely understated the City’s flood risk. To better communicate and prepare for flood risk, the City seeks to require FEMA to update the maps at least every ten years. Further, the City will call on FEMA to implement a series of technical and process improvements—including exploration of the next generation of coastal flood models—to better represent and communicate flood risk.
- 2. Improve Risk-Based Pricing:** Currently, FEMA does not have the data required to adequately price a majority of New York City policies, such as those deemed to be “negatively-elevated structures.” In addition, FEMA does not, for the most part, offer premium reductions for mitigation approaches other than building elevation. The City is advocating for a broader list of partial mitigation measures that result in reduced risk and premiums.
- 3. Improve Management of Write Your Own (WYO) Companies:** FEMA sells its NFIP products through WYO insurance companies. Recent allegations concerning Sandy claims payments have demonstrated the need for better management and controls within insurance companies and by FEMA. The City will advocate for better oversight of these companies and better training of WYO companies to improve communication to existing and prospective clients.
- 4. Ensure NFIP Affordability:** The City is undertaking two affordability studies to help ensure the NIFP takes into account the specific characteristics of a dense, urban environment in the floodplain for both multi-family and one-to-four family housing.





# Infrastructure

## Goal: Infrastructure systems across the region will adapt to maintain continued services

### Overview

#### INDICATORS + TARGETS

- ✔ Reduce customer-hours of weather-related utility and transit service outages
- ✔ Increase the percentage of patient beds at hospitals and long-term care facilities in the 100-year floodplain benefiting from retrofits for resiliency

The risks from climate change and other 21<sup>st</sup> century threats will further challenge the resiliency of the city’s aging infrastructure for years to come. The City aims to adapt infrastructure systems in the city and across the region to withstand the impacts of climate change, to ensure the continuity of critical services in an emergency, and to recover more quickly from service outages.

The City is already implementing a robust portfolio of infrastructure-based recovery and resiliency initiatives as part of a more than \$20 billion climate resiliency program—which will reach nearly \$30 billion with additional spending by other regional partners.

The City also coordinates closely with its partners in the energy, telecommunications, and transportation sectors across the region to facilitate planning for and investment in the resiliency of their assets. These partners include the Metropolitan Transportation Authority (MTA), the Port Authority of New York and New Jersey (PANYNJ), Con Edison, the Long Island Power Authority (LIPA), National Grid, AT&T, Sprint, T-Mobile, Cablevision, Verizon, and Time Warner Cable, among others.

These publicly and privately owned systems are vulnerable to natural disasters and the impacts of climate change. Without proper investment, our transportation network, water, sewer, and waste infrastructure, energy system, telecommunications assets, and social infrastructure are all at risk.

**Transportation:** The city’s transportation network is vital to helping New Yorkers recover after a disruptive event. There is a need for focused attention to prepare these facilities and assets for future shocks by making the right investments for adaptation. Our subway system is particularly vulnerable to flooding and power disruption. New York City’s freight infrastructure is not only critical for day-to-day operations, but also serves as a necessary network in emergency response during natural and man-made disasters. The freight network connects New Yorkers to commodities such as food and fuel from areas across the region by air, rail, ship, and road.

**Water, Sewer, and Waste:** The city’s sewer system can be overwhelmed by heavy downpours that exceed the system’s design capacity, creating flooding and sewer backups, as well as by storm surges, which pose a risk to the city’s wastewater treatment plants and pumping stations. During heavy downpours, partially treated or untreated sewage can spill into waterways around New York City as a relief



#### Infrastructure

mechanism to avoid damage to treatment facilities. These events are anticipated to increase as New York City experiences more intense precipitation with more frequent flooding. The capacity of the City to manage its solid waste during and after a shock event is critical to maintaining healthy and safe conditions for communities. However, potential damage of sanitation facilities and assets, the ability to fully staff shifts, and the conditions of roadways, street lights, and other infrastructure in place determine the resiliency of the City’s solid waste management system.

**Energy:** The city’s underground and overhead energy distribution systems are vulnerable to floodwaters and high winds, as are electricity- and steam-generating facilities and liquid fuel refinery and distribution terminals. Today, 88 percent of the City’s steam-generating capacity lies within the 100-year floodplain. In the electric power system, 53 percent of in-city electricity-generation capacity, 37 percent of transmission substation capacity, and 12 percent of large-distribution substation capacity lie within the floodplain. Heat waves also pose significant challenges to operability of the electrical grid. Of the 39 fuel terminals in the New York metropolitan area, nearly all lie within FEMA’s 100-year floodplain. Extreme weather events would cause direct damage to key liquid fuel assets in the region and disrupt the power infrastructure critical to the functioning of terminals, refineries, and pipelines.

**Telecommunications:** The ability to communicate reliably is critical, especially in an emergency. More than ever, the resiliency of telecommunications services across the city, including wired and wireless telephone, video, and internet, will affect the city’s capacity to both respond to a major disruptive event and implement a coordinated recovery. These systems rely on a vast infrastructure of over 50 thousand miles of cabling, thousands of cell sites, and nearly 100 critical facilities. By the 2020s, 18 percent of telecommunications infrastructure will lie within the 100-year floodplain. Recent upgrades to the fiber optic network have helped, but more improvements are needed.

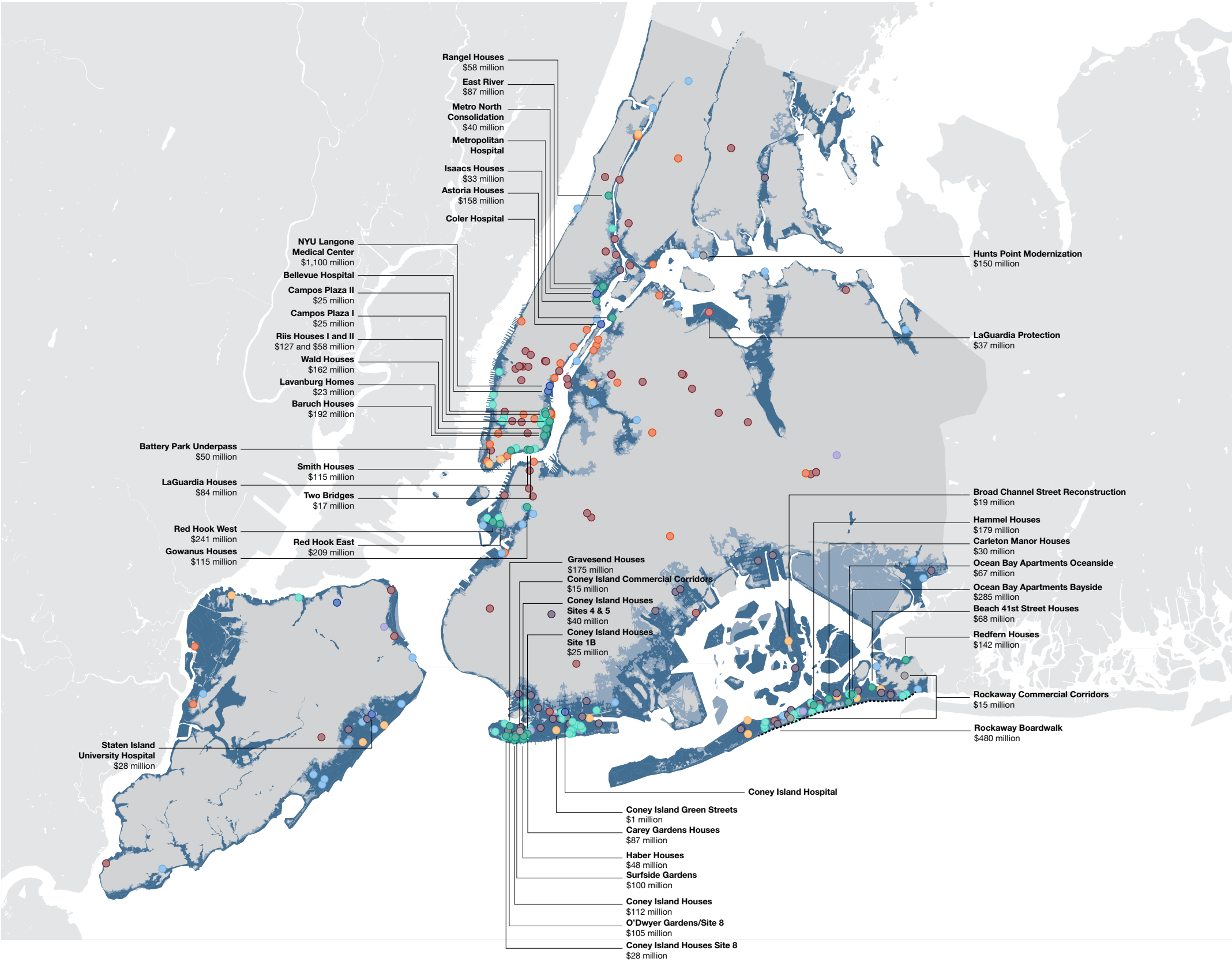
**Social Infrastructure:** Infrastructure that strengthens communities, such as hospitals, community centers, libraries, and schools, can enhance social resiliency and assist in immediate response after a disruptive event. Parks, in particular, can play a role in protecting adjacent neighborhoods from severe weather, and serve as gathering places after an event. But these facilities are as vulnerable to damage or to the interruption of essential services as any other critical facilities. In an emergency, the continuity of operations for buildings, critical vehicles, and telecommunications networks for first responders is a matter of life and death. And hospitals and long-term care facilities, including nursing homes and adult care facilities, are equally crucial to the immediate response and long-term recovery of neighborhoods after a crisis.

Each of these systems requires a specific set of activities to ensure the resiliency of the city.

A Resilient City  
Current Investments in Infrastructure  
and Buildings

- Transportation: \$565 million
- Regional Water and Wastewater: \$5.5 billion
- Hospitals: \$2.9 billion
- Libraries: \$10 million
- Schools: \$755 million
- NYCHA: \$3.2 billion
- Other Resiliency Housing: \$60 million
- MTA Fix and Fortify: \$10.5 billion
- PANYNJ Storm Sandy Program: \$1.1 billion
- Con Edison: \$1.0 billion
- Other: \$50 million
- 2013 100-Year Floodplain
- 2050s 100-Year Floodplain

Floodplain Source: FEMA (Current Floodplain) New York City Panel on  
Climate Change (NPCC) 2015 (2050s Floodplain)  
Note: NPCC Floodplain is a high-end projection (90th percentile).  
All costs are rounded estimates. Not all projects shown.







Initiative 1

Adapt the region’s infrastructure systems

Infrastructure systems are vital to making our city run. Across the region, New Yorkers rely on infrastructure systems every day to light and heat their homes, obtain drinking water, get to work, and access information. However, these infrastructure assets require regular repairs and upgrades to remain operable and adapt for resiliency. The City will, therefore, continue to pursue programs to coordinate investments across agencies and other infrastructure providers.

The City commits to repairing critical infrastructure systems damaged or destroyed by Hurricane Sandy, while mitigating future climate risks through billions of dollars in funds from FEMA’s public assistance grant program. The City is providing a required local match of funds in order to secure these resources.

Working with other regional partners, the City will invest in the resiliency of its transportation infrastructure, including ferries, tunnels, movable bridges, traffic signals, and streets, through the elevation or dry-proofing of facilities and systems, the hardening of conduits, enhanced continuity of operations planning, and mitigation strategies, such as hardening of street ends and green infrastructure for storm water management.

The City will work to ensure the resiliency of our freight network in the face of climate change by hardening our ports, rail, staging areas, and warehouses. The City is undertaking planning exercises to identify vulnerabilities to the freight network, improve redundancy, and provide resiliency strategies for at-risk infrastructure through partnerships with City agencies and the private sector.

Further, the City is planning for green infrastructure installations across the five boroughs, including bioswales, rain gardens, permeable pavement, and green roofs to reduce the amount of stormwater entering the sewer system, thus helping to keep the sewers from exceeding their capacity. The City is also investing in the resiliency of its wastewater treatment plants and pumping stations by implementing measures such as elevating and flood-proofing equipment, constructing barriers, and installing backup power supplies to ensure continued service in the event of a major storm.

Upstate reservoir dams are critical to our City’s drinking water sources. Given the increased variability in the frequency and magnitude of storms associated with climate change, DEP will go beyond the level of protection currently required by New York State. This guidance requires existing dams to be capable of safely passing half of the probable maximum flood, a standard we already meet. Beyond these requirements, we will commit to ensuring our dams safely pass the full probable maximum flood when capital improvements are made. Finally, while the science suggests New York City’s upstate water supply watersheds will experience increased precipitation due to climate change, we are also preparing for the risk of the opposite extreme: drought. The City commits to protecting our fresh water



resources, managing demand, increasing infrastructure investments for greater flexibility, and maintaining a steady supply of water during all weather conditions.

The City’s ability to function during a disaster depends on a resilient information technology infrastructure that keeps critical agency applications running, data accessible and secure, and telecommunications networks operating. The City will do so by populating its backup data center with replication and backup of critical applications, and incorporate this data center into its continuity of operations plans for City agencies. It will also continue hardening network and infrastructure assets to withstand both storm-related power outages and power grid outages, and strengthen the City’s support of mission-critical operations for first responders and essential City services.

In addition, the City will develop strategies to promote and enforce resiliency for telecommunications providers through the franchise renewal process and other agreements with the City. DoITT’s newly created Telecommunications Planning and Resiliency Office is facilitating an ongoing dialogue with telecommunications providers to discuss resiliency initiatives and address barriers to implementation.



MTA workers clear a clogged drain near the Cortlandt Street subway station to prevent flooding during a heavy rain event





The City will also work with wireless carriers to ensure cell sites and networks are hardened and resilient. In some cases, technology upgrades made at cell sites have improved battery backup time (e.g., newer equipment does not draw as much power). We also helped facilitate discussions between one wireless carrier and the Fire Department of New York City that ultimately led to approval of an alternate fuel source option for backup power. The carrier plans to deploy at least two of these units in New York City. And we have also advocated for strong backup power requirements in proceedings before the Federal Communications Commission. Further, LinkNYC will increase access to affordable broadband through a network of public Wi-Fi, and is a model for incorporating resiliency requirements into franchise agreements, ranging from enhancing cyber-security to submitting an annual resiliency plan.

The City will proceed with the retrofit of critical buildings, such as healthcare, hospitals, and long-term care facilities, and other critical municipal assets for long-term resiliency and to help our critical buildings withstand the risks posed by climate change. The City has secured nearly \$1.7 billion from FEMA to execute a comprehensive resiliency program across four HHC facilities: Bellevue Hospital, Coney Island Hospital, Metropolitan Hospital, and Coler Rehabilitation and Nursing Care Center. Resiliency upgrades to these facilities will include the installation of backup power systems, the elevation and hardening of building systems, and flood-proofing of lower levels. The City is also working to secure funds from FEMA's Hazard Mitigation Grant Program for the resiliency of long-term care facilities located in the 100-year floodplain.

Initiative 2

Adopt policies to support infrastructure adaptation

The City will use the best available climate science, as well as robust research, legislative action, advocacy, and regional coordination to adapt the city's infrastructure to be resilient against disruption. It is critical to standardize the process by developing and implementing a set of design guidelines for resiliency to ensure what we build adheres to the highest performance standards. By 2018, we aim to have all New York City agencies adopt standardized resiliency design guidelines for streets, transportation, public spaces, utilities, and other infrastructure.

The City will call on regional infrastructure providers and operators, such as the MTA, PANYNJ, ConEdison, National Grid, LIPA, and Verizon to make critical resiliency investments in their systems, coordinated through the Climate Change Adaptation Task Force.

The City will explore, with our State and academic partners, the preparation of a Regional Resiliency Assessment Program with the U.S. Department of Homeland



Security on the resiliency of the City's supply chain for critical commodities such as food, fuels, materials, and consumer goods. NYC EM and Department of Citywide Administrative Services are in development of operational response strategies to address possible fuel disruptions to New York City. In order to prevent and prepare for such disruptions, these agencies and the Mayor's Office are working in partnership with the Columbia University SIPA Center on Global Energy Policy, as well as state, federal, and private sector partners to develop a liquid fuels resiliency strategy. This may include standardized regulatory waivers, communications protocols, fuel reserves, and hardening of assets for the refinement, storage, and delivery of fuels.

The City will also conduct an analysis and develop recommendations to enhance the resiliency of the city's food supply chain, which is expected to support further investments at the Hunts Point Food Distribution Center beyond the funds that have already been identified through HUD's Rebuild by Design competition.



Activity at the New Fulton Fish Market at Hunts Point





# Coastal Defense

**Goal: New York City’s coastal defenses will be strengthened against flooding and sea level rise**

## Overview

### INDICATORS + TARGETS

- ✔ Increase the linear feet of coastal defenses completed
- ✔ Increase the acres of coastal ecosystems restored
- ✔ Increase the number of residents benefiting from coastal defenses and restored ecosystems

Hurricane Sandy vividly demonstrated the city’s vulnerability to coastal storms. With 520 miles of coastline, New York City has been exposed to these risks since its founding. Over the past 400 years, the city’s shoreline has been developed and modified in ways that have contributed to increased risks from coastal storms. Now, a changing climate is adding to the risks.

Our current understanding of flood risk comes from FEMA and its Flood Insurance Rate Maps (FIRMs). These maps were first adopted in 1983 and showed that 33 square miles of the city were in the 100-year floodplain, which includes 218,000 people. Updated maps will show approximately 400,000 people currently in the 100-year floodplain.

These maps do not include projections on rising sea levels. In addition to the approximately 1.1 feet of sea level rise the city has experienced since 1900, current mid-range projections show sea levels will rise another one to two feet by 2050 and two to four feet by 2100. The NPCC shows that due to sea level rise, these floodplains are expected to continue growing and increase the frequency and intensity of citywide flooding. In fact, the floodplain projections provided by the NPCC show 71 square miles will be in the 100-year floodplain in 2050, which includes approximately 808,900 people. This is a 42 percent increase.

Alarming as they are, these projections largely assume that no action will be taken to mitigate this risk. However, the City is continuing to act to reduce the impacts of climate change. We will expand our efforts to adapt coastal communities to the evolving risks of climate change, including flooding and sea level rise. In June 2013, the City released its first-ever comprehensive coastal protection plan, which will significantly reduce the city’s vulnerabilities.

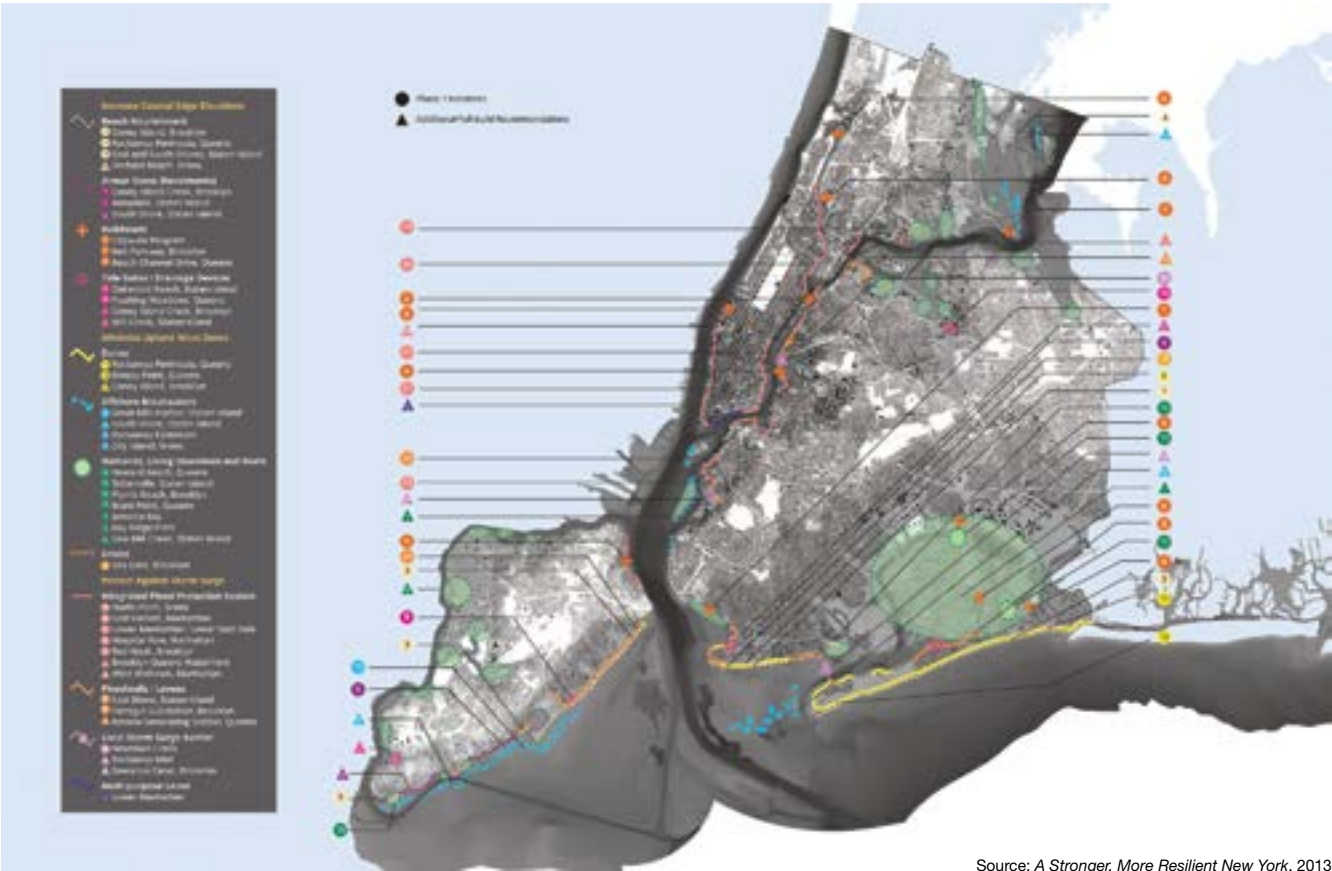
Since 2013, the city has initiated many projects to strengthen our defenses against the risks associated with climate change. These projects include beach nourishment in Coney Island, the Rockaways, and Staten Island; miles of new dunes across the city’s beaches; repairs to bulkheads in low-lying neighborhoods; new investments in Red Hook, the east side of Manhattan, Lower Manhattan, Breezy Point, Howard Beach, and Tottenville; and feasibility studies for flood protection systems for Newtown Creek, Gowanus Canal, East Harlem, the North Shore of Staten Island, and Coney Island Creek.



We are also partnering with U.S. Army Corps of Engineers (USACE) as it implements new coastal resiliency projects, including construction of T-groins at Sea Gate in Coney Island, advancing implementation of the East Shore levee and South Shore investments in Staten Island, and development of the Rockaway Reformulation investments on the Rockaway peninsula beaches and in Jamaica Bay.

All of this work will continue to require funds and new sources of financing. While the City has successfully launched its first phase of a coastal protection program with nearly half of the funding secured, more funds are needed now and in the future to implement this program fully and effectively reduce risk in our coastal communities.

## New York City's Comprehensive Coastal Protection Plan



Source: A Stronger, More Resilient New York, 2013



Initiative 1

Strengthen the city’s coastal defenses

Prior to 2013, the City had never adopted a comprehensive coastal protection plan to reduce the risk of coastal flooding and sea level rise. With the release of A Stronger, More Resilient New York, the City now has a comprehensive coastal protection plan in place and has already taken steps to implement its first phase, which includes a \$3.7 billion program of infrastructure investments, natural area restorations, and design and governance upgrades. The City will, as funds continue to be identified, make progress on the entire plan.

Over the next ten years, the City will strengthen its coastal defenses by completing many vital projects in all five boroughs, including:

- An integrated flood protection system for the east side of Manhattan and in Lower Manhattan south of Montgomery Street to the northern end of Battery Park City
- Armored levee and stormwater management on the East Shore of Staten Island, in partnership with USACE
- Investments on the Rockaway peninsula beaches and in Jamaica Bay, as part of the USACE Rockaway Reformulation, plus further investments in Breezy Point
- An integrated flood protection system in Red Hook, in partnership with the State
- Coastal and energy resiliency improvements in Hunts Point to protect the city’s food distribution center from flooding and power loss
- Investments to improve low-lying shorelines across the city, including in Coney Island and the South Shore of Staten Island
- Nature-based measures in Jamaica Bay, such as those at Sunset Cove in Broad Channel and Spring Creek in Howard Beach

To deepen public participation in the implementation of this coastal protection plan, the City will also reestablish and expand the Waterfront Management Advisory Board (WMAB) to advise the City on the waterfront, including coastal resiliency, natural resources, and related waterfront topics.

Through a partnership with the NPCC and the Science and Resilience Institute at Jamaica Bay, the City will continue to expand its understanding of the science of resiliency and explore nature-based strategies to enhance resiliency in the city. The City will also continue to explore the implementation of other innovative resiliency programs, including oyster production and education programs.



East Side Coastal Resiliency

In June 2014, the City was awarded \$355 million for coastal resiliency investments through HUD’s Rebuild by Design competition, aimed at stimulating the development and funding of innovative resiliency projects in the Sandy-impacted region. Of the total amount, \$335 million was earmarked for development of the first phase of an east side integrated flood protection system in Lower Manhattan. This system is expected to stretch from East 23rd Street to Montgomery Street, with enhanced resiliency against flooding while expanding public access to East River Park and its adjacent esplanades. When completed, it will benefit thousands of public housing and other residents of a particularly vulnerable part of Manhattan, and will demonstrate a new model for integrating coastal protection into neighborhoods, consistent with the City’s resiliency vision.

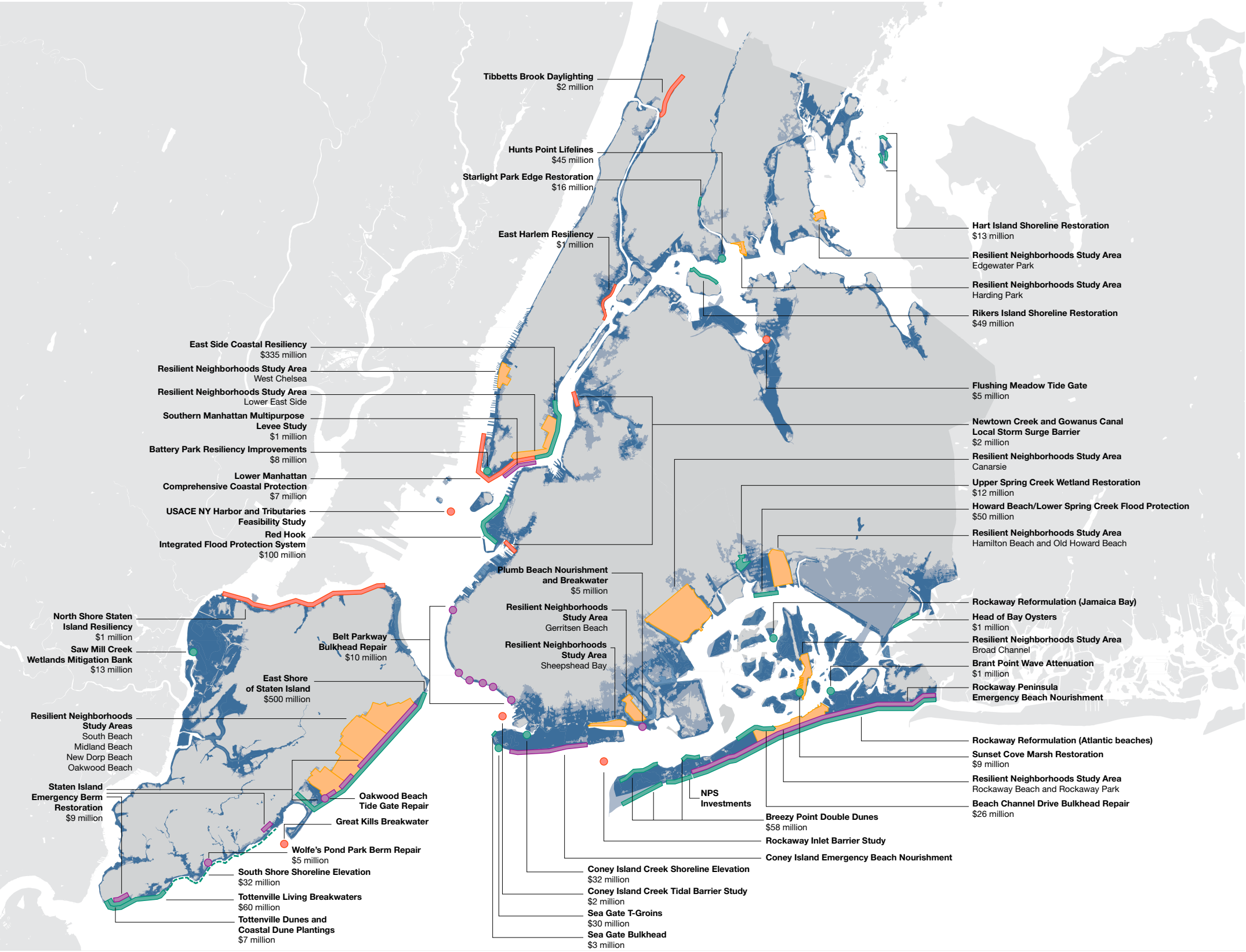




A Resilient City  
Coastal Protection Project Status

- Completed
- Study Funded
- Project Funded
- DCP Resilient Neighborhoods Study Areas
- 2013 100-Year Floodplain
- 2050s 100-Year Floodplain

Floodplain Source: FEMA (Current Floodplain) NPCC 2015 (2050s Floodplain)  
Note: NPCC Floodplain is a high-end projection (90th percentile). All costs are rounded estimates. Not all projects shown.





Initiative 2

Attract new funds for vital coastal protection projects

The City’s \$3.7 billion coastal protection plan is nearly 50 percent funded and moving forward. But significant portions of the plan still require additional funds for implementation.

To address this need, the City will continue to identify and secure new sources of funds to reduce coastal flooding risk. In partnership with USACE, a new feasibility study for New York Harbor and its tributaries will launch in 2015. It is intended to result in new projects that can be authorized and funded in New York City, in accordance with the City’s coastal protection plan.

To advance elements of its full-build coastal protection plan, the City is conducting its own feasibility studies of several investment opportunities, including at Coney Island Creek, Newtown Creek, Gowanus Canal, and Lower Manhattan. These studies are being conducted to inform future USACE studies, and are intended to strengthen the City’s ability to secure additional funds.

The City will also seek out new sources of funding. HUD is currently running a National Disaster Resilience Competition which will fund innovative resiliency measures that strengthen communities. The City has already submitted its phase one application to this competition. Throughout the rest of 2015, the City will work with community partners and other stakeholder agencies to secure funds through this competition.



In addition, the City will continue to evaluate long-term coastal protection measures, such as a multipurpose levee in Lower Manhattan, particularly where investments could strengthen communities and potentially generate funding to offset construction costs. Finally, the City will continue to explore other innovative financing opportunities.

A proposed multipurpose levee in Lower Manhattan



Initiative 3

Adopt policies to support coastal protection

In order to strengthen the city’s coastal defenses effectively, policies must be aligned and adopted to support the right investments in coastal protection and ensure those investments are operated and maintained effectively.

As new assets are built, it will be necessary for the City to have a more effective management plan for waterfront assets. To address this need, the City will continue to upgrade its waterfront management tools and fund citywide waterfront inspections to assess and better manage its assets.

The City will also explore new governance models to support the completion and long-term operation of integrated coastal resiliency measures, based on national and international best practices.



Construction of t-groins at Sea Gate in Brooklyn



# Diverse and Inclusive Government

**One of New York City’s greatest strengths is its diversity.** We have always been a city of many cultures, attracting people from across the nation and around the world who seek opportunity in a vibrant, engaging, and supportive urban environment.

City government’s ability to govern effectively and serve all our residents depends on the diversity of our workforce and senior leadership, and maintaining an atmosphere in City workplaces that accepts and embraces diversity.

**Diversity helps increase innovation.** Research has shown that effective diversity management coupled with an inclusive work environment improves organizational performance and innovation. A diverse workforce also brings different perspectives and solutions to challenges, often resulting in new and creative advances.

City agencies invest large amounts of their budgets in compensation and benefits. The return on this investment significantly increases with a leadership pipeline of diverse individuals that is representative of all New Yorkers. The diversity dividend is maximized when employees perform at their peak. Peak performance can only happen in inclusive, harassment-free environments where workplace policies that enhance retention, produce greater workplace engagement, and further productivity across the organization are in place.

Diversity and inclusion increase an agency’s capacity to serve and protect people with different experiences or backgrounds; they also enhance an agency’s ability to be receptive to different traditions and ideas. **A workforce that reflects the City of New York builds trust in government and inspires our residents’ civic engagement.** Building on this legacy of improving diversity and inclusion, New York City is now positioned to strengthen its commitment and accelerate our efforts to attract, retain, and develop a diverse workforce. The City is also determined to serve all New Yorkers equally, including representation and participation of minority- and women-owned businesses (M/WBE) in OneNYC and all City initiatives.



# Government Workforce

**Goal: Build a government workforce reflective of the diversity and inclusion of all New York City communities**

## Overview

A majority of the City’s current civil workforce is comprised of women and people of color. Given the diversity of our population, we must also diversify our senior leadership. Equitable representation across all levels of City government strengthens the city by increasing efficiency, excellence, and strong delivery of City services; increasing the economic security of previously excluded professionals and their families; growing a diverse middle class; enhancing trust in government with a workforce that reflects the community it serves; and creating a pipeline of young leaders to join New York City government.

## Initiative 1

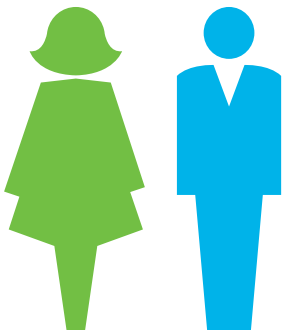
### Improve the way New York City recruits a diverse workforce

In order to show that government work is an attractive career path for graduating high school and college students from all backgrounds, we have strong programs and partnerships with organizations, high schools, colleges, and graduate programs to learn from and grow targeted talent recruitment pipelines.

We will launch new programs to recruit administrative talent as we better leverage and publicize our existing programs. In addition to the Public Service Corps, we currently run the Management Academy, a program designed specifically for the city’s new and emerging leaders; the Leadership Institute, which has helped prepare outstanding mid-level agency executives to lead organizational change initiatives; and the Urban Fellows program, which was designed to introduce America’s finest college students and graduates to local government and public service.

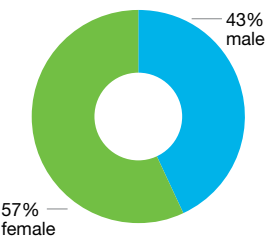
We will study the potential of three new programs: the Mayoral Leadership Institute for mid-level administration leaders to partner with a local university; the Mayoral Public Sector Fellowship to provide graduate school opportunities for high performing mid- and senior-level officials; and the Smart Government Initiative partnership with Cornell Tech for entry- and junior-level public sector professionals.

**The New York City government has built a diverse and inclusive workforce of 327,793 employees**

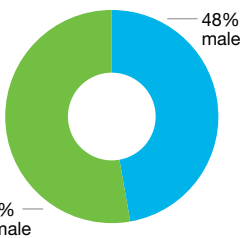


## Gender Balance

NYC Government



NYC Population



2013 Workforce Profile Report, NYCEDC's Center for Economic Transformation

## Median Age

NYC Government



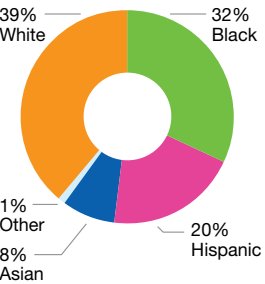
NYC Population



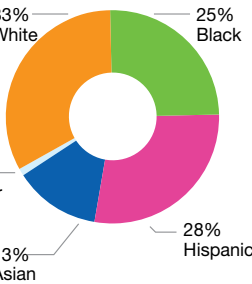
2013 Workforce Profile Report, ACS 2013

## Racial Diversity

NYC Government



NYC Population



2013 Workforce Profile Report, ACS



## Successful Existing Programs



The City’s Public Service Corps program is the nation’s first and largest off-campus internship program for college students. It provides undergraduate and graduate students with opportunities to serve their communities, build professional skills, and learn about careers in the public sector. The Department of Citywide Administrative Services (DCAS) and Department of Education (DOE) currently partner to provide internships, training, and other support to the City’s automotive high schools, led by the Brooklyn Automotive High School. This successful partnership has improved educational opportunities and led to direct employment for automotive high school participants. DCAS offers training courses designed to strengthen test-taking skills and workforce readiness, and assists students in matching their education and experience with City jobs and highlighting potential exams from the exam schedule.



## Initiative 2

### Improve the way New York City retains a diverse workforce

Recruiting a diverse workforce is only part of the story. Unless the City provides workplaces that embrace diversity and provide equitable opportunities for all City workers to grow and succeed, we will struggle to both recruit and maintain that diversity.

**This means the City must takes steps to ensure it is diverse at every level and that people from all backgrounds have opportunities across disciplinary areas.** This is the 21<sup>st</sup> century. It’s no longer acceptable for our teaching corps to be all female or our firefighters all male.

To improve the way New York City retains a diverse workforce, City agencies have formed diversity work groups and internal councils to develop and share best practices and address the underrepresentation of various demographic groups in certain areas. For example, the Department of Design and Construction has established a cross-divisional task force to focus on hiring and succession planning within their agency. Meanwhile, the Law Department has established a mentoring initiative called the Coaching Collaborative, which meets on a regular basis to discuss ways to enhance the work environment. And the Fire Department is planning a specific initiative to recruit talented women firefighters as part of its broader diversity agenda.

The opportunity to increase diversity is particularly ripe at this moment, with large segments of the City workforce soon eligible to retire. DCAS will lead a project to integrate workforce analytics into succession planning to promote career opportunities that exist, and utilize long-range planning to map retirement trends and establish New York City government workforce needs and hiring imperatives for the future. In the next two years, DCAS plans to conduct an annual Employee Engagement survey; deploy onboarding and exit interview guidance; issue a full Workforce Profile Report; identify workforce trends; issue an updated Risk Assessment Tool to enable each agency to analyze its own workforce, turnover rates, and attrition risks; develop a retirement predictor analysis and incorporate findings into exam planning and attrition risk assessments; and analyze training records to identify training efficacy and impact on career mobility.

## Initiative 3

### Improve the way New York City develops a diverse workforce

New York City is undertaking a disparity study in accordance with Local Law 1. The results of this study will help inform M/WBE goals, which will be included in the future OneNYC progress update. For the first time since 2005, DCAS, in cooperation with the Mayor’s Office, issued a revised citywide Equal Employment Opportunity (EEO) policy that included diversity and inclusion leadership best practices for commissioners. Agencies are currently participating in the **Managing Diversity and Inclusion Leadership Initiative (MDLI)**, which focuses on 15 best practices including commitment statements from commissioners, quarterly reviews of workforce data on the diversity of senior leadership candidate slates, mentoring, succession planning, identification of high potential talent, structured interviewing, and measuring the establishment of employee resource groups. Seventy percent of agencies have already incorporated a focus on ten of the best practices into their annual diversity and EEO plans. NYPD is the top performer engaged in or exploring all 15 best practices.

DCAS developed and promotes Everybody Matters, the City’s flagship diversity and inclusion training program available to all agencies. Between January and April 2015, DCAS has trained more than 6,000 employees.

To further expand our diversity, we will focus on recruiting and including populations that historically have not been measured in our multicultural and multi-generational workforce. These populations include disabled, veterans, and LGBT residents.

We will also expand vocational skills and training programs in public service, which are expected to help the City reach populations that have previously been under-represented in government jobs that require vocational skills. These programs will be developed with our union partners to address the skills gap. We will also establish clear career pathways and mentoring programs, enhance our talent development framework, and include budget allocations for agencies to enhance diverse recruiting practices.



# Minority and Women-owned Business Enterprise

**Goal: Increase total City spending with Minority and Women-owned Business Enterprises (M/WBEs) to \$16 billion over the next ten years**

## Overview

Minority and Women-owned Business Enterprises (M/WBEs) are some of the strongest drivers of local economic growth because they tend to hire from within New York City’s diverse communities and keep money and investments flowing back into our communities. By awarding contracts to M/WBEs, the City will not only help close the inequality gap when it comes to wealth creation, but also support sustainable and diverse communities and local economic growth.

New York City is currently a leader in M/WBE inclusion, but there is still significant room for improvement. Contracts have not historically been awarded to M/WBEs at a level commensurate with their representation in the marketplace. That is changing as the City undertakes a range of efforts to boost M/WBE participation. For example, under Local Law 1, in Fiscal Year 2014 the City awarded \$690 million to certified M/WBEs in all prime and subcontracts, for a 57 percent increase over Fiscal Year 2013.

But this is not enough. In addition to increasing M/WBE program participation, the City can better increase M/WBE participation, even when not subject to Local Law. The City will aim to continue our positive trend and spend more than \$16 billion with M/WBEs over the next ten years. This target assumes that there will not be major downward deviations in economic conditions and that the City is able to win the changes in state and local law that we seek to give us the legal flexibility necessary to boost M/WBE participation to these levels. To be clear, this goal is a floor, not a ceiling, and includes all City contracts—not just those subject to the M/WBE program.

Year	Total M/WBEs
2011	3,244
2012	3,526
2013	3,700
2014	3,783

Annual City M/WBE Compliance Reports, 2011-14.

## Initiative 1

### Increase the number of certified M/WBEs

As of July 2014, there were 3,783 certified M/WBEs in New York City—a slight increase from 3,700 in July 2013. The City sponsored 20 certification workshops in Fiscal Year 2014, with community partners supplementing this outreach with marketing workshops, networking events, and business development services. However, there are still opportunities for increased support during the certification process, which the City continues to streamline. These include the use of the recently-launched New York City online certification portal and increased outreach to firms that could be eligible. We will engage in a marketing push to attract M/WBEs, with a special focus on those that could support OneNYC initiatives. These efforts will be undertaken in conjunction with Small Business First and efforts to reform procurement processes in the City.

## Initiative 2

### Increase the rates at which agencies utilize M/WBEs

Across contracts of all sizes, M/WBEs are still underutilized. Increasing agency utilization will require support from the City. We will provide agencies with additional tools to support their utilization of M/WBEs and hold them accountable for using them. We will invest in additional capacity building services for M/WBEs, and increase the use of strategies proven to support M/WBEs, including prequalified lists and pre-bid conferences. We will negotiate modifications to the City’s Project Labor Agreements that will be more M/WBE-friendly and, where appropriate, encourage agencies to elevate the role of M/WBE officers and identify and cultivate M/WBEs’ relationships with contracting agencies.

## Initiative 3

### Expand legal tools to induce greater usage of M/WBEs

New York City is undertaking a disparity study in accordance with Local Law 1. The results of this study will help inform M/WBE goals, which will be included in the future OneNYC progress update. The City will seek to amend legal and policy barriers to greater M/WBE awards in City procurement, including seeking State legislative changes designed to increase M/WBE participation, and presenting proposed changes to the Procurement Policy Board (PPB) rules to expand “best value” as a basis for procurement.





# Performance Tracking

**Goal: Systematically track performance of equity outcomes to ensure OneNYC is making a positive and equitable impact on all New York City communities**

## Overview

New York City does not have a consistent and centralized way to ensure physical interventions—such as those called for by OneNYC—have an impact on all residents in an equitable way. Collecting data at a population-wide level, rather than disaggregating it, can mask deep problems and deprive the City of the ability to identify when initiatives may have unintentionally disparate impacts on certain communities. For example, tracking marijuana arrests by race allowed the City to see that African-American and Latino New Yorkers were being arrested at far higher rates than white New Yorkers even though research has shown that, across racial groups, people use marijuana at roughly similar rates. This led to policy reform.

Going forward, the City will systematically track metrics on opportunity, progress, and livability across all of New York City’s traditionally disadvantaged groups. We will establish a cross-agency group to oversee the collection, analysis, and internal reporting of the data at the agency level. The City will use this data to support agencies in making decisions around OneNYC and other initiatives designed to better support equitable outcomes.



# Initiative 1

**Issue an Executive Order requiring regular compilation and use of equity metrics**

We will issue a Mayoral Executive Order requiring the Social Indicator Report, which analyzes the social, economic, and environmental health of the city, to break out measurements by traditionally disadvantaged groups and to gather that data where it is not currently being collected. This and additional reports, such as those being developed by the Young Men’s Initiative, DOHMH, and others, will also bring attention to disparities. Through these reports, we can ensure that policy decisions advance the Mayor’s equity platform.



# 2011 Sustainability Initiatives

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
HOUSING AND NEIGHBORHOODS	CREATE CAPACITY FOR NEW HOUSING					
	1	Continue transit-oriented rezoning	In Progress	The City continues to pursue opportunities for rezonings in transit rich neighborhoods. For further updates on this initiative, refer to the City's comprehensive housing plan, <i>Housing New York: A Ten-Year, Five-Borough Plan</i> .	Continue to create opportunities for denser development in transit-accessible areas, in large rezonings including Sunnyside/Woodside, Bedford-Stuyvesant North, West Harlem, West Clinton, and East Fordham Road	Completed
					Continue to apply Inclusionary Housing Program in re-zonings that encourage substantial new housing development	Partially Completed
	2	Explore additional areas for new development	In Progress	Work is underway on the open space for the first phase of New Stapleton Waterfront, anticipated to open to the public in the spring of 2016. Advance Phase II open space plans for New Stapleton Waterfront by end of 2015. Additionally, the City will implement plans for the Staten Island Innovation Cluster on the North Shore in 2015. As part of NextGen NYCHA, consultation with residents has begun regarding new development opportunities on three public housing properties located in Brooklyn and the Bronx respectively. The City released the RFP for the Seward Park RFP in Jan 2013 for the development of nine parcels in the Lower East Side. The development, Essex Crossing, will include 1,000 housing units, half of which will be permanently affordable. The first phase of construction is projected to begin in 2015.	Advance development and open space plans for the Staten Island North Shore	Partially Completed
					Identify additional potential infill opportunities citywide	Partially Completed
					Explore opportunities for the use of underutilized MTA properties to create housing, economic development, open space, or other opportunities to enhance surrounding communities	Completed
					Implement improvements in Hudson Yards to catalyze development	Completed
					Unlock development potential of underutilized Seward Park sites	Completed
					Reduce City government leased or owned space by 1.2 million square feet	Completed
	3	Enable new and expanded housing models to serve evolving population needs	In Progress	The City continues to enable new and expanded housing models to serve evolving population needs. For further updates on this initiative, refer to the City's comprehensive housing plan, <i>Housing New York: A Ten-Year, Five-Borough Plan</i> .	Explore regulatory and legislative changes to allow the creation of safe and legal additional units in existing housing	Partially Completed
					Explore new housing models to promote smart growth and serve smaller households	Completed
	FINANCE AND FACILITATE NEW HOUSING					
	4	Develop new neighborhoods on underutilized sites	In Progress	Construction has commenced for Parcels A and B of Hunters Point South, totaling 925 units of affordable housing. Design for Willets Point Phase 2 infrastructure and waterfront park commenced in August 2014 and is expected to be completed by August 2015. More than 1,190 units in 724 homes have been completed in Arverne, Queens. Over 1,000 additional units are expected to be completed in 2015.	Begin construction on 900 units of housing in Hunter's Point South, Queens	Partially Completed
					Begin infrastructure construction and remediation for Willets Point Phase I, a mixed-use development including 400 housing units	Partially Completed
					Complete construction on 1,300 units and begin construction on 900 units in Arverne, Queens; Complete construction on 400 units and start construction on 80 units in Gateway Brooklyn	Partially Completed



Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
HOUSING AND NEIGHBORHOODS	5	Create new units in existing neighborhoods	In Progress	In total, 3,035 new construction units in the Melrose Commons URA have been completed and occupied. Since 2004, NYCHA has completed more than 2,730 units of affordable housing. For more information related to this initiative, refer to the City's comprehensive housing plan, <i>Housing New York: A Ten-Year, Five-Borough Plan</i> .	Develop 20,000 new units by 2014 under the New Housing Marketplace Plan	Completed
					Complete construction of over 3,000 units in Melrose Commons Urban Renewal Area	Completed
					Complete construction on 1,640 units and begin and finish construction on 1,800 affordable units in NYCHA sites	Completed
					Explore modification of parking requirements for affordable housing to lower construction costs and facilitate housing creation	Completed
	6	Develop new housing units in existing City properties	In Progress	Construction and marketing have commenced at Artspace PS109 in East Harlem. The City is exploring the development of the West 20th St. site as public openspace in addition to the continued creation of affordable housing in CB 4. For more information related to this initiative, refer to the City's comprehensive housing plan, <i>Housing New York: A Ten-Year, Five-Borough Plan</i> .	Start construction of housing units in the former PS 109 in E Harlem	Partially Completed
	ENCOURAGE SUSTAINABLE NEIGHBORHOODS					
	7	Foster the creation of Greener, Greater Communities	Completed	This initiative was completed in 2013. The City continues to encourage green communities through various programs.	Launch Greener, Greater Communities pilot	Completed
	8	Increase the sustainability of City-financed and public housing	In Progress	Since July 2014, more than 80 HPD-funded projects consisting of nearly 200 buildings and over 9,600 dwelling units applied for Enterprise Green Communities (EGC) certification. Additionally, 13 HPD-funded projects were LEED certified. Also in 2014, HPD conducted six Green Owners Nights for small and medium sized building owners, providing best practices on green energy, water, materials, and community issues. In 2014 HPD rolled out new “green” standardized specifications for preservation projects, incorporating best practices in sustainable building material selection into all of the agency's sponsored rehab projects. In April 2015, Mayor de Blasio, HUD Secretary Julian Castro and NYCHA announced the launch of the largest energy savings program for any public housing authority in the country. Through a series of competitive Energy Performance Contracts, it is estimated that at least \$100 million in work will occur across nearly 300 NYCHA developments to upgrade and retrofit thousands of buildings, dramatically reducing greenhouse gas emissions and generating tens of millions of dollars in cost savings, as well as creating more than 500 jobs.	Certify 40 affordable housing projects with Enterprise Green Communities every year	Partially Completed
	9	Promote walkable destinations for retail and other services	In Progress	The City continues to promote neighborhood shopping districts. In Staten Island, two additional Race for Space businesses opened and a third is expected to open in 2015. In June 2014, a 14,000 square foot Fine Fare supermarket to be located in the Melrose section of the Bronx was approved for FRESH benefits. In October 2014, a FRESH ShopRite supermarket was opened in East New York, Brooklyn. At 90,000 square feet, this is the largest supermarket in New York City. A FRESH Western Beef store located in the Soundview section of the Bronx is expected to open in 2015. To date, FRESH benefits have incentivized the renovation, expansion, or creation of approximately 585,000 square feet of supermarket selling area and represent a private investment of over \$80 million in supermarket development for healthy food in underserved neighborhoods. The City, through the FRESH program, continues to explore challenges and opportunities in improving food retail access in the most underserved neighborhoods.	Promote neighborhood shopping districts	Partially Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
HOUSING AND NEIGHBORHOODS	10	Preserve and upgrade existing affordable housing	In Progress	In April 2015, Mayor de Blasio, HUD Secretary Julian Castro and NYCHA announced the launch of the largest energy savings program for any public housing authority in the country. Through a series of competitive Energy Performance Contracts, it is estimated that at least \$100 million in work will occur across nearly 300 NYCHA developments to upgrade and retrofit thousands of buildings, dramatically reducing greenhouse gas emissions and generating tens of millions of dollars in cost savings, as well as creating more than 500 jobs. For more information related to the preservation of affordable housing refer to the City's comprehensive housing plan, <i>Housing New York: A Ten-Year, Five-Borough Plan</i> .	Preserve 34,000 affordable units by 2014 under the New Housing Marketplace Plan	Completed
	11	Proactively protect the quality of neighborhoods and housing	Completed	This initiative was completed in 2014. For more information related to this initiative, refer to the City's comprehensive housing plan, <i>Housing New York: A Ten-Year, Five-Borough Plan</i> .	Proactively conduct field studies in 1,000 buildings at risk for distress or decline	Completed
PARKS AND PUBLIC SPACE	TARGET HIGH IMPACT PROJECTS IN NEIGHBORHOODS UNDERSERVED BY PARKS					
	1	Create tools to identify parks and public space priority areas	Completed	Parks has completed a project to pilot the use of a multi-variable matrix based on scorecard information, demographic data, environmental factors, physical condition and community need and support to identify high priority areas.	Develop matrix assessment and mapping tools to assist in targeting high priority areas	Completed
	2	Open underutilized spaces as playgrounds or part time public spaces	In Progress	To date, 234 schoolyards to playgrounds sites across the city have been completed and are open to the public. In 2014, DOT held Summer Streets over three weekends in August, attracting over 300,000 people. The agency is currently planning for Summer Streets 2015, which will be held the first three Saturdays in August. In partnership with community organizations throughout the City, 32 Weekend Walks were held. This program continues to expand, with Community groups planning about 50 Weekend Walks for summer 2015. Parks created Play Streets to help combat the childhood obesity epidemic in our cities. Play Streets allows communities to open up their streets to pedestrians for play on a recurrent basis. Thirteen Playstreets were conducted in 2014. DOH has assisted 29 schools with applying for and obtaining Play Streets permits. The school permit renews every year with no need to reapply. Three new applications have been received for schools in 2014. Since 2009, DOH as assisted 69 community groups with applying for and obtaining Play Streets permits. DOT worked with CAU, DOH, and SAPO to streamline the Summer Play Streets application process, with SAPO playing a coordinating role. SAPO permitted 29 Summer Play Streets total in 2014, including about 50% PAL Play Streets.	Complete construction and open for community use an additional 60 schoolyards to playgrounds sites bringing the total number open for public use to 234	Completed
					Conduct Summer Streets for three Saturdays each year	Completed
					Conduct Weekend Walks at 20 locations annually	Completed
					Expand the number of schools with access to Playstreets by 40	Partially Completed
					Conduct 15 Community Playstreets each year	Partially Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
PARKS AND PUBLIC SPACE	3	Facilitate urban agriculture and community gardening	In Progress	A study to identify potential urban agriculture or community garden sites on City-owned properties was completed in 2014. Local Law 48 of 2011 required the New York City Department of Citywide Administrative Services (DCAS) to create an online, public database of vacant City-owned property that includes an assessment of the land's suitability for urban agriculture projects. It also provides GreeThumb contact information for those interested in gardening on the plot. In the process of developing an inventory of usable land, more than 100 properties have been identified as potentially suitable for urban agriculture. Five vertical farm operators toured NYCEDC's East NY Industrial site in November 2014 and an operator is expected to move onto the site in June 2015. Forty-five new community gardens were constructed on NYCHA sites in 2014, with 70 additional sites projected for 2015. In addition, two urban farms have been created on NYCHA property, one at Frederick Douglass Houses in the spring of 2012 on a tennis court and another was created in the spring of 2013 as the first "large scale" urban farm on NYCHA Property at Red Hook West Houses. DPR has established five farmers markets at community garden sites. The number of volunteers increased 14 percent from 2013 to 2014, bringing the total to 14,055. With more than 14,000 volunteers, the number of community volunteers registered with GreenThumb has increased by more than 25% since 2011. DPR is currently exploring expansion of the Building Healthy Communities (BHC) initiative with the Mayor's Fund. The BHC focuses on the 352 gardens throughout the Community Parks Initiative zones in underserved neighborhoods.	Launch study to identify potential urban agriculture or community garden sites on City-owned properties unsuitable for other development	Completed
					Plant 129 new community gardens on NYCHA sites	Partially Completed
					Create one urban farm on a NYCHA site	Completed
					Establish five additional farmers markets at community garden sites	Completed
					Increase number of community volunteers registered with GreenThumb by 25%	Completed
					Expand support for community gardens into new underserved neighborhoods	Partially Completed
					Register 25 new school gardens with Grow to Learn NYC per year, and retain at least 75% of registered school gardens year to year	Completed
	4	Continue to expand usable hours at existing sites	In Progress	Construction of the 19th lighting installation is expected to begin in 2015.	Reduce impediments to agriculture in relevant laws and regulations	Completed
					Complete 26 multi-purpose fields	Completed
					Complete 19 new lighting installations	Partially Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
PARKS AND PUBLIC SPACE	CREATE DESTINATION-LEVEL SPACES FOR ALL TYPES OF RECREATION					
	5	Create and upgrade flagship parks	In Progress	Work continues on the Ocean Breeze Park Field House. The restoration of bridge and access paths within Highland Park is approximately 85% complete, with full completeion by July 2015. The third and final section of the Highline, from 30th Street to 34th street, was completed in 2014. Phase 3 of Fort Washington Park, which includes a 1.2-mile greenway to north of the George Washington Bridge was opened in June 2014. The final phase of construction, which includes pedestrian and ADA access, greenway connections, and shore stabilization and Dyckman Street is 75% complete and is expected to be completed by July 2015. Phase 1 of Soundview Park , including the running track, was opened to the public in spring 2014. The Rosedale amphitheater and Metcalf playground will open in Spring 2015. The Metcalf Playground comfort station is still under construction and a completion date is pending. Package 3 of the East River Esplanade was opened to the public in April 2014. This portion of the park is located underneath the FDR between Pike/Allen and Rutgers Slip; it contains active recreational uses including basketball courts, petanque courts, and exercise equipment. Phase 1 of Governors Island park and public space project was opened to the public in May 2014. In addition, infrastructure investment is complete, potable water, electric, seawall, maritime and historic building stabilization projects are complete, on time and on-budget. One additional parcel for Bushwick Inlet Park was acquired by the City in December 2014 and another parcel is expected to be acquired in June 2015. Together, these parcels comprise 15.5 acres and include the actual inlet at the mouth of Bushwick Creek. In addition, National Grid ,who is responsible for remediating a portion of the park already owned by DPR, is expected to begin remediation of the 50 Kent Site, in Fall 2015. Bush Terminal Park opened to the public in November 2014.	Highland Park: Complete renovations including reservoir perimeter lighting, path restoration, and new entry points	Completed
					McCarren Park: Complete construction of pool and year-round recreation center	Completed
					Ocean Breeze Park: Complete 2,500-seat field house	Partially Completed
					Highbridge Park: Restore bridge and access paths within park to improve connectivity between Northern Manhattan and the Bronx	Partially Completed
					The High Line: Construct Section 2 (20th to 30th streets) and pursue acquisition of Section 3	Completed
					Dreier-Offerman Park (Calvert Vaux Park): Construct new sports fields, lighting, and pedestrian paths as part of Phase 1 construction	Completed
					Fort Washington Park: Complete phase I construction	Partially Completed
					Soundview Park: Complete construction of Metcalf Playground, Rosedale Amphitheater, and Metcalf Track & Field	Partially Completed
					Rockaway Park: Complete construction of Phase I	Completed
					Brooklyn Bridge Park: Complete Pier 5, re-open Empire Fulton Ferry Park and Squibb Bridge	Completed
					Transmitter Park: Construct 1.5-acre site, including a playground, benches, and trees	Completed
					East River Park Esplanade: Substantially complete park elements	Completed
					East River Park: Complete reconstruction of seawall and esplanade	Completed
					Governors Island: Commence parkland and infrastructure development	Partially Completed
					Hunter's Point, Queens: Complete construction of a new five-acre park	Completed
					Bushwick Inlet Park: Continue phased acquisition, remediation, and development of parks	Partially Completed



Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
PARKS AND PUBLIC SPACE					Stapleton, Staten Island: Begin construction of six-acre waterfront esplanade	Partially Completed
					Steeplechase Park: Complete construction of Steeplechase plaza and restoration of carousel	Partially Completed
					Orchard Beach: Replenish with clean sand, and expand the South Jetty	Completed
					Long Island City, Queens: Complete design and reconstruction of pier in the Anable Basin	Partially Completed
					Hudson River Park: Construct an upland esplanade in Tribeca and reconstruct Pier 97	Completed
					Bush Terminal: Complete remediation of open space and advance Phase I of park	Completed
	6	Convert former landfills into public space and parkland	In Progress	Over 10,000 people visited Freshkills Park in 2014 through organized events and tours. Construction of North Park and Phase 1 of East Park, comprising an additional 509 acres in total, are funded. Designs for North Park are completed and construction services will be procured in 2015,. Designs for East Park are expected to be completed by June 2016,. Construction services would be procured as soon as the design is complete for that area. The New Springville Greenway is on schedule at 70% completion and is expected to be completed in Summer 2015.	Freshkills Park: Develop the first public access areas overlooking Main Creek and continue capping and closing of east and west mounds	Partially Completed
					Pelham Landfill: Open to the public	Partially Completed
					Ferry Point Park: Complete Community Park	Completed
	7	Increase opportunities for water-based recreation	In Progress	DPR continues to pursue funding to complete the expansion of launch platform at Hunts Point-Riverside Park and for the repair and replacement of floating docks at Dyckman Street Marina.	Develop multi-agency task force to assess opportunities for expanding the blue network across the city for water-based recreation	Completed
					Complete expansion of launch platform at Hunts Point-Riverside Park	Partially Completed
					Complete repair and replacement of floating docks at Dyckman Street Marina	Partially Completed
					Activate West Harlem Piers Park's excursion boat pier and ferry barge	Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
PARKS AND PUBLIC SPACE	RE-IMAGINE THE PUBLIC REALM					
	8	Activate the streetscape	In Progress	Since the inception of the plaza program, DOT has initiated 63 plazas projects throughout the city, 43 of which are currently open to the public. Ten plaza capital projects have been completed, with another two in planning, 20 in design, and 12 in construction. Another 33 plazas have been opened with interim materials. This program involves a comprehensive outreach process and enjoys broad community support. To date, DOT has installed more than 1,250 benches throughout the five boroughs, exceeding the 2011 goal by more than 100%. The City continues to encourage the revitalization of underutilized arcades in Lower Manhattan with new active uses including the Water Street POPS 2014 Summer Events Programming. A zoning text amendment is expected to be referred in 2015. DOT's The Street Seats program enables seasonal public open spaces, generally including seating and tables, at locations where sidewalk seating is not available. To date, four Street Seats have been installed, two in Manhattan and two in Brooklyn.	Complete construction on 13 plazas	Completed
					Install 500 benches throughout the city	Completed
					Approve the urbanSHED Design Competition winning design. Work with City agencies, buildings owners, contractors and professionals on adoption of the new design	Completed
					Release recommendations to further streamline the permitting process for sidewalk cafes	Completed
					Amend zoning to facilitate revitalization of underutilized arcades in Lower Manhattan with new active uses	Completed
					Open four new pop-up cafes	Partially Completed
	9	Improve collaboration between City, state, and federal partners	In Progress	DPR and the Natural Areas Conservancy (NAC) continue to advance and pursue projects with other agencies, non-profits, and universities to study urban systems. The US Forest Service Urban Field Station is currently engaged in over 20 joint research projects with various other institutions. In addition, the NAC ecological and social assessments were completed this fall, painting a vivid picture of the social and ecological services provided by natural areas in NYC.	Conduct five joint research projects via the NYC Urban Field Station	Completed
					Align pathways, hours of operation, and bicycling rules on neighboring park sites	Partially Completed
	10	Create a network of green corridors	In Progress	In 2014, DPR completed an additional 0.8 lane miles of the Soundview Greenway along Lafayette Avenue in Soundview Park. DPR also completed three lane miles of the Manhattan Waterfront Greenway from 187th Street to the northern tip of Manhattan on the West Side. Construction began on Randall's Island Connector and ongoing construction on Food Center Drive as part of completion of Phase I of South Bronx Greenway. DOT's Greenways program includes the Brooklyn Waterfront Greenway, Bronx River and South Bronx Greenways, the Manhattan Waterfront Greenway (EDC/DOT/DPR), the Jamaica Bay Greenway (DOT/DPR), and the Harlem River Greenway. Two Brooklyn Waterfront Greenway capital projects will begin construction in 2015: Flushing Avenue and West Street. An additional six segments of this greenway, which totals six miles, are in design at DDC. The Bronx River Greenway was extended to the Bryant Avenue Pedestrian Bridge. The Concrete Plant Park and Starlight Park are seamlessly linked. Capital projects are in development for these segments of the Bronx River Greenway. The 2nd edition of the Street Design Manual was released in October 2013. DOT has distributed over 675 copies of the new Manual (including 112 through CityStore) and made presentations to all relevant City agencies. DOT will continue to update the manual on a regular basis.	Continue to build and expand greenway waterfront network including Brooklyn Waterfront Trail, Queens East River Trail, Soundview Greenway, South Bronx Greenway, Staten Island South Shore greenway and Manhattan waterfront greenway	Partially Completed
					Release update to Streets Design Manual that contains guidance on landscaping and the use of other sustainable elements	Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
PARKS AND PUBLIC SPACE	PROMOTE AND PROTECT NATURE					
	11	Plant one million trees	In Progress	As of April 2015, more than 949,000 trees have been planted as part of the Million Trees Initiative. DPR continues to develop its stewardship program, transitioning from planting trees to caring for them. The Young Street Tree Pruning project continues with 10,000 trees pruned in 2014.	Plant a total of 695,000 trees	Completed
					Explore methods to ensure long-term survival of existing urban forest	Partially Completed
	12	Conserve natural areas	In Progress	The Natural Areas Conservancy continues to work closely with NYC Parks to advance and expand its work in natural areas.	Explore the establishment of a natural area conservancy to preserve the city's remaining wild lands	Completed
	13	Support ecological connectivity	In Progress	DPR is now transitioning from the design and construction of greenstreets in the right of way to retrofitting parkland to better manage stormwater. DPR has completed design for the first stage of restitution/restoration work in conjunction with the Belt Parkway Seven Bridges project, which includes the planting of thousands of trees and anticipates construction to begin in the summer of 2015. In 2014, DPR kicked off Phase 2 of that project, between Plumb Beach and Rockaway Parkway, with construction anticipated to begin in Summer 2016. DPR also began design for the Canarsie West Trail Connector in 2014, which will include a bike path through Canarsie Park that connects to the Jamaica Bay Greenway.	Complete 80 greenstreets per year	Partially Completed
					Conduct a study to determine best practices for promoting biodiversity in green roof design and construction	Partially Completed
					Restore parkway landscapes to improve landscape connectivity	Partially Completed
					Develop a framework to comprehensively address landscape issues on building sites in City codes and regulations	Partially Completed
					Create green standards for City government building site development and renovations	Partially Completed
	ENSURE THE LONG-TERM HEALTH OF PARKS AND PUBLIC SPACE					
	14	Support and encourage stewardship	In Progress	DPR continues to cultivate stewards, transitioning our volunteer days from exclusively planting days to stewardship days. The Young Street Tree Pruning project continues with 10,000 trees pruned in 2014. In 2014, DPR led 85 small scale stewardship workshops throughout the year as well as spring and fall stewardship days and planting events.	Expand access to free tree care workshops and tool kits to stewardship groups across the five boroughs	Partially Completed
					Institute DPR's network meetings for at least one park in every borough	Completed
					Increase training activities and networking forums at catalyst parks	Completed
					Increase attendance at programming to more than 15,000 across all catalyst parks annually	Completed
	15	Incorporate sustainability through the design and maintenance of all public space	In Progress	The City continues to incorporate sustainability through the design and maintenance of all public space when practicable.	Develop digital library tracking system for cataloging sustainable aspects of capital projects	Completed
					Develop sustainable design checklist to be used with all DPR capital projects that comply with national Sustainable Sites standards	Completed
					Develop indicators to measure existing and new sustainability initiatives at DPR related to water, material resources, energy, fuel, and partnerships	Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
PARKS AND PUBLIC SPACE					Release first version of the Sustainable Parks Plan to promote accomplishments, train and educate DPR staff in best practices, and improve sustainability initiatives across the agency	Completed
BROWNFIELDS	DEVELOP PROGRAMS TO ACCELERATE BROWNFIELD CLEANUP AND REDEVELOPMENT					
	1	Increase participation in the NYC Voluntary Cleanup Program by partnering with lenders and insurers	Completed	OER established the NYC Environmental Review and Assessment program to provide comfort letters to facilitate land transactions and support more lending on brownfields with emphasis in low-income communities. OER worked with the environmental insurance industry to develop Pollution Liability policies tailored to the needs of projects enrolled in the VCP. OER has included financial escrow analysis and environmental insurance premiums as reimbursable items under the NYC BIG Program.	Establish programs for financial institutions to increase lending for properties in the NYC VCP	Completed
					Establish programs with the insurance industry to deliver preferred insurance policies for properties in the NYC VCP	Completed
	2	Increase the capacity of small businesses and small- and mid-size developers to conduct brownfield cleanup and redevelopment	In Progress	To increase the capacity of small businesses and small- and mid-size developers to conduct brownfield cleanup and redevelopment, OER established the Pro Bono Environmental Assistance program. This will help achieve social equity goals by assisting CBOs, non-profit community developers, and small businesses in developing cleanup plans in the VCP, and establishing the CBO Peer Assistance program to assist CBOs and community developers with brownfield land transactions, cleanup and site redevelopment. OER is working with the NYC Brownfield Partnership to increase industry awareness of environmental hardship claims and have encouraged legal specialists to join the Pro Bono Environmental Assistance program to deliver advice on hardship relief.	Establish a brownfield pro bono referral program to provide inexperienced developers with advice on how to conduct investigations and cleanups	Completed
	3	Enable the identification, cleanup, and redevelopment of brownfields	In Progress	OER strengthened cleanup standards for waterfront industrial properties to achieve social equity goals by minimizing environmental impact in environmental justice communities associated with severe storm events. OER is engaging community and industry experts in Community Brownfield Planning Areas, community development organizations, and the Brownfields Industry Task Force to improve OER programs and get feedback on improvements to SPEED, our online environmental research engine. OER established the Look Back mode and Stand-Still mode for enrollment in the VCP, and approved cleanup plans for first projects using each mode. OER also launched workshops to train the environmental industry to effectively navigate the VCP. OER has institutionalized exit interviews with volunteers completing cleanup projects in the VCP and have used the feedback to improve program delivery. OER is currently building the EPIC (Environmental Project Information Center) online interface for community members and volunteers using the BCP and are targeting launch in Fall 2015. OER collaborated on the “Streamlining Site Cleanup in NYC” report with EPA to illustrate the use of Triad approaches on VCP projects.	Establish flexible NYC BCP provisions to allow for land preparation for resale	Completed
					Perform market outreach to improve the SPEED real estate search engine to promote brownfield cleanup and redevelopment	Completed
					Collaborate with community development corporations to advance the cleanup and redevelopment of property across the city	Completed
					Establish a web-based application that automates and streamlines the navigation of City cleanup programs	Partially Completed
					In partnership with the EPA, implement approaches and improve Triad tools to accelerate property investigation and cleanup	Completed
					Encourage cleanup and redevelopment of waterfront sites by proposing amendments to the Zoning Resolution that would allow greater flexibility for non-residential uses and floor area	Redirected



Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
BROWNFIELDS	4	Build upon existing state and federal collaborations to improve the City's brownfield programs	Completed	The State delegated authority to OER to operate the NYC Clean Soil Bank to enable free exchange of clean native soil to achieve cost savings and resiliency, and improve social equity by advancing affordable housing and community projects. OER has established a program to unlock abandoned properties in disadvantaged neighborhoods through a case-by-case waiver of State environmental liens with NYC OMB and NYS Office of the State Comptroller, and we are now enabling these sites to proceed to auction. OER has extended the Memorandum of Agreement between New York State and the City for operation of the VCP and delegation of State liability protection and petroleum cleanup oversight to OER until 2016. OER has advocated for legislation to enable full statewide liability release for VCP cleanups and has advocated for and obtained State legislation that provides a waiver of State hazardous waste disposal taxes and fees for VCP projects which will greatly lower cost of cleanup in the VCP. OER has received recognition from EPA that provides comfort on federal environmental liability for volunteers using the VCP and enables VCP cleanups to qualify for EPA grants, and worked with EPA to allow property owners near federal superfund sites to acquire federal liability protection for cleanup and redevelopment.	Develop stronger liability protection at the state level	Completed
					Develop stronger liability protection at the federal level	Completed
					Develop a pilot program for environmental lien forgiveness	Completed
	STRENGTHEN INCENTIVES FOR BROWNFIELD CLEANUP AND REDEVELOPMENT					
	5	Study the economic value of brownfield redevelopment in New York City	Completed	OER is pursuing unique research that will evaluate the social and environmental justice benefits of brownfield cleanup and redevelopment in the VCP in low-income and disadvantaged communities in NYC. OER has completed the financial analysis of the first three years of over 260 cleanup projects to assess the amount of affordable housing that will be created (3,850 new units), job creation (4,500 permanent new jobs and 19,500 construction jobs), leveraging of private investment (\$8.4 billion in new investment).	Assess the fiscal and employment benefits of brownfield redevelopment in New York City	Completed
	6	Leverage the NYC Voluntary Cleanup Program to establish funding and other incentives for cleanup and redevelopment	Completed	OER established a series of programs to achieve social equity goals including the Affordable Housing Cleanup Fund using EPA grants to support cleanup of affordable housing projects in the VCP. OER established Preferred Community Development Grants to prioritize City funding for cleanup of affordable housing, community facilities, and community-supported projects. OER established the NYC Green Property Certification program to encourage more developers to work with government on cleanups to ensure that disadvantaged communities with a disproportionate number of brownfields are better protected from environmental pollution. We received \$500,000 from the NYS Regional Economic Development Council to fund cleanup of VCP projects to promote affordable housing and economic development in disadvantaged communities. OER launched the Brownfield Certification program in collaboration with NYS DEC to enable small businesses and community development corporations to claim Federal IRS tax deductions for brownfield cleanup costs incurred under the VCP, and OER is advocating in Congress for reauthorization of these deductions which expired in 2011. OER's pre-application meetings include discussions of available financial and technical assistance tailored toward redevelopment of individual projects. Additionally, OER will launch the Financial Assistance Search Tool (FAST) to help CBOs, community developers, and others find available grants in our Brownfield Incentive Grant (BIG) program.	Develop programs that align incentives for neighborhood housing or infrastructure revitalization with brownfield incentives	Completed
					Establish brownfield redevelopment financial counseling program	Completed
					Develop a web-based, brownfield financial assistance search tool	Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
BROWNFIELDS	DEEPEEN OUR COMMITMENT TO COMMUNITIES FOR COMMUNITY BROWNFIELD PLANNING, EDUCATION, AND SERVICE					
	7	Support community-led planning efforts	In Progress	OER has designated 19 place-based Community Brownfield Planning Areas and has established nine additional areas for designation under this plan. Future plans are to continue to expand into new neighborhoods. This will expand the reach of OER community assistance programs, including eligibility for up to \$50,000 in OER grant funding to CBOs for grass-roots community brownfield planning. OER functions as an ombudsman for CBOs trying to work with City agencies to help them achieve local community planning goals. OER is providing special attention, benefits, and resources to brownfield sites in the East New York Community Brownfield Planning Area. OER has extended funding for OER grants to support community brownfield planning through 2015. OER has established the CBO Peer Assistance Program and selected an experienced CBO (SoBro) to perform brownfield financial and real estate peer counseling and assistance for other CBOs with less experience on brownfield redevelopment, and are developing a brownfield management reference manual for CBOs that provides best management practices. OER has advocated for reforms to BOA designation and for continued State funding of the BOA community planning grant program.	Establish 25 NYC Place-Based Community Brownfield Planning Areas	Completed
					Provide focused City assistance and services to designated CBPDs for brownfield and sustainability planning	Completed
					Pilot incorporation of brownfield planning into early stages of redevelopment planning with East New York Sustainable Communities project	Completed
					Identify 8-12 new Place-Based Community Brownfield Planning Areas in neighborhoods disproportionately impacted by clusters of brownfields	Completed
	8	Support local and area-wide community brownfield planning efforts	In Progress	OER has established a program to build capacity of CBOs and other community brownfield planners by sharing best management practices for brownfield planning, assisting CBOs in working with city agencies, and helping them navigate the VCP. OER has acquired HUD funding to complete our online community planning portal to help CBOs achieve their revitalization goals. Working with NYS Department of State, OER is encouraging development of new community brownfield planning areas in regions of New York City heavily impacted by Superstorm Sandy and are involved, in cross-government collaboration with NY State, in the NY Rising program and Regional Economic Development Council to promote community resiliency planning.	Conduct a study to identify best management practices for community planners undertaking community brownfield planning efforts	Completed
					Establish training and other programs to build the capacity of community-based organizations in brownfield redevelopment, planning, and implementation	Completed
					Develop online community planning portal to provide cutting edge tools to community brownfield planners	Partially Completed
					Support pilot program established by New York State Department of State for area-wide community brownfield planning and cross-government collaboration	Completed
	9	Increase the transparency and accessibility of brownfield cleanup plans	Completed	OER has developed a wide variety of programs to promote transparency including provisions for New York City's three library systems to assist patrons with online access to VCP project information and OER educational information. OER established an online repository of documents for all projects in the VCP. A public contact list is developed for each VCP project, and OER publishes three fact sheets for release to these contacts at each stage of cleanup. A Community Protection Statement is developed for each cleanup project in the VCP and is written in six languages to promote wider dissemination of plans for community protection. OER established the BrownfieldWorks! program to place workforce development graduates on cleanup projects in the VCP. OER expanded our grant program to fund salaries for BrownfieldWORKS! trainees and launched a professional mentorship program by OER staff to assist trainees in getting full time jobs. OER produced four educational videos and posted them on OER's website to inform communities of the importance of community engagement on brownfields to address environmental injustice and about OER programs for investigation and cleanup. OER recently produced a new video on the meaning and value of certification of properties under the NYC Green Property Certification Program and will release that under this plan.	Establish an online document repository for VCP project information	Completed
					Establish advanced methods for the communication of brownfield project information to New York City communities	Completed
					Develop web-based educational tools to help all stakeholders understand brownfield cleanup and redevelopment processes	Completed
					Expand the NYC BrownfieldWORKS! training program	Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
BROWNFIELDS	EXPAND THE USE OF GREEN REMEDIATION					
	10	Promote green remediation in the NYC Brownfield Cleanup Program	Completed	OER was delegated the authority by NY State to establish the NYC Clean Soil Bank to promote recycling of clean soil from VCP redevelopments. The Clean Soil Bank promotes social equity and economic development goals including cost-free reuse on affordable housing projects, wetland restoration, climate change resiliency projects and City capital construction projects. OER established Climate Resiliency and Green Remediation Surveys that are performed free of charge to ensure that cleanup and redevelopment projects in the VCP are prepared for the impacts of climate change and will minimize future community environmental impact during severe storm events. OER established a Sustainability Statement in all cleanup plans and a Sustainability Report in all final cleanup reports to promote green remediation and development. Recycled concrete aggregate is now reused for backfill on many VCP projects. Hundreds of new trees have been planted as part of final development on VCP projects approved in the first three years of operation to support Million Trees and also provide groundwater quality polishing. High efficiency stormwater management techniques and green infrastructure education are provided by Climate Resiliency and Green Remediation Surveys performed by OER for projects in the VCP.	Establish the Sustainability Statement in all cleanup plans	Completed
					Accelerate adoption of green remediation practices by establishing a program for green remediation audits of cleanup plans under the VCP	Completed
					Encourage the use of recycled concrete aggregate (RCA) as substitute for conventional backfill material	Completed
					Develop tree-based phytoremediation approach for end-of-cleanup polishing, also promoting the MillionTreesNYC program	Completed
					Establish green remediation storm water management approaches on remedial sites and expand green infrastructure implementation as part of redevelopment	Completed
	11	Promote green space on remediated brownfield properties	Completed	OER has completed environmental investigations that enable the creation of parks in underserved neighborhoods in Staten Island and Brooklyn. Cleanup was performed by OER using federal funds to enable creation of a park at Mariners Marsh on Staten Island. The NYC Clean Soil Bank was used to provide free soil for shaping of park space at Fresh Kills Park and numerous brownfield cleanups are in progress or completed on coastal parkland. OER has established conceptual plans for raised-bed community garden space suitable for use on brownfield sites. OER has established the NYC Clean Soil Bank and are working with CBOs to provide clean soil free of charge for backfill for affordable housing and other social equity uses. We have established OER funded grants to fund investigation and cleanup of properties to enable community uses.	Create three Pocket Parks in collaboration with community planning organizations	Completed
					Create design for state-of-the-art community gardens on remediated brownfields	Completed
WATERWAYS	CONTINUE IMPLEMENTING GREY INFRASTRUCTURE UPGRADES					
	1	Upgrade wastewater treatment plants to achieve secondary treatment standards	Completed	In May 2011, the City certified that Newtown Creek Wastewater Treatment Plant meets federal Clean Water Act (CWA) standards for secondary treatment two years ahead of schedule. All 14 of the City's wastewater treatment plants now meet CWA secondary treatment standards.	Certify that the Newtown Creek WWTP meets secondary treatment standards	Completed
	2	Upgrade treatment plants to reduce nitrogen discharges	Completed	In 2013, DEP completed a \$237 million upgrade to the Wards Island Wastewater Treatment Plant that reduced the amount of nitrogen discharged from the plant by nearly 50 percent. DEP has completed the construction at the Tallman Island Wastewater Treatment Plant as of May 1, 2014. The remaining plant upgrades and stabilization work at the Bowery Bay, Wards Island, and Tallman Island Plants, as well as at the 26th Ward and Jamaica Plants, are projected to be complete in February 2016.	Complete upgrades at the Wards Island WWTP	Completed
					Complete upgrades at the Tallman Island WWTP	Completed
					Complete upgrades at the Bowery Bay WWTP	Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
WATERWAYS	3	Complete cost-effective grey infrastructure projects to reduce CSOs and improve water quality	Completed	DEP has completed the shotcreting of an old brick sewer as of April 2014. The Avenue V Pumping Station has been operating at the new wet weather capacity of 80 MGD as of October 2014. DEP placed the Gowanus Flushing Tunnel in full operation as of April 23, 2014 with a 10-day test to verify the system was working correctly, completed on May 3, 2014. The Gowanus Pumping Station has been placed into operation with the CSO Screening System as of November 22, 2014 and fully tested as of December 24, 2014. The Flushing Tunnel System and the Pumping Station System has been placed into full operation. Substantial completion for Lower English Kills aeration was issued March 31, 2014.	Complete Paerdegat Basin CSO Facility	Completed
					Complete Alley Creek CSO Facility	Completed
					Complete Avenue V Pumping Station	Completed
					Complete upgrades to the Gowanus Canal Pumping Station	Completed
					Complete upgrades to the Gowanus Canal Flushing Tunnel	Completed
					Construct an aeration system for Lower English Kills in Newtown Creek	Completed
					Complete a destratification facility at Shellbank Creek	Completed
	4	Expand the sewer network	In Progress	In 2013, DEP and DDC completed design and bid projects in the Twin Ponds Area, Sheldon Avenue Area, and Richard Avenue area. These projects will install new sanitary and sewer storm infrastructure areas and the Twin Ponds projects will have Bluebelt components. In 2013, the City also initiated a program to advance sewer construction where possible to alleviate flooding in targeted areas affected by repeat events. Two accelerated construction projects were completed in late 2013, with studies underway for similar projects in southeast Queens.	Completed over 60 miles of new or reconstructed sewers from FY08 to FY12	Completed
	5	Optimize the existing sewer system	Completed	In 2010, DEP implemented more efficient work practices and used in-house staff to expand our sewer cleaning operations. In 2011, the City finished inspecting all 138 miles of interceptor sewers and in 2012, DEP completed the first two-year cycle of interceptor cleaning. In total, DEP removed 30 million gallons of material, freeing up storage capacity of 3.06 million gallons. Collectively, this translates into a reduction of combined sewer overflows of 100 million gallons per year. In addition, in 2012, DEP inspected the remaining 219 tide gates and repaired or replaced those deemed necessary. Reported sewer backups continue to decline. In 2013, DEP cleaned more than 760 miles of sewers and continues to expand several programs to address sewer backups, including programmatic degreasing and improved sewer backup response practices. In addition, DEP expanded the pilot to evaluate sewer manhole sensors and installed additional devices for a total of 64 throughout the city. These sensors measure the elevation of wastewater in the sewer and wirelessly transmit that information to DEP's computer systems, allowing DEP to dispatch crews promptly and fix the problem before it results in a sewer backup. In November, the City released the second annual State of the Sewers, which includes key performance indicators for sewer maintenance and construction for each borough.	Continue to inspect each tide gate once per month as per standard operating procedure.	Completed
					Clean 138 miles of interceptor sewers	Completed
USE GREEN INFRASTRUCTURE TO MANAGE STORMWATER						
6	Expand the Bluebelt program	In Progress	In 2013 DEP continued to develop the Springfield Gardens Bluebelt in southeast Queens and accomplished a critical milestone for the Mid-Island Bluebelt by completing the Final Generic Environmental Impact Statement. The first capital project in the Mid-Island Bluebelt is scheduled to start construction in Fall 2014 and will involve the restoration of New Creek's west branch. In addition, the City has advanced a second Mid-Island Bluebelt project called Last Chance Pond, estimated at approximately \$35 million.	Expand Bluebelt system into Queens	Completed	

USE GREEN INFRASTRUCTURE TO MANAGE STORMWATER



Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
WATERWAYS	7	Build public green infrastructure projects	In Progress	By the end of 2014, DEP and the Departments of Parks and Recreation, Design and Construction and the Economic Development Corporation had initiated construction on multiple area-wide contracts covering approximately 27,000 acres of the City. DEP is currently in construction or in final design phase on approximately 2,000 bioswales and stormwater greenstreets.	28 GI sites have been completed, with an additional 5 substantially completed.	Partially Completed
					Capture the first inch of runoff from 70 additional acres of impervious surface	Partially Completed
	8	Engage and enlist community stakeholders in sustainable storm water management	Completed	By 2015, DEP committed over \$13 million to 33 grantees through the Green Infrastructure Grant Program. In 2014, DEP also conducted a targeted outreach campaign to property owners that would be eligible for the Grant Program, and accepted applications in both the spring and the fall. In addition, DEP investigated a pilot a mini-grant program for homes and small properties. DEP continued to meet with the Water Infrastructure Steering Committee (formerly the Green Infrastructure Steering Committee) on a range of stormwater management and water quality issues, including resiliency and the Long Term Control Plan process. DEP also continued to engage with a broad range of stakeholders including neighborhood associations, community boards, elected officials, schools and environmental organizations.	Implement a green infrastructure grant program	Completed
					Seek input through the Green Infrastructure Citizens Group	Completed
	9	Modify codes to increase the capture of storm water	In Progress	Throughout 2014, the City continued to track compliance with the 2012 stormwater performance standard (or “stormwater rule”) for new development and significant redevelopment. Compliance is tracked through house connection and sewer connection proposals received by DEP. In 2014 the City adjusted its reporting methods to more accurately track compliance and eliminate redundancy. Since the stormwater rule for new development and significant redevelopment took effect in 2012, approximately 260 sites were required to comply. Planned source control technologies on those sites include 100 blue roofs, 160 tanks, 11 drywells, and 8 perforated pipe systems. Of these, approximately 60 connections have been constructed; this includes 27 blue roofs, 29 tanks, 3 drywells, and 1 perforated pipe system. Pursuant to LL80 of 2013, DEP and DOT are planning to pilot porous paving materials in the roadway and on city sidewalks. Monitoring will be conducted and a final report will be submitted to city council in 2016. DEP collaborated with DCP on the Open Industrial Uses Study to suggest appropriate stormwater controls for open industrial sites.	Require greater on-site detention and infiltration for new development and redevelopment	Completed
					Require greater storm water runoff controls from construction sites	Partially Completed
					Study potential code changes to incorporate blue roofs on existing buildings	Partially Completed
					Develop new design standards for sidewalks	Partially Completed
					Study improved regulation of open industrial uses to reduce runoff	Completed
	10	Provide incentives for green infrastructure	Completed	First initiated in 2011, DEP’s Parking Lot Stormwater Pilot Program generates revenue for operation and maintenance of the City’s wastewater system. The program applies a stormwater discharge fee to stand-alone parking lots that contribute runoff to the City’s wastewater system, but that do not receive City water service. DEP’s stormwater charge increased from \$0.06 per square foot in 2013 to \$0.063 in 2014, to account for rate structure increases. In 2014, DEP billed 557 accounts for \$501,882.68. Parking lot owners who implement green infrastructure practices are exempt from the stormwater discharge fee. The Green Roof Tax Abatement program was fully in place and available to property owners for only three to four months of 2014, therefore DEP will gather another year of data to determine the efficacy of the program. There were no applications for the green roof tax abatement in 2014.	Evaluate the feasibility of using price signals to reduce storm water runoff	Completed
					Evaluate the efficacy of the green roof tax abatement	Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
WATERWAYS	REMOVE INDUSTRIAL POLLUTION FROM WATERWAYS					
	11	Actively participate in waterway clean-up efforts	In Progress	The City worked with other responsible parties throughout 2014 to ensure that the implementation of the selected remedy addresses contamination results in a clean and safe waterway, and incorporates principles of social justice. In 2014, the City conducted sampling of groundwater and point sources in Newtown Creek, including stormwater and CSOs, providing more data to support the Superfund investigation. In 2014, the DEP Gowanus Canal maintenance dredging project was superseded by the National Grid dredge of the entire canal. Application to dredge CSO mounds in Flushing Creek were prepared for submittal. Completion of dredging in Paerdegat Basin certified by DEP on Nov. 18, 2014 and approved by DEC on Dec. 1, 2014. Completion of dredging in Hendrix Creek certified by DEP on October 17, 2011 and approved by DEC on May 3, 2012.	Participate in the Superfund investigation and feasibility study in the Gowanus Canal	Partially Completed
					Participate in the Superfund investigation in Newtown Creek	Partially Completed
					Submit application to dredge CSO mounds for Gowanus Canal and Flushing Creek	Completed
					Begin CSO dredging in Paerdegat Basin	Completed
					Complete dredging in Hendrix Creek	Completed
	PROTECT AND RESTORE WETLANDS, AQUATIC SYSTEMS, AND ECOLOGICAL HABITAT					
	12	Enhance wetlands protection	In Progress	In 2014, the City continued to develop wetland resources, including the one foot Digital Elevation Model (DEM) of wetland areas, which has been completed. This information will be used in discussions with state and federal partners to potentially update existing wetland maps and the methodology to produce them. The City is also working with federal and state partners through the USACE’s Rockaway Reformulation in Jamaica Bay and the NY Rising Program, which are currently evaluating proposals that will help protect existing infrastructure and increase the resiliency of coastal ecosystems.	Transfer at least five City-owned wetlands to DPR	Completed
					Work with state and federal partners to update wetlands maps	Partially Completed
					Modify the Waterfront Revitalization Program to designate additional sites of ecological importance	Completed
					Evaluate the vulnerability of salt marshes through additional monitoring	Partially Completed
					Develop a comprehensive strategy for wetlands	Completed
	13	Restore and create wetlands	In Progress	Major construction in the Paerdegat Basin was completed in December 2013, and the project has moved into the monitoring and maintenance phase. Restoration construction of Pugsley Creek Park was completed in summer 2013; restoration construction of Soundview Park was completed in fall 2013. Bronx River fish passage construction was completed at River Park, at the 182nd Street Dam, to allow upstream access for spawning for river herring. The fish passage will be open when the first migration season begins in spring 2015. The USACE has re-started site evaluations and is continuing discussions with local agency partners in the development of restoration concepts for sites identified in the 2008 Bronx River Ecosystems Feasibility Study. Construction documents for Randall’s Island shoreline restoration are nearing completion. Presentation to Public Design Commission is expected in January 2015 and construction is expected to begin in 2015. Restoration construction of Dreier Offerman Park was completed in summer 2013. Meadow Lake restoration contract has been bid and awarded and is expected to begin construction in 2015. Freshkills North Park restoration construction was completed in summer 2013. DPR is undertaking the Spring Creek and Sunset Cove projects, which together total over \$15 million. The projects will restore marshland and upland forest to improve the bay’s ecological function and resiliency to coastal storms as well as create new recreational opportunities. DEP has already invested \$8 million to complete the restoration of Yellow Bar, Black Wall and Rulers Bar, with an additional \$7 million expected to be allocated based on recommendations in the USACE Jamaica Bay Reformulation Study due in April 2016.	Complete Paerdegat Basin restoration	Completed
					Complete Pugsley Creek Park restoration	Completed
					Complete Soundview Park restoration	Completed
					Complete Bronx River restoration - all phases	Partially Completed
					Complete Randall’s Island shoreline restoration	Partially Completed
					Complete Dreier Offerman Park restoration	Completed
					Complete Meadow Lake restoration	Partially Completed
					Complete Freshkills North Park restoration construction by 2013 summer	Completed
					Invest \$15 million in wetlands restoration in Jamaica Bay	Partially Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
WATER SUPPLY	14	Improve wetlands mitigation	In Progress	The City, led by the NYCEDC, received approval on the mitigation bank prospectus. Two drafts of the Mitigation Banking Instrument (MBI) have been submitted to the Interagency Review Team. A final signed MBI is expected in February or March of 2015. The Public Comment periods opened for Army Corps in-water construction permits as well as the Community Development Block Grant Program - Disaster Recovery action plan amendment allocation.	Establish a wetland mitigation banking or in-lieu fee program	Partially Completed
	15	Improve habitat for aquatic species	In Progress	DEP and DPR have worked with Baykeeper, the Harbor School, Hudson River Foundation and other partners to add spat on shell to the existing reef at Soundview Park to expand it, and monitoring continued to evaluate its effect. DPR is also designing a restoration project at Sunset Cove in Jamaica Bay that will incorporate a pilot oyster reef restoration project. In 2014, the City continued to leverage grant funds to support aquatic habitat improvement projects. DEP was awarded a \$1 million grant from the Department of Interior to expand the oyster restoration efforts at the Head of Bay - Jamaica Bay. The City is contributing an additional \$375,000 to the project, bringing the total to \$1.375 million. Design will begin in spring 2015 with expected construction to start in fall 2015. The oyster restoration project is being carried out in partnership with Cornell Cooperative Extension, Hudson River Foundation, and the New York Harbor School.	Expand oyster pilot project and conduct additional research	Partially Completed
					Develop a strategy to advance restoration efforts	Partially Completed
					Complete ribbed mussel bed pilot	Completed
					Complete eel grass pilot	Completed
	ENSURE THE QUALITY OF OUR DRINKING WATER					
	1	Continue the Watershed Protection Program	In Progress	New York State Department of Health released the final version of the Revised 2007 Filtration Avoidance Determination (FAD) on May 7, 2014. DEP continues to implement the watershed protection program including the land acquisition program.	Maintain the city's Filtration Avoidance Determination (FAD)	Partially Completed
					Seek to acquire land by contacting the owners of at least 50,000 acres of land every year	Completed
	2	Protect the water supply from hydrofracking for natural gas	Completed	On December 17, 2014, Governor Cuomo announced his intention to prohibit natural gas extraction using high-volume hydrofracking in New York State.	Work with the State to secure the prohibition of hydrofracking within the city's watersheds	Completed
	3	Complete the Catskill/Delaware Ultraviolet (UV) Disinfection Facility	Completed	In October 2013, DEP announced the completion of the Catskill/Delaware Ultraviolet Treatment Facility. The \$1.5 billion Catskill/Delaware UV Facility will provide an added layer of protection against pathogens and other harmful microorganisms for the drinking water consumed by more than 9 million residents of New York City and portions of Westchester County.	Complete construction	Completed
	4	Complete the Croton Water Filtration Plant	In Progress	Construction of the above grade structures continues. Startup and testing of both Plants A & B continued. Modifications of Valve Loops in Plants A & B were completed. The City is on schedule to begin full operations no later than 2015.	Complete construction	Partially Completed
	MAINTAIN AND ENHANCE THE INFRASTRUCTURE THAT DELIVERS WATER TO NEW YORK CITY					
	5	Repair the Delaware Aqueduct	In Progress	Design of the bypass tunnel and Wawarsing repairs was completed in late 2014 and public bidding for construction commenced in January 2015. The bypass tunnel contract was bid on March 27, 2015. This contract is expected to be awarded in May 2015 and registered in July 2015. The project continues to be on schedule and on budget. The New Croton Aqueduct was completed on June 30,2013. The Jamaica groundwater system design has been decides into four groups. The first three groups have passed through facility planning, and the Basis of Design Reports are approved. Design will progress to 30 percent compete for the last group by the end of 2015.	Break ground on the aqueduct bypass	Partially Completed
					Complete upgrades to the Cross River Pumping Station	Completed
					Complete design for the upgrades to the Croton Falls Pumping Station	Completed
					Complete rehabilitation of the New Croton Aqueduct	Completed
					Begin design for the upgrades to the Jamaica groundwater system	Partially Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status	
WATER SUPPLY	6	Connect the Delaware and Catskill Aqueducts	In Progress	By late March 2014, all seven holes were cored into the Catskill Aqueduct. Meetings have been held with the DEP and design consultant in regards to start-up and flow testing for the development of standard operating protocols and procedures. Substantial completion is anticipated on, or about, June 30, 2015 with a final completion date, on, or about, June 29, 2016.	Start construction	Partially Completed	
	7	Pressurize the Catskill Aqueduct	In Progress	In 2014, DEP refined project objectives and reached consensus on capacity requirements supporting release of a final Facility Plan in February 2015 that identifies the need for a secondary pressure tunnel between Kensico and Eastview. The project will commence a Basis of Design effort during 2015, with active design to commence in 2016. Construction is anticipated to commence in 2019.	Complete Facility Planning and Basis of Design Report	Partially Completed	
	8	Maintain and upgrade dams	In Progress	The reconstruction of Gilboa Dam is 95% complete. Design for the new low level outlet and Schoharie Release Chamber was completed and the pre-bid meeting was recently held and construction is anticipated to commence in 2015. All engineering assessments as required by NYS were completed. Engineering studies are underway for the rehabilitation of the Ashokan Reservoir dam and dikes, which is phase one of the reconstruction of the New Croton Dam began in July 2013 and is expected to be substantially completed in July 2016. This work includes the mechanical replacement and other structural repair to the outlet works.	Begin rehabilitation of the Gilboa Dam	Completed	
					Begin engineering assessments for dams as required by the State	Partially Completed	
	MODERNIZE IN-CITY DISTRIBUTION						
	9	Complete City Water Tunnel No. 3	In Progress	In October 2013, the City announced the activation of the Manhattan portion of Stage 2 of City Tunnel No. 3. The Brooklyn-Queens section is scheduled for completion in 2018.	Activate Stage 2 in Manhattan	Completed	
	10	Build a backup tunnel to Staten Island	In Progress	In 2012, in partnership with the Port Authority of New York and New Jersey and the New York City Economic Development Corporation, DEP launched tunneling operations for construction of the Staten Island Siphon. During Hurricane Sandy, the Staten Island shaft site was inundated with water and the tunnel boring machine was damaged, delaying the project for approximately one year. The tunnel boring machine has been refurbished from the flooding, and tunneling operations and resumed in April 2014.	Begin construction	Partially Completed	
	11	Upgrade water main infrastructure	In Progress	DEP initiated construction in Coney Island and continues to make substantial progress on key water supply projects in targeted areas, such as the Rockaways. Some major improvements were also made citywide. Completed projects include a trunk water main replacement in Atlantic Avenue, Brooklyn, valued at \$14.5 million and a trunk water main project on E59th Street, Manhattan Community Boards 6 and 8, valued at \$33.5 million. This project was a key component in the activation of City Water Tunnel No. 3, connecting Shaft 31B to the distribution network. Finally, DEP invested over \$30 million in three distribution water main projects in Queens, improving water quality and distribution in Community Boards 4, 6, 8, 9 and 13.	Replace 80 miles of water mains	Completed	



Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
---------	-------------------	------------	-------------------	-------------------------------	----------------	------------------

WATER SUPPLY	IMPROVE THE EFFICENCY OF THE WATER SUPPLY					
	12	Increase operational efficiency with new technology	Completed	As of January 2015, the City has installed Automated Meter Reading (AMR) devices for over 97 percent of customers. In February 2012, the City expanded the Leak Notification Program to proactively notify large building owners of potential leaks and enable owners and managers to quickly respond and fix leaks before they become a costly problem. Since starting the program in March 2011, more than 72,000 customers have saved an estimated \$60 million in otherwise wasted water or damaging leaks. Since January 2012, DEP staff have replaced over 19,000 underperforming meters.	Complete the installation of AMR devices citywide	Completed
					Replace 10,000 large water meters	Completed
					Optimize delivery by integrating forecasting models into operations	Completed
	13	Increase water conservation	In Progress	In 2014, the City officially released the Water Demand Management Plan, launched the Municipal Water Efficiency Program, and completed conservation retrofits in 60 schools, 12 fire houses, and over 150 spray showers. The overall program will target municipal buildings for water savings of nine million gallons per day and cost \$60 million by 2019. The City completed analysis of costs and benefits of widespread replacements of inefficient toilets and developed a strategy to achieve an optimal flow. The City launched the Toilet Replacement Program in August of 2014 to replace approximately 200,000 fixtures in its first Phase. On August 8, 2012, the Local Law 41 of 2012, the Plumbing Code Revisions Bill (Intro 807A) was signed into law. The new law incorporates greywater reuse standards into NYC Plumbing Code by bringing it up to date with the 2009 edition of the International Plumbing Code and making amendments to the Code that reflect the unique character and needs of the City. DEP is in the process of developing a guidance document outlining various processes and making the plumbing code requirements more accessible.	Release a design manual for water conservation in buildings	Completed
					Pilot advanced strategies for water conservation in City buildings	Completed
					Launch a process to replace all old, inefficient toilets in City Buildings	Completed
					Analyze the costs and benefits of widespread replacements of inefficient toilets and develop a strategy to achieve an optimal flow	Completed
TRANSPORTATION	1	Improve and expand bus service throughout the city	In Progress	The following SBS corridors have been launched: Nostrand Avenue (Nov 2013), LaGuardia (May 2014), 34th Street (Nov 2011) and Hylan Blvd (Sept 2012). Additional enhancements will be completed to the Williamsburg Bridge plaza stop on the Nostrand Ave. Corridor in 2015. Design for the Woodhaven Blvd. Corridor is underway. The Corridor is expected to launch after capital reconstruction in 2017. In the interim, initial bus priority improvements will be installed on the Corridor in the summer of 2015.Transit Signal Priority has been installed on three corridors and design is underway for an additional eight corridors. It is expected that all 11 corridors will be active by summer 2016, with additional corridors will follow in the future. The MTA has installed Bus Time real time information on every route in New York City. Improvements to bus access to the Ed Koch Queensboro Bridge were completed in 2011.	Launch Nostrand Ave., Brooklyn SBS Corridor	Completed
					Launch LaGuardia, Queens SBS corridors	Completed
					Launch 34th Street, Manhattan SBS Corridor	Completed
					Launch Hylan Blvd., Staten Island SBS Corridor	Completed
					Launch initial Woodhaven Blvd.	Partially Completed
					Implement bus operations improvements on all routes, with transit signal prioritization on eleven routes in five boroughs	Partially Completed
					Install Bus Time on all 31 bus routes in Staten Island and B63 in Brooklyn	Completed
					Improve bus priority of Ed Koch Queensboro Bridge and approaches	Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
---------	-------------------	------------	-------------------	-------------------------------	----------------	------------------

TRANSPORTATION	2	Improve and expand subway and commuter rail service	In Progress	Construction of the 7 Line Extension is nearly complete and is scheduled to open for revenue service Q2 2015. The first phase of Second Avenue Subway is scheduled to be completed in December 2016. The major remaining work involves station finishes and systems. Construction continues on East Side Access, with revenue service expected to begin in December 2022.	Complete construction of 7 Line extension to the Hudson Yards area of far west Midtown	Partially Completed
					Continue construction of first phase of Second Avenue Subway	Partially Completed
					Continue construction of East Side Access, the LIRR's direct service to Grand Central Terminal	Partially Completed
					Complete analysis for North Shore Transportation Improvements, Staten Island	Completed
	3	Expand for-hire vehicle service throughout our neighborhoods	Completed	TLC issued the first Street Hail Livery (SHL) permit in June 2013 and by November 2013 had issued all 6,000 permits in the program's first year. By March 2014 over 4,300 Boro Taxis, including nearly 250 wheelchair accessible Boro Taxis, were already in service providing call-ahead and street hail service in Brooklyn, Bronx, Queens, Staten Island, and Northern Manhattan neighborhoods that had previously lacked access to safe, convenient and legal street hail service. TLC has commenced the second issuance of SHL Permits.	Allow livery vehicles to accept street hails outside of Manhattan	Completed
	4	Promote car-sharing	Completed	The City, through DCAS, currently operates the largest fleet share program in the United States. In 2014 DCAS worked with Zip Car to better identify usage patterns with shared vehicles to further enhance operations. DCAS renewed its contract with Zip Car in January 2015.	Assess car-sharing potential for City fleet vehicles	Completed
	5	Expand and improve ferry service	In Progress	The City will launch a new Citywide Ferry Service that will knit together existing East River routes with new landings and services to Astoria, the Rockaways, South Brooklyn, Soundview and the Lower East Side. Service will launch in 2017. Further expansion to Stapleton and Coney Island will constitute a second phase of expansion, pending additional funding. The project will include the construction of multiple new ferry landings.	Launch East River service pilot to support the continued redevelopment of the East River waterfronts	Completed
	6	Make bicycling safer and more convenient	In Progress	DOT's bike-sharing program launched in May 2013. In 2014, DOT installed 41.3 miles of bike facilities. In addition, the bike counting methodology was improved by installing loop induction counters on the four East River Bridges. The new counters provide a more robust data set by counting cyclists all year round. As of January 2015, DOT installed 2,318 bike racks at 336 stations; 45 bike corrals; and has a total of over 22,400 bike racks (or provides 44,800 bike parking spaces). Bike commuting has doubled from 2007 levels.	Double bike commuting from 2007 levels	Completed
					Launch pilot bike-sharing program	Completed
					Install bike racks near 15 subway stations	Completed
	7	Enhance pedestrian access and safety	In Progress	As of December 2014, pedestrian countdown signals have been installed at more than 4,400 intersection, with another 4,500 intersections expected to be completed by the end of 2016. The City Council adopted a zoning text amendment in May 2013 that partially adopts new guidelines of public parking garages that promote pedestrian safety. Construction was complete for one Safe Routes to Transit projects in 2014. Nine additional locations will be constructed in 2015 and 11 to follow in 2016-17. Eight Safe Routes to School projects were completed since April 2014, bringing the total number of complete to 40. As of January 2015, 13 locations are under construction and 29 additional locations are in the final design phase. DOT's WalkNYC Wayfinding program has installed 100 wayfinding signs in neighborhoods in the Bronx, Brooklyn, Manhattan, and Queens. As of April 2015, DOT has installed an additional 50 WalkNYC signs and developed a map-based Greenway network sign for future deployment. DOT has also designed and launched SBS Wayfinding signs (incorporating real time bus arrival information) and subway station neighborhood maps using the WalkNYC database and graphic standards.	Install countdown pedestrian signals at 1,500 intersections	Completed
					Adopt new guidelines for public parking garages that promote pedestrian safety	Partially Completed
					Continue to implement Safe Routes to Transit projects, including nine Bus Stops under Els	Partially Completed
					Implement 32 Safe Routes to School projects	Completed
					Design a standardized, consistent pedestrian wayfinding system	Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
TRANSPORTATION	REDUCE CONGESTION ON OUR ROADS, BRIDGES, AND AT OUR AIRPORTS					
	8	Pilot technology and pricing-based mechanisms to reduce traffic congestion	In Progress	DOT is engaged in outreach to neighborhoods across the City to expand the use of the agency's innovative curb-management toolbox. In January 2013, NYCDOT completed conversion of the parking meter system to multi-space pay stations. In total, this system has over 13,000 Muni-Meters. In addition, by Winter 2015, the Department will have modernized all meters to state-of-the art Smart meters. DOT expanded Midtown in Motion, an ITS congestion-reduction project, from 34 St. to 57 St., river to river. DOT also installed cameras and traffic detection equipment on select coastal storm evacuation routes including Woodhaven Blvd, Flatbush Avenue and Hylan Blvd.	Expand ParkSmart program to three new neighborhoods	Partially Completed
					Install 4,500 Muni-Meters	Completed
					Install Intelligent Transportation Systems (ITS) approach to reducing congestion in selected areas	Completed
	9	Modify parking regulations to balance the needs of neighborhoods	Completed	In May, 2013, Manhattan Core Text Amendment was adopted, enacting improvements to off-street parking regulations to ensure that the right amount of parking spaces is being provided to support Manhattan Core businesses, residents and visitors while also addressing the city's sustainability objectives to encourage public transit and reduce energy use and greenhouse gas emissions.	Explore modifications to Manhattan Core parking regulations	Completed
					Explore revisions to off-street parking requirements in areas close to the Manhattan Core	Completed
	10	Reduce truck congestion on city streets	In Progress	The City has received \$450,000 in grants from FHWA and EPA to implement off-hour delivery programs modeled after the NYC off-hour delivery program. In addition, DOT has received a NYSERDA Grant Funding Award of \$112,500 to pursue low noise truck tests and \$625,000 in FHWA funds to expand the program. DOT expanded paid commercial parking with the installation of 275 MuniMeters in the Financial District, the Meatpacking District, and sections of Broadway.	Implement new peak and off-peak delivery windows in congested areas	Partially Completed
					Implement commercial paid parking at high-demand loading zones citywide	Partially Completed
					Improve landside access to the New York Container Terminal	Partially Completed
	11	Improve freight movement	In Progress	The City is in the process of procuring a consultant to assist in a food system resiliency study. This study is expected to be completed in 2016. Work has begun on rehabilitation of track serving Hunts Point cooperative warehouses; tracks for Building B are complete. Doubling of lead track and transload platform are currently in design. The City is working to expand transload operations.	Study the Sheridan Corridor in the Bronx	Completed
					Launch a study of New York City's food distribution pathways	Partially Completed
					Accommodate more inbound freight trains at Hunts Point	Partially Completed
					Establish new rail transfer hubs in Brooklyn and Staten Island	Partially Completed
	12	Improve our gateways to the nation and the world	In Progress	The City continues to advocate for improved aviation traffic control, including investments in NextGen technology in the New York Region. The JFK Air Cargo Study was released in 2013. NYCEDC in conjunction with the Port Authority of New York and New Jersey has begun work on a market and commodity assessment and strategic plan for the JFK focused industry. EDC, in conjunction with City DOT and the PANYNJ conducted a series of outreach meetings in the fall of 2014 with local community boards, elected officials and trade groups regarding a change to traffic regulations that would allow for industry standard 53 foot trailers to access cargo facilities at JFK Airport. City DOT published a draft rule and solicited public input on the proposed change. (DOT) The City adopted a traffic rule change to allow 53-foot trailers to access the JFK Airport as long as they used major highways and did not enter local streets. Public hearings were held in October 2014. The rule will be come effective in March 2015. CCTV cameras will be installed at key access points to JFK to monitor compliance.	Advocate for federal investment in NE Corridor passenger rail and improved aviation traffic control	Partially Completed
					Launch study of JFK air cargo industry	Completed
					Improve truck access to JFK	Partially Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
TRANSPORTATION	MAINTAIN AND IMPROVE THE PHYSICAL CONDITION OF OUR ROADS AND TRANSIT SYSTEM					
	13	Seek funding to maintain and improve our mass transit network	In Progress	The \$32 billion capital program was submitted to the Capital Program Review Board (CPRB) in October 2014 for statutory review. At that time it was vetoed without prejudice. MTA awaits CPRB direction for resubmission. The City continues to stress the need to fully fund the MTA's 2015-2019 Capital Plan and is urging our federal and state partners to develop a funding solution for the City's transit infrastructure.	Fund MTA Capital Program beyond 2011	Partially Completed
	14	Maintain and improve our roads and bridges	In Progress	DOT owns, operates, and maintains 789 bridges and tunnels throughout New York City. Over the past four years DOT has spent more than \$1 billion on the bridge capital program. In 2014, DOT repaved 1,000 lane miles of city streets and filled over 254,000 potholes. Legislation for joint bidding of public works projects was signed by the Governor in summer 2014.	Seek opportunities to improve bridge conditions	Partially Completed
					Seek opportunities to improve the state of repair of the city's streets	Partially Completed
					Seek legislation for joint bidding of public works projects	Completed
ENERGY	IMPROVE ENERGY PLANNING					
	1	Increase planning and coordination to promote clean, reliable, and affordable energy	In Progress	The City continues to advocate for clean, reliable, and affordable energy with multiple stakeholder groups, as part of its 80 x 50 plan to reduce greenhouse gas emissions by 80 percent by 2050 and a 30 percent reduction in building-based emissions. One City: Built to Last, released in September 2014, lays out a ten-year plan that will help New York City reduce citywide energy use in buildings and promotes the adoption of cleaner energy and innovative building technologies. Following the release of <i>One City: Built to Last</i> , the City launched a technical working group of experts in real estate, architecture, engineering, and affordable housing to help inform the direction of future policies.	Work with multiple energy stakeholders to encourage clean energy supply investments, effective incentive programs, shared data collection and management, and coordinated energy forecasting	Partially Completed
	INCREASE OUR ENERGY EFFICENECY					
	2	Implement the Greener, Greater Buildings Plan	In Progress	LL87 submissions were collected for the second year in 2014. More than 1,000 submissions have been collected. The City is continuing to implement, enforce, and expand the Greener, Greater, Buildings Plan (GGBP). The final benchmarking report on 2013 data and the public disclosure of 2014 data were both released in September 2014. Through One City: Built to Last, the City has proposed to expand GGBP requirements to mid-sized buildings between 25,000 to 50,000-square feet. A fully operational Benchmarking Help Center will be established to assist with GGBP compliance.	Complete the development of rules and guidelines and fully enforce the Greener, Greater Buildings Plan	Partially Completed
					Complete an annual analysis and report on benchmarking results	Completed
	3	Improve our codes and regulations to increase the sustainability of our buildings	In Progress	Green Codes Task Force proposals enacted into law include: requirements for commissioning of energy systems; increased boiler efficiency; standards for attaching rooftop solar PV panels, standards for mold prevention, increased lighting efficiency on Construction sites; and required insulation of pipes exposed during construction. The 2014 NYC Energy Conservation Code update was enacted with significant improvements to energy performance requirements.	Complete the incorporation of the Green Codes Task Force proposals into law	Partially Completed
					Propose amendments to the Zoning Resolution and City codes to remove the barriers to energy efficient building envelopes and the sitting of clean energy on buildings	Completed
Work with the International Code Council and ASHRAE to bring New York City's codes and the model codes into greater alignment					Completed	



Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
ENERGY	4	Improve compliance with the energy code and track green building improvements citywide	In Progress	Through <i>One City: Built to Last</i> , the City has committed to enhancing Energy Code enforcement by allocating resources to ensure that requirements are fulfilled both in the design and construction phase. The City will also begin a comprehensive effort to track retrofits in private buildings through a new outreach and technical assistance program called the Energy and Water Retrofit Accelerator.	Aim to achieve compliance by 2017	Partially Completed
					Develop a “green report card” and an online tracking tool for green building improvements	Partially Completed
	5	Improve energy efficiency in smaller buildings	In Progress	Through <i>One City: Built to Last</i> , the City allocated funding to implement new energy efficiency related GreeNYC campaigns for New Yorkers to reduce residential energy consumption and develop a strategy to encourage efficiency upgrades in smaller buildings.	Develop a strategy to increase the energy efficiency of smaller buildings	Partially Completed
					Execute GreeNYC public education campaigns to encourage New Yorkers to reduce energy consumption at home	Completed
					Launch an energy efficiency competition between residential neighborhoods throughout the five boroughs	Not Started
	6	Improve energy efficiency in historic buildings	In Progress	The technical working group launched as part of <i>One City: Built to Last</i> will consider strategies to improve energy efficiency in historic buildings. The City, in partnership with the Building Energy Exchange, has also begun developing a website that will provide comprehensive, updated information on energy efficiency that will include information about energy efficiency strategies for historic buildings.	Work with historic preservation societies and energy code councils to reconcile the energy codes with preservation requirements	Partially Completed
					Partner to create a handbook of energy efficiency strategies for historic buildings	Completed
	7	Provide energy efficiency financing and information	In Progress	In <i>One City: Built to Last</i> , the City announced it will create an Energy and Water Retrofit Accelerator to help building owners implement energy efficiency projects and navigate financing and incentive offerings, including products that are available through the New York City Energy Efficiency Corporation (NYCEEC). The City will also build out the Building Energy Exchange as a physical resource center for energy efficiency strategies and technologies and create a web portal as a single source of information about energy efficiency financing, incentives, and other resources.	Create a not-for-profit corporation, the New York City Energy Efficiency Corporation (NYCEEC), to provide energy efficiency financing	Completed
					Create an information center to provide comprehensive, updated information on energy efficiency funding and tax incentives	Partially Completed
	8	Create a 21st century energy efficiency workforce	In Progress	Through <i>One City: Built to Last</i> , the City has committed to upgrading the skills of building staff in both City-owned and private buildings by offering low or no-cost training in energy efficiency best practices. These expanded trainings are expected to reach a total of more than 7,000 building operators and will reach new constituencies, including building supers and operators who speak English as a second language.	Work with Amalgamated Green to ensure that we have a qualified workforce to implement our sustainability policy	Completed
					Partner to launch Green Light New York, an energy efficiency education center for building professionals	Completed
					Incorporate Energy Code training into licensing and continuing education requirements for electricians	Partially Completed
					Adopt national standards for energy efficiency professionals	Completed
					Develop and implement a sustainable contractors designation program for electricians, plumbers, and general contractors	Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
ENERGY	9	Make New York City a knowledge center for energy efficiency and emerging energy strategies	In Progress	In 2014, the New York City Economic Development Corporation partnered with New York University to open the Urban Future Lab, a business incubator in Downtown Brooklyn that supports startup companies, showcases innovation, and provides programming focused on sustainable infrastructure and urban resiliency. The creation and ongoing operation of the Urban Future Lab is expected to generate over 9,000 new jobs by 2025. With the release of <i>One City: Built to Last</i> , the City committed to creating an Energy and Water Retrofit Accelerator to help building owners implement energy efficiency projects and navigate the complex market for energy services and to engage new communities in developing more energy efficient and resilient communities. As part of the Retrofit Accelerator, the City will support the creation of a web portal for information on energy efficiency. Finally, the City is working with Broadway theatres, museums, and other iconic cultural institutions to deepen their commitments to improving energy efficiency.	Work with an academic partner to create a world-class energy efficiency engineering and building science program	Partially Completed
					Partner with an academic institution to develop a standardized energy database and make this data widely available	Partially Completed
					Partner with our cultural institutions to showcase the best new building strategies	Partially Completed
	10	Provide energy efficiency leadership in City government buildings and operations	In Progress	With the release of <i>One City: Built to Last</i> , the City updated the GHG reduction goal for City-owned buildings to a 35 percent reduction by 2025. As part of this goal, DCAS has implemented the new Accelerated Conservation and Efficiency (ACE) competitive capital program that rigorously evaluates agency-identified energy projects and provides funding for cost-effective greenhouse gas reduction projects that agencies implement using their own contracts. The City continues to explore opportunities for alternative contracting vehicles in order to increase our capacity to implement the most impactful energy efficiency projects across our diverse building portfolio.	Pursue a variety of procurement mechanisms for 30 x 17, including Energy Savings Performance Contracting	Partially Completed
				DCAS has implemented the Expenses for Conservation and Efficiency Leadership (ExCEL) program to provide competitively-awarded expense funding to support Agencies’ energy priorities including the implementation of energy efficient retrofits, operations and maintenance measures, training, tools and studies at City agencies.	Incentivize City agencies to reduce energy consumption by improving operations and maintenance	Partially Completed
				DCAS created a program called the Preventative Maintenance Collaborative, in partnership with OMB, to help fund maintenance programs at Agencies to implement industry best practices, perform regular routine maintenance on building systems, optimize operations, save energy and ensure equipment longevity.	Create standards and a handbook for high performance, green renovations of typical space types	Partially Completed
				DCAS launched the Innovative Demonstrations for Energy Adaptability (IDEA) program and designated the Phase 1 to focus on building controls with implementation complete and monitoring underway. Phase 2 of the IDEA program is going to focus on energy storage.	Create a board to review new technologies and pilot them in City buildings	Partially Completed
				DCAS has added standard energy-aligned lease language for all new city leased facilities.	Incorporate energy-aligned lease language in City government leases, and promote energy aligned leases in the private sector	Partially Completed
				The first net-zero school is currently under construction in Staten Island by School Construction Authority. DCAS is exploring additional public buildings to serve as additional net-zero or Passive House pilot projects.	New York City government to pilot net-zero school, a Passive House project, and a deep energy retrofit project	Partially Completed
	11	Expand the NYC Carbon Challenge to new sectors	In Progress	The NYC Carbon Challenge continues to expand. With the release of <i>One City: Built to Last</i> , the City committed to expand the Challenge to new sectors, increase the number of participants in existing sectors, and encourage participants to commit to deeper carbon reductions.	Continue to support the University and Hospital Challenges, and develop “stretch goals”	Partially Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
ENERGY					Launch at least two new Carbon Challenges	Completed
	PROVIDE CLEANER, MORE RELIABLE, AND AFFORDABLE ENERGY					
	12	Support cost-effective re-powering or replacement of our most inefficient and costly in-city power plants	In Progress	The City continues to work with the New York State electricity market operator to ensure that the latest repowering market rules will encourage the entry of cleaner and more efficient generation sources, and extend appropriate preferences to renewable power in recognition of its value in advancing our public policy goals. The City has provided comments to the FERC in response to NYISO's application of Buyer-Side mitigation rules that appear to be disincentivizing entry of new generation.	Advocate for a wholesale energy market design that does not discourage sensible repowering and new generation projects	Partially Completed
	13	Encourage the development of clean distributed generation	In Progress	The City installed a 15 MW cogeneration plant at Rikers Island, which was operational as of January 2015, and a 100 KW fuel cell at City Hall. DEP has led the first of several advanced contracts related to the installation of a new 12 MW cogeneration plant at the North River WWTP and will complete design in 2015. DEP is evaluating the feasibility of developing cogeneration at the Wards Island WWTP and, in partnership with DCAS, conducted a preliminary analysis of cogeneration potential at 26th Ward Wastewater Treatment Plant. DCAS also completed a cogeneration feasibility study of Woodhull Hospital. In June 2014, NYCEDC completed a Smart Grid demonstration project at the Brooklyn Army Terminal, as part of the DOE's Smart Grid Demonstration Program (administered by Con Ed).  The NYC Mayor's Office of Sustainability (MOS) has submitted comments to the Public Service Commission regarding Standard Interconnection Requirement tariffs, which streamline permitting and utility interconnection processes for small systems. In particular the City has called for increasing the threshold from 2 MW to 5 MW, greater enforcement of interconnection review deadlines, increased transparency in interconnection costs and feeder capacities.  The City has raised barrier issues with NYSERDA as part of their Clean Energy Fund development and is developing comments regarding NYS PSC Stand-by Rate rules that currently create a barrier to expanded DG development. In addition, DEP and Con Ed have coordinated on gas distribution pipeline replacement planning.  The City has submitted comments to the Public Service Commission supporting the State Reforming Energy Vision initiative ("REV"). The goal of REV is to change the paradigm of central generating facilities as the majority component of energy generation to include a much higher component of distributed energy generation resources to increase grid reliability. In its comments, the City has made recommendations to enhance the REV process, the Clean Energy Fund and the Green Bank development. The City is a member of the REV Market Design working group.	Examine the feasibility of developing clean DG at various City-owned sites and assets	Completed
					Work with utilities and project developers to streamline permitting and interconnection processes and to improve coordination of electric and gas distribution planning	Partially Completed
					Advocate for cost-effective ratepayer-funded incentives to catalyze clean DG development	Partially Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
ENERGY	14	Foster the market for renewable energy in New York City	In Progress	With the release of <i>One City: Built to Last</i> , the City set a goal of installing 250 MW of solar PV installations in private buildings by 2025. As part of this goal, Sustainable CUNY issued an RFP supported by the Department of Energy for Solar PV installers to participate in a pilot program to conduct a NYSolar Smart Solarize in Community Board 6 in Brooklyn. The chosen installer(s) will work with Sustainable CUNY and partners to form a group purchasing program to drive community adoption of Solar PV. Building off of this pilot, along with lessons learned from other solarize campaigns, a broader group purchasing program will be developed by Sustainable CUNY. An accounting methodology for solar energy purchased through a Power Purchase Agreement (PPA) was developed for the NYC Carbon Challenge.	Work with stakeholders to explore ways to pool consumer purchasing power and demand for locally produced renewable energy	Partially Completed
				Work with Energy Service Companies to conduct greenhouse gas accounting for local purchases of Renewable Energy Credits	Completed	
				Develop an online solar map and a solar PV performance monitoring network to promote market growth and improve integration with utility planning	Partially Completed	
				Work with Con Edison and other parties to explore the development of a one-stop, centralized website for permit application and tracking	Partially Completed	
				Install small-scale solar PV and solar thermal projects at City-owned sites	Partially Completed	
				Explore public-private partnerships to develop utility scale solar energy projects at capped municipal landfills	Partially Completed	
				Work with state and federal regulators to support cost-effective proposals for both public and private offshore wind projects that will benefit New York City	Partially Completed	
				Explore the feasibility of developing small scale hydroelectric projects at upstate reservoirs and in water and wastewater distribution systems in a cost-effective and environmentally sensitive manner	Partially Completed	
				Undertake waste-gas-to-grid and cogeneration projects at City-owned buildings and infrastructure sites	Partially Completed	
				Reuse as an energy resource 60% of anaerobic digester gas produced in our wastewater system by 2017	Partially Completed	
	Under the leadership of CUNY, the City, NYSEDA, NYPA, NYSIO and the utilities are working together to expand the NY Solar Map and Portal with support from the US Department of Energy. An expanded tool is expected to be launched in September 2015. Through the NYC Solar America Cities Partnership, NYCEDC continues to work with MOS, Sustainable CUNY, Con Edison and multiple City and State agencies to develop and pilot innovative tracking software designed to streamline the permitting process, both speeding up solar adoption in NYC and reducing the “soft costs” of installation.					
	With the release of <i>One City: Built to Last</i> , the City has committed to installing 100 MW of solar PV installations on City-owned buildings property by 2025. So far the City has committed to constructing and interconnecting substantial solar PV projects at an additional 24 schools by 2016; of which 2 MW at nine schools is actively in design. Building on the success of the pilot PPA, DCAS is also developing a large-scale solar PPA. In June 2014, NYCEDC completed a Smart Grid demonstration project at the Brooklyn Army Terminal, as part of the DOE's Smart Grid Demonstration Program (administered by Con Ed). The project includes 100kW of rooftop solar PV and a 170kW VRLA battery. Under a pilot solar Power Purchase Agreement (PPA) led by DCAS, 1.8 MW of solar PV was installed at four sites across the city including two high schools, a maintenance facility and a wastewater treatment plant, with DEP's Port Richmond WWTP being the largest solar PV system on City property.					
	MOS is coordinating efforts among DSNY, DPR, DEC and SunEdison to develop solar at the Fresh Kills Landfill. The City selected SunEdison to develop up to 8 MW of solar PV at Fresh Kills landfill, and negotiations are ongoing to complete that project. This system will be built, owned, and operated by SunEdison, who will also sell the energy generated to third parties. DEP has advocated to the NPS to include solar in its Master Plan for the development of Fountain Avenue Landfill. The City submitted comments to the Bureau of Ocean Energy Management (BOEM) in July 2014 supporting NYPA's application for an offshore wind development proposal of between 350MW and 700 MW, and urging BOEM to act in a manner that ensures the highest and best use of federal resources, noting a potential conflict with an offshore LNG proposal. The U.S. Department of Interior has issued a statement of competitive interest for offshore wind farm applications in federal waters, and now has an active agency review process under way.					
	DEP received a license from FERC for the development of a 14 MW hydroelectric plant at its Cannonsville Dam on May 13, 2014. DEP is starting the design phase. In addition, a system-wide evaluation of traditional, small, and micro hydroelectric potential in the water supply, water distribution, and wastewater systems was completed in November 2013. The report did not indicate substantial opportunities for additional development. However, DEP continues to monitor the evolution of innovative micro hydroelectric technology that may become feasible for implementation. DEP is working with National Grid to clean up digester gas from the Newtown Creek WWTP to pipeline quality gas to produce renewable natural gas for sale to customers. Construction to begin before the end of 2015. Newtown Creek WWTP will accept food waste to enhance a waste gas to grid project. That system is expected to be operational in Winter 2015.					
	DEP has almost \$500 million allocated in its capital improvement plan for 2013-2017 to increase the capture and beneficial use of digester gas from 38% to 58%. DEP is also in design on a 12 MW cogeneration system at the North River Wastewater Treatment Plant that will use biogas, generated as byproduct of the wastewater treatment process, as a fuel source.					



Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
ENERGY	MODERNIZE OUR TRANSMISSION AND DISTRIBUTION SYSTEM					
	15	Encourage conversion from highly polluting fuels by increasing natural gas transmission and distribution capacity and improving reliability	In Progress	The New Jersey/New York pipeline was in installed November 2013. Subject to approval by the Federal Regulatory Commission, the Williams pipeline is expected to enter service before the 2015 peak winter gas demand season. Natural gas development and distribution regulations and safety standards continue to be reviewed at the Federal, State and City level. The City will continue to consider opportunities to safely ensure the supply of natural gas.	Work with pipeline developers, regulators, and community stakeholders to facilitate the permitting and development of appropriately sited natural gas transmission lines	Partially Completed
					Work with utilities, regulators, and stakeholders to accelerate natural gas distribution upgrades in the areas where they can have the most impact in reducing residual fuel usage and improving air quality	Partially Completed
					Advocate for improved regulations and safety standards for natural gas production and transmission nationwide	Partially Completed
	16	Ensure the reliability of New York City power delivery	In Progress	NYSDEC Staff has proposed that IPEC be subject to forced outages during summer months as an alternative to a closed cycle cooling system. The City will submit expert testimony in June, 2015 on the adverse impacts on system reliability, energy affordability and emissions. The NYS Department of Environmental Conservation has proposed denial of a water discharge permit for the Indian Point power plant. Entergy, the Indian Point owner, has challenged that decision and agency proceedings on the challenge are now ongoing at DEC. The City has intervened in the DEC case and submitted expert testimony to ensure that critical electric reliability and environmental concerns are fully considered in the DEC hearing process.	Support the continued safe operation and relicensing of the Indian Point Energy Center	Partially Completed
					Explore more robust interconnection with neighboring power systems such as the Pennsylvania-New Jersey-Maryland (PJM) grid	Partially Completed
				The City is now working with Con Edison to ensure that necessary transmission system upgrades in the Pennsylvania-New Jersey-Maryland (PJM) grid territory are completed and financed in a manner that is equitable to New York ratepayers. With City support, the Champlain-Hudson Power Express transmission line was granted a certificate of approval by the PSC in 2013, and the relevant federal permits in late 2014. If built as projected, it would deliver up to 1000 MW of clean hydropower from Quebec, Canada to Astoria, Queens by 2018.	Continue to evaluate the costs, benefits, and feasibility of other transmission line proposals that could deliver cleaner energy to New York City	Partially Completed
				DCAS has implemented a new Demand Response program for municipal facilities, including City University of New York campuses, and wastewater treatment plants. The City is on track to increase the number of City buildings enrolled in the program to shed load during peak demand events to at least 50 MW by 2018.	Increase ability of City buildings to shed load during peak demand periods and emergency events to 50 MW	Partially Completed
	17	Develop a smarter and cleaner electric utility grid for New York City	In Progress	DCAS is leading an effort to enable real time electricity metering capabilities in larger locations participating in demand response program and continues to work with utilities to enhance utility hosted metering programs and initiatives. The City has supported Con Edison's initiatives to pilot alternative approaches, including utility-dispatchable DG and targeted energy efficiency measures to meet peak demand growth, in selected networks in lieu of traditional distribution capacity investments. The City submitted two proposals, one for private sector and one for public sector, in response to Con Ed's request for information for their Brooklyn-Queens Demand Management network. In proceedings at the PSC, the City has and will continue to advocate for improved alignment of incentive programs to encourage greater participation by the city's large energy consumers in demand management programs.	Lay the foundation for a smarter grid by deploying an Energy Enterprise Metering System (EEMS) in thousands of City-owned buildings	Partially Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
ENERGY					Explore opportunities to leverage city wireless communication assets to assist utilities in conducting automated meter reading for power and gas customers	Partially Completed
					Partner with utilities, the private sector, and academic institutions to demonstrate the viability of 'virtual generation' to allow buildings to sell energy curtailment services on wholesale electricity markets	Partially Completed
					Support Con Edison's efforts to capitalize on lessons learned in smart-grid demonstration projects and to scale up cost-effective technologies that will help reduce consumption or improve grid reliability	Partially Completed
					Work with regulators, utilities, building owners, and energy companies to encourage deeper participation by commercial and industrial consumers in market-based programs to reduce peak demand	Partially Completed
AIR QUALITY	UNDERSTAND THE SCOPE OF THE CHALLENGE					
	1	Monitor and model neighborhood-level air quality	In Progress	The Department of Health and Mental Hygiene continued to monitor criteria air pollutants at 60 core street-level sites throughout the city. In June 2014, monitoring began at 15 additional sites in high poverty neighborhoods and five additional continuous air quality monitors were deployed. DOHMH published additional air quality reports including: neighborhood-specific "Outdoor Air and Health" reports on its Environment and Health Data Portal, online charts summarizing trends in levels of criteria pollutants over 5 years, and three scientific reports on: spatial variation in noise, health benefits of converting to cleaner heat fuels and NYC air pollution exposure and birth weight.	Maintain a street-level air monitoring network to track neighborhood air quality differences over time	Partially Completed
					Expand the methods and pollutants measured to look more closely at specific types of emission sources and exposure settings	Partially Completed
	REDUCE TRANSPORTATION EMISSIONS					
	2	Reduce, replace, retrofit, and refuel vehicles	In Progress	The Clean Fleet Transition Plan is now codified fleet policy as per the rollout of the Fleet Management Manual (FMM) in October 2013. It requires that all agencies replace vehicles with equal or more fuel efficient options and that any departures from that be approved in writing by the Chief Fleet Officer. The City, through DCAS enforces CFTP issues all the time, with most replacements resulting in fuel efficiencies. DCAS continues to add plug-in and natural gas vehicles to the fleet along with some right sizing and downsizing.	Reduce the City's fleet by at least 5%	Completed
					Implement the Clean Fleet Transition Plan	Partially Completed
					Install over 60 electric vehicle charging units at City-owned facilities and garages	Completed
					Expand the use of biodiesel in the City's fleet	Completed
					Complete upgrades of 400 vehicles through existing Congestion Mitigation and Air Quality (CMAQ) and other funding sources	Completed
					Install Diesel Particulate Filters (DPFs) on 685 buses	Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
AIR QUALITY	3	Facilitate the adoption of electric vehicles	In Progress	DOT is participating in the EV advisory committee, a five year initiative that commenced in 2014. This committee will provide an annual report to City Council. In addition, EDC is exploring the use of the Skyport parking garage as a potential charging station for multiple fleet vehicles.	Work with Con Edison and auto manufacturers to streamline the installation process for home EV chargers	Completed
					Work with parking garage owners, co-op boards, consumers, and Con Edison to ensure that each group understands the technical and consumer needs associated with EV chargers	Partially Completed
					Work with private and non-profit parties to inform New Yorkers about the benefits and use of EVs	Partially Completed
	4	Reduce emissions from taxis, black cars, and for-hire vehicles	In Progress	The “Green Taxis Act of 2011” was introduced in 2011 and referred to Committee on Commerce, Science, and Transportation.	Work with Congress to pass legislation to explicitly allow state and local governments to incentivize fuel-efficient vehicles	Partially Completed
					Launch an electric vehicle taxi pilot program	Completed
	5	Reduce Illegal Idling	Completed	In 2014 the City continued working on a campaign to educate motorists about idling regulations, particularly near the most sensitive populations – schools in areas with high asthma rates. The Health Department’s New York City Community Health Survey and latest data show that New York City has the highest asthma rates among children in the country, and in particular the communities of East Harlem, and Mott Haven and Hunt’s Point in the Bronx, persist in having the highest rates in the city. DEP has conducted targeted enforcement at more than 88 schools and as a result, idling prohibited signage has been installed; DEP also works with the NYPD to increase targeted enforcement where idling problems are identified. DEP also, through the enforcement responsibilities under the New York City Air Pollution Code, conducts annual outreach to all agency fleet directors of the adverse effects of illegal idling by City fleet vehicles. Additionally, DEP annually sends idling reminder letters to city schools, alerting staff and parent organizations of the idling laws.	Improve compliance of existing anti-idling laws through targeted enforcement and education	Completed
	6	Retrofit ferries and promote the use of cleaner fuels	In Progress	DOT has completed upgrades and retrofits on Staten Island ferries and 20 privately-operated vessels.	Complete engine upgrades on four Staten Island ferries	Completed
					Retrofit 20 private ferry boats with Diesel Oxidation Catalysts (DOCs) and repower nine additional vessels to improve fuel efficiency	Completed
					Work with the State to repeal the exemption on Petroleum Business Tax for bunker fuel	Not Started
	7	Work with the Port Authority to implement the Clean Air Strategy for the Port of New York and New Jersey	In Progress	The City continues to work with PANYNJ on the Clean Air strategy. The new strategy will be released by PANYNJ in 2015. The Brooklyn Cruise Terminal’s shore power is estimated to be completed by summer of 2015, with vessel commissioning in Fall of 2015.	Work with the Port Authority and other partners to implement the actions outlined in the Clean Air Strategy for the Port of New York and New Jersey	Partially Completed
					Install shore-power capability at the Brooklyn Cruise Terminal	Partially Completed
					Look for additional opportunities at other facilities to connect ships to the city’s grid	Partially Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
AIR QUALITY	REDUCE EMISSIONS FROM BUILDINGS					
	8	Promote the use of cleaner-burning heating fuels	Completed	In 2011, the City launched the NYC CleanHeat Program, which provides technical, educational, and financial assistance to property owners to convert to cleaner fuels at a faster pace than required by regulation. The program goal is a 50 percent reduction of fine particulate matter emissions (PM 2.5) from the use of heavy heating. The program helped more than 1,000 buildings convert their heavy heating oil to a cleaner fuel this year, and the City is working to help all buildings convert their No. 6 oil to a cleaner fuel by July of 2015.	Launch a program to encourage and support the early phase-out of Number 4 and 6 heating oil	Completed
					Release Requests for Proposals to enter into energy performance contracts for City schools	Completed
					Complete boiler conversions at 15 schools	Completed
AIR QUALITY	UPDATE CODES AND STANDARDS					
	9	Update our codes and regulations to improve indoor air quality	In Progress	Local Law 72 mandates minimum filtration requirements for mechanical ventilation systems in buildings. Local Law 72 established limits on volatile organic compounds in carpet and carpet cushion in the city. Title 15 of the NYC Rules removes obstacles to asbestos removal.	Propose regulations to reduce exposure to toxins released by building materials	Completed
	10	Update our air quality code	Completed	The City completed a revised draft update of the Air Pollution Control Code, which addresses currently unregulated sources such as cooking emissions, and continued to engage stakeholders and city agencies to discuss the potential changes to the Code. The revised draft code was completed in 2014 and sent to City Council.	Update the NYC Air Code	Completed
SOLID WASTE	REDUCE WASTE BY NOT GENERATING IT					
	1	Promote waste prevention opportunities	In Progress	Water fountains designed to accommodate reusable bottles are currently being tested for deployment. In 2014, DSNY and GreeNYC launched a “Stop Junk Mail” campaign to encourage New Yorkers to reduce the number of catalogs and other junk mail they receive and request paperless service for most household bills. In 2014, our partner organizations diverted more than 16 million pounds of material from the waste stream, contributing to a reduction of more than 10,000 metric tons of greenhouse gas emissions and an energy savings of 150 billion BTUs.	Install redesigned drinking fountains in public spaces and parks to encourage adoption of reusable water bottles	Partially Completed
					Implement public education campaigns to reduce litter, encourage switching to reusable bags and reusable water bottles for tap water, and to encourage New Yorkers to reduce paper consumption	Partially Completed
	2	Increase the reuse of materials	Completed	GreeNYC partnered with GrowNYC to promote the use of reusable bags at all greenmarkets through signage, pledges and distribution of reusable bags. In 2013, DSNY and Housing Works partnered to launch re-fashionNYC, a textile recycling program for buildings with 10 or more units that benefits Housing Works, an NYC-based non-profit organization. As of January 2015, more than 500 buildings in all five boroughs participated in re-fashionNYC, and another 500 buildings had applied to join the program. In 2014, DSNY and GrowNYC partnered to host 59 Stop N' Swap events, one per community district. DSNY has continued to support ReuseNYC and the NYC Center for Materials Reuse, which promotes innovation in materials reuse.	Implement public education campaign and leverage online platforms to encourage and increase reuse of materials	Completed
					Encourage businesses, institutions, and individuals to reuse materials	Completed
	INCREASE THE RECOVERY OF RESOURCES FROM THE WASTE STREAM					
	3	Incentivize recycling	In Progress	DSNY has a number of programs in place to help incentivize recycling including expansion of public recycling bins and revising commercial recycling rules to simplify recycling for businesses.	Encourage businesses to recycle, and use recyclable and recycled materials through corporate challenges, partnerships, or recognition programs	Partially Completed
					Improve access to residential waste generation and diversion rate data	Completed
					Implement new residential recycling penalties	Not Started



Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
SOLID WASTE	4	Improve the convenience and ease of recycling	In Progress	In 2014, DSNY increased the number of public space recycling baskets to more than 3,000 across the City. DSNY is prioritizing neighborhoods with historically low diversion rates for the placement of new public space recycling baskets to increase public awareness about recycling in those neighborhoods. On January 1, 2015, DSNY issued a determination that expanded polystyrene foam, commonly known as “styrofoam,” is not recyclable in the City’s metal, glass, and plastic recycling program. As of July 1, 2015, foam food-service products and packing peanuts will be banned in New York City, eliminating this non-recyclable product from the waste stream. DSNY and the Department of Small Business Services will conduct outreach to small businesses to help them find affordable and sustainable alternative products. Removing non-recyclable materials from the waste stream makes recycling simpler and more streamlined.	Increase recycling in public spaces and parks	Partially Completed
					Require new residential buildings to provide space for recycling	Partially Completed
					Expand recycling education programs	Partially Completed
	5	Revise City codes and regulations to reduce construction and demolition waste	In Progress	As part of the New York City Building Code update passed on December 30, 2013, a provision was added through Local Law 141 of 2013 that increases the proportion of alternative cementitious material to Portland cement in concrete exposed to deicing chemicals from 25 percent to 35 percent for a single alternative material. For multiple alternative materials, the total amount must not exceed 50 percent.	Require use of recycled content in building materials	Completed
					Require recycling of building materials	Partially Completed
	6	Create additional opportunities to recover organic material	In Progress	DSNY has expanded the curbside organics collection program to service more than 100,000 households, 700 schools, and several agencies and institutions. In Spring 2015, DSNY is adding an additional 40,000 households. DSNY continues to support the expansion of community compost sites and food waste drop-off sites in all five boroughs, giving New Yorkers the opportunity to compost in their neighborhoods. DEP is continually looking for opportunities to recover energy from its biosolids in a fiscally responsible manner. Although we have contracts to beneficially use approximately 30 percent of the biosolids the City produces, the vendor’s compost facility has run into some regulatory problems. As such, no biosolids are currently being reused beneficially. It is expected that the beneficial reuse contractor will resolve their regulatory problems in 2015 and beneficial use can resume. Pilot program to take in food waste from schools and process it into a bioslurry for anaerobic digestion at the Newtown Creek WWTP were completed in May 2014. Construction for a 250 tons per day system is beginning in 2015.	Expand opportunities for communities to compost food waste	Partially Completed
					Expand leaf and yard waste composting	Partially Completed
					Complete the curbside organics feasibility study	Partially Completed
					Implement a public-private textiles recycling program in every borough	Completed
					Encourage use of new technologies to increase recovery of commercial food waste	Partially Completed
					Encourage in-city opportunities to recover yellow grease and convert it to biofuel	Partially Completed
					Pursue opportunities to beneficially use biosolids	Partially Completed
	7	Identify additional markets for recycled materials	In Progress	DOT’s use of road renovation spoils (RAP) increased with the rebuilding of the Brooklyn Municipal asphalt plant. DOT increase RAP use to 50 percent from 40 percent at the Brooklyn facility, which supplies half of DOT’s asphalt need. DSNY continues to explore and identify additional markets for recycled materials.	Explore expansion of designated plastics	Completed
					Promote beneficial use of dredge and road renovation spoils	Partially Completed
	8	Pilot conversion technologies	Cancelled	Proposals were received to develop a conversion technology facility to dispose of waste. The RFP was cancelled in 2014 because none of the proposals were cost-effective, there were also siting concerns raised by elected officials and residents.	Solicit proposals to develop conversion technology facilities to dispose of waste	Cancelled

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status	
SOLID WASTE	IMPROVE THE EFFICIENCY OF THE WASTE MANAGEMENT SYSTEM						
	9	Reduce the impact of the waste system on communities	In Progress	With the construction of the Sims recycling facility at the South Brooklyn Marine Terminal, DSNY expanded the City's metal, glass, and plastic recycling program to include all rigid plastics. This change has contributed to an increase in curbside diversion rates from 14.7 percent in the first four months of FY14 to 15.3 percent in the same period in FY15. After a year of operation, the North Shore MTS will begin accepting commercial waste in limited quantities. Investments in railroad development and rail access at transfer stations in the Bronx, Queens, and Brooklyn have created opportunities for those communities to export some commercial waste in sealed railcars.	Achieve significant progress toward completion of the Hamilton (Brooklyn) and North Shore (Queens) Marine Transfer Stations	Completed	
					Open the Sims recycling facility	Completed	
					Promote export of commercial waste by barge and rail	Partially Completed	
	10	Improve commercial solid waste management data	In Progress	DSNY and BIC are working together to simplify commercial recycling rules and streamline the data submission process for carters and transfer stations. DSNY has also published the 2012 Commercial Waste System study and continues to explore opportunities to improve NYC's commercial waste system.	Complete the Comprehensive Commercial Waste System Study and implement recommendations	Completed	
					Improve access to commercial carter information and disposal practices	Partially Completed	
	11	Remove toxic materials from the general waste stream	In Progress	On January 1, 2015, a state law banning the curbside disposal of electronic waste took effect. DSNY has engaged in extensive public education and outreach to help New Yorkers comply with this law, including issuing warnings to residents who improperly set out electronics for curbside collection. In April 2015, DSNY established a rule allowing Sanitation Officers and Enforcement agents to issue tickets to residents for improper disposal of electronic waste. As of April 2015, more than 4,000 buildings in all five boroughs have applied to participate in e-cycleNYC, an electronics recycling program DSNY created in partnership with Electronics Recycling International for buildings with 10 or more units. More than 900 of those buildings currently participate, and DSNY is working with GrowNYC to bring additional buildings into the program. New Yorkers can also recycle electronic waste at more than 95 drop-off locations citywide. DSNY has opened a new Household Hazardous Waste Site in Manhattan and extended hours at sites in all five boroughs. In 2015, DSNY will expand the number of SAFE Disposal events to 10 from 5 in each borough. In 2014, New Yorkers brought nearly 700,000 pounds of electronics, pharmaceuticals, and household hazardous waste to SAFE Disposal events for proper recycling, handling, and disposal. DSNY continues to support programs and policies that encourage extended producer responsibility of hazardous and toxic products. In 2015, DSNY established new rules that allow the Department to bill the manufacturers of CFC-containing items for the cost of refrigerant recovery.	Expand Household Hazardous Waste collection program	Completed	
					Enhance the public's access to information about and participation in the NYS e-waste program	Partially Completed	
					Promote product stewardship programs for high toxicity products	Partially Completed	
	REDUCE THE CITY GOVERNMENT'S SOLID WASTE FOOTPRINT						
	12	Revise City government procurement practices	In Progress	Continue to research procurement best practices to reduce solid waste.	Develop best practices that address solid waste reduction for procurement and incorporate into Environmentally Preferable Purchasing	Partially Completed	
					Incentivize city vendors to recover and reuse products	Not Started	

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
SOLID WASTE	13	Improve the City government's diversion rate	Completed	DSNY has expanded curbside organics collection to service more than 700 schools and many agencies and other institutions. Waste from New York City schools is comprised of 40 percent paper, 40 percent organic material, 10 percent metal, glass, and plastic, and 10% other items, making them ideal candidates for intensive recycling programs. DSNY has partnered with DOE to launch the Zero Waste Schools initiative to make targeted investments in staff training, student curriculum, and recycling infrastructure with the goal of zero waste from participating schools sent to landfills. DSNY has also partnered with the New York City Housing Authority to develop an aggressive plan to bring all NYCHA developments into compliance with the City's recycling laws over the next five years. In 2015, NYCHA will invest \$15 million to create new recycling centers and will train residents and staff on the importance of proper recycling.	Improve quality of and access to City government solid waste generation data	Completed
					Develop pilot at targeted City buildings to measure diversion rate	Completed
					Ensure all DOE schools have sustainability plans (including recycling) and designate a sustainability coordinator	Completed
					Sponsor packaging contest with design schools and corporate sponsors for products with high city agency consumption	Completed
CLIMATE CHANGE	REDUCE AND TRACK GREENHOUSE GAS EMISSIONS					
	1	Release an annual inventory of greenhouse gas emissions	In Progress	The City released its most recent annual inventory of greenhouse gas emissions in November 2014, demonstrating a 19 percent decrease in emissions.	Expand GHG inventory to include neighborhood level analysis and reporting	Completed
	2	Assess opportunities to further reduce greenhouse gas emissions by 80% by 2050	In Progress	The City has adopted a goal to reduce greenhouse gas emissions 80% by 2050.	Complete study to determine strategies to reduce citywide GHG emissions by 80% below 2005 levels by 2050	Completed
	ASSESS VULNERABILITIES AND RISKS FROM CLIMATE CHANGE					
	3	Regularly assess climate change projections	In Progress	The City continues to assess climate change projections on a regular basis. For further updates on this initiative, refer to the City's resiliency program updates.	Institutionalize New York City Panel on Climate Change (NPCC) and establish process to regularly update its climate projections	Completed
	4	Partner with the Federal Emergency Management Agency (FEMA) to update Flood Insurance Rate Maps	In Progress	The City continues to partner with FEMA to update the City's flood insurance rate maps. For further updates on this initiative, refer to the City's resiliency program updates.	Release draft updated Digital Flood Insurance Rate Maps (DFIRMS) for public comment	Completed
	5	Develop tools to measure the city's current and future climate exposure	In Progress	The City continues to develop tools to measure the city's current and future climate exposure. For further updates on this initiative, refer to the City's resiliency program updates.	Develop a climate risk assessment tool	Completed
					Develop an updated digital elevation model using LiDAR data to promote more accurate sea level rise modeling	Completed
					Launch effort to develop publicly-available projected flood maps that incorporate sea level rise projections for planning purposes	Completed
	INCREASE THE RESILIENCE OF THE CITY'S BUILT AND NATURAL ENVIROMENT					
	6	Update regulations to increase the resilience of buildings	In Progress	The City has updated regulations to increase the resiliency of buildings. For further updates on this initiative, refer to the City's resiliency program updates.	Conduct study of the urban design implications of enhanced flood protection for buildings	Completed
					Pursue amendments to freeboard requirements to require freeboard for wider range of buildings to account for climate change projections	Completed

Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status	
CLIMATE CHANGE					Incorporate consideration of climate change within the policies of the City's Waterfront Revitalization Program (WRP)	Completed	
					Launch study of effects of rising water tables, inland flooding, wind, and extreme heat events on buildings	Completed	
	7	Work with the insurance industry to develop strategies to encourage the use of flood protections in buildings	In Progress	The City continues to work with the insurance industry to develop strategies to encourage the use of flood protections in buildings. For further updates on this initiative, refer to the City's resiliency program updates.	Explore measures to promote flood protection in areas that may be subject to flooding based on climate change	Completed	
	8	Protect New York City's critical infrastructure	In Progress	The City continues to work to protect the city's critical infrastructure. For further updates on this initiative, refer to the City's resiliency program updates..	Complete Climate Change Adaptation Task Force assessment and report and begin to implement its recommendations	Completed	
					Maintain the Climate Change Adaptation Task Force with an expanded focus on public health and safety services	Partially Completed	
					Assess the opportunities for the incorporation of climate change projections into design specifications and standards for critical infrastructure	Completed	
	9	Identify and evaluate citywide coastal protective measures	In Progress	The City continues to identify, evaluate, and implement citywide coastal protection measures. For further updates on this initiative, refer to the City's resiliency program updates.	Develop an inventory of best practices for enhancing climate resilience in coastal areas	Completed	
					Coordinate with academic institutions, scientists, engineers, and designers to develop pilot projects to test potential strategies and evaluate their costs and benefits	Completed	
	PROTECT PUBLIC HEALTH FROM THE EFFECTS OF CLIMATE CHANGE						
	10	Mitigate the urban heat island effect	In Progress	The City continues to mitigate the urban heat island effect. For further updates on this initiative, refer to the City's resiliency program updates.	Coat an additional two million square feet of cool roofs	Completed	
					Pursue a cool roof requirement for existing buildings	Completed	
					Work with neighborhoods most impacted by the urban heat island effect to develop and implement community-specific strategies	Completed	
	11	Enhance our understanding of the impacts of climate change on public health	In Progress	The City continues to enhance its understanding of the impacts of climate change on public health. For further updates on this initiative, refer to the City's resiliency program updates.	Complete study on the impact of climate change on public health	Completed	



Chapter	Initiative Number	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
CLIMATE CHANGE	INCREASE CITY’S PREPAREDNESS FOR EXTREME CLIMATE EVENTS					
	12	Integrate climate change projections into emergency management and preparedness	In Progress	The City continues to integrate climate change projections into emergency management and preparedness. For further updates on this initiative, refer to the City’s resiliency program updates.	Integrate climate change projections into the City’s emergency management and preparedness plans and procedures	Completed
					Launch a process to include climate change as a hazard assessed under the Natural Hazard Mitigation Plan	Completed
	CREATE RESILIENT COMMUNITIES THOUGH PUBLIC INFORMATION AND OUTREACH					
	13	Work with communities to increase their climate resilience	In Progress	The City continues to work with communities to increase their climate resiliency. For further updates on this initiative, refer to the City’s resiliency program updates.	Ensure that outreach efforts target appropriate communities and provide up-to-date climate risk information	Completed
					Improve the access to publicly-available data on the locations of hazardous material storage in flood zones throughout the city	Completed

# 2013 Resiliency Initiatives

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
CLIMATE ANALYSIS	STRENGTHEN THE QUALITY OF AVAILABLE CLIMATE ANALYSIS					
	1	Work with FEMA to improve the flood-mapping process	In Progress	The City continues to work with FEMA to improve the flood mapping process and provided expert analysis in FEMA's most recent release of Preliminary FIRMs. The first Technical Mapping Advisory Council meeting, on which the City sits, was held in September 2014. The next one will be held in May 2015.	Implement technical and process improvements	Completed
	2	Work with FEMA to improve the communication of current flood risks	In Progress	The City has partnered with the Center For New York City Neighborhoods (CNYCN) on its interactive webtool (floodhelpny.org), which was launched in September 2014. Additionally, the City is conducting a consumer education campaign and developing tools for explaining flood risk and the changes that are coming to the maps and insurance programs. Finally, the City continues to advise FEMA on its local flood risk messaging and online tools.	Launch a new interactive tool	Completed
	3	Call on the State and Federal governments to coordinate with the City on local climate change projections	Completed	NOAA and the USACE have agreed to incorporate the most recent NPCC projections into their climate models.	Obtain Federal agreement to rely on NPCC	Completed
	4	Continue to refine local climate change projections to inform decision-making	Completed	The City released expanded NPCC projections to include humidity and new projections through 2100. NPCC3 will focus on the following: enhancing coordination across the entire New York metropolitan region, looking at a neighborhood scale, and studying the interactions of mitigation, adaptation, and equity.	Issue expanded NPCC projections; release evaluation metric for climate change	Completed
	5	Explore improved approaches for mapping future flood risks, incorporating sea level rise	In Progress	The City, with Stevens Institute of Technology, has completed its study of Sea Level Rise mapping, which was incorporated into the NPCC's most recent report. NPCC has also developed future flood maps to show the projected floodplains.	Develop revised future flood maps	Completed
	6	Launch a pilot program to identify and test strategies for protecting vulnerable neighborhoods from extreme heat health impacts	In Progress	The City, in partnership with the Nature Conservancy, has launched a new urban heat island working group to develop new monitoring methods and tools for mitigating heat risk.	Launch pilot program	Partially Completed
COASTAL PROTECTION	INCREASE COASTAL EDGE ELEVATIONS					
	1	Continue to work with the USACE to complete emergency beach nourishment in Coney Island	Completed	Over 600,000 cubic yards of sand have been placed on Coney Island.	Complete beach nourishment projects	Completed
	2	Continue to work with the USACE to complete emergency beach nourishment on the Rockaway Peninsula	Completed	Over 3,500,000 cubic yards of sand have been placed on the Rockaway Peninsula.	Complete beach nourishment projects	Completed
	3	Complete short-term beach nourishment, dune construction, and shoreline protection on Staten Island	Completed	Over 26,000 linear feet of shoreline protection and reinforced dunes have been installed on Staten Island. Additional reinforced dune projects are expected to be installed in Tottenville with State funds.	Complete beach nourishment and related projects	Completed
	4	Install armor stone shoreline protection(revetments) in Coney Island	In Progress	The City launched a feasibility study that will generate specific recommendations for investments in shoreline protection along Coney Island Creek. The study is expected be finished in December 2015, leading to design and construction, with over \$30 million in funds already available.	Begin design	Partially Completed
	5	Install armor stone shoreline protection (revetments) on Staten Island	In Progress	The City launched a citywide assessment of low-lying shorelines that will generate specific recommendations for investments in shoreline protection along the South Shore of Staten Island. The assessment is expected to be finished in December 2015, leading to design and construction, with over \$30 million in funds already available. This work will be coordinated with other Federal and State investments underway on the South Shore.	Begin design	Partially Completed



Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
COASTAL PROTECTION	6	Raise bulkheads in low-lying neighborhoods across the city to minimize inland tidal flooding	In Progress	The City launched a citywide assessment of low-lying shorelines that will generate specific recommendations for investments in shoreline protection across the city. The assessment is expected to be finished in December 2015, leading to design and construction, with approximately \$40 million in funds already available.	Launch study of low-lying neighborhoods; begin selected implementation	Partially Completed
	7	Complete emergency bulkhead repairs adjacent to the Belt Parkway in Southern Brooklyn	Completed	Emergency repairs were completed in 2013.	Complete bulkhead repairs	Completed
	8	Complete bulkhead repairs and roadway drainage improvements adjacent to Beach Channel Drive on the Rockaway Peninsula	In Progress	Construction of all bulkhead repairs and related drainage improvements is expected by Summer 2015.	Complete bulkhead repairs and related drainage improvements	Partially Completed
	9	Continue to work with the USACE to complete emergency floodgate repairs at Oakwood Beach, Staten Island	Completed	Emergency floodgate repairs were completed.	Complete floodgate repairs	Completed
	10	Complete tide gate repair study at Flushing Meadows Corona Park, Queens	In Progress	The City expects to receive approximately \$5 million in FEMA funds for this initiative and will launch the tide gate repair study upon approval by FEMA.	Study tide gate repairs	Partially Completed
	MINIMIZE UPLAND WAVE ZONES					
	11	Continue to work with the USACE to complete existing studies of the Rockaway Peninsula and implement coastal protection projects	In Progress	The City continues to work with the USACE on its Rockaway Reformulation Study. Investment options on the beach and in Jamaica Bay are currently being evaluated, with final selection of preferred alternatives expected in 2015. Design and construction will follow, with Federal funds already available.	Begin study of flood risk reduction projects; complete identified short- term dune improvements	Completed
	12	Call on and work with the USACE to study and install primary and secondary dune systems in vulnerable Rockaway Peninsula neighborhoods (such as Breezy Point)	In Progress	The City expects to receive approximately \$58 million in FEMA funds for this initiative and will launch the dune system design study upon approval by FEMA.	Begin study	Partially Completed
	13	Call on and work with the USACE to study and install offshore breakwaters adjacent to and south of Great Kills Harbor	In Progress	In partnership with the City, the State has launched a study to evaluate offshore breakwater designs in Great Kills. The study is currently underway and anticipated to be completed in 2015.	Begin study	Completed
	14	Call on and work with the USACE to study and install wetlands for wave attenuation in Howard Beach and to study further flood protection improvements within Jamaica Bay	In Progress	Design is already underway for wetlands and wave attenuation investments in Howard Beach at Spring Creek and in Broad Channel at Sunset Cove, with funds already available for construction.	Begin study	Completed
	15	Call on and work with the USACE to study and install living shorelines for wave attenuation in Tottenville	In Progress	The State was awarded \$60 million through HUD's Rebuild by Design program for implementation of the project.	Begin study	Completed
	16	Continue to work with the USACE to complete its Plumb Beach breakwater and beach nourishment project in Southern Brooklyn	Completed	In partnership with DPR, the project was completed by the USACE in 2014.	Complete construction	Completed

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
COASTAL PROTECTION	17	Complete living shorelines and floating breakwaters for wave attenuation in Brant Point, Queens	In Progress	The City, through DEP, has completed the installation of a floating wave attenuator adjacent to a tidal wetland at Brant Point, Queens as part of a five-month study to evaluate the attenuation of wave energy against the wetland edge and accretion of sediment.	Complete construction	Completed
	18	Continue to work with the USACE to complete its Sea Gate project in Southern Brooklyn	In Progress	Construction is underway and is expected to be completed in 2015.	Complete construction	Partially Completed
	PROTECT AGAINST STORM SURGE					
	19	Install an integrated flood protection system in Hunts Point	In Progress	The City was awarded \$20 million through HUD's Rebuild by Design program for continued design and implementation of a pilot project, and the City subsequently allocated an additional \$25 million to the project. The City is coordinating these investments with other City-funded projects and will launch the next phase of design and implementation in 2015.	Begin design	Completed
	20	Install an integrated flood protection system in East Harlem	In Progress	The City has allocated \$1 million to begin planning and preliminary design for this project, which will begin in 2015.	Begin design	Not Completed
	21	Install an integrated flood protection system in Lower Manhattan, including the Lower East Side	In Progress	The City was awarded \$335 million through HUD's Rebuild by Design program for continued design and implementation of the project, which is currently in design north of Montgomery Street. A final conceptual design is expected to be completed in 2015, with a goal of starting construction in 2017. The City and State also allocated \$6.75 million in additional funds to begin design south of Montgomery Street, including funds for implementing an \$8 million in City funds for first-phase investment in Battery Park. The City continues to pursue additional funds for this project.	Begin design	Completed
	22	Install an integrated flood protection system at Hospital Row	In Progress	The City is no longer pursuing an integrated flood protection system for Hospital Row. In its place, the three primary hospitals between 23rd Street and 34th Street are investing in higher levels of flood protection and storm hardening measures, and has secured hundreds of millions in FEMA funds at Bellevue Hospital alone.	Launch competition; begin design	Completed
	23	Install an integrated flood protection system in Red Hook	In Progress	The City and State have each committed \$50 million for an integrated flood protection system in Red Hook. The City has released an RFP for design services and expects to begin design in 2015.	Begin design	Partially Completed
	24	Continue to work with the USACE to complete existing studies on Staten Island and implement coastal protection projects	In Progress	The USACE is now expected to complete its draft feasibility study for Phase 1 in May 2015, with a goal of starting construction in 2017. The City has committed \$50 million in local matching funds for the project and expects to hear the results of the USACE Phase 2 feasibility study in 2015.	Complete study	Partially Completed
	25	Continue to work with Con Edison to protect the Farragut substation	In Progress	Through a settlement with ConEd, the State, and the City, ConEd is investing in storm hardening at critical substations across the city, as part of its \$1 billion storm hardening program.	File comments on rate case	Completed
	26	Call on and work with the USACE to study and install local storm surge barriers at Newtown Creek	In Progress	The City has launched a feasibility study for a Newtown Creek local storm surge barrier.	Begin study	Completed

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
COASTAL PROTECTION	IMPROVE COASTAL DESIGN AND GOVERNANCE					
	27	Continue to work with the USACE to complete its comprehensive flood protection study of New York Harbor	Completed	The USACE released its North Atlantic Coast Comprehensive Study in January 2015. The City is now working with the USACE to launch a new feasibility study for NY Harbor and its tributaries, with the expectation that it will result in projects ready for authorization by Congress.	Complete draft study, recommending projects ready for authorization by Congress	Completed
	28	Implement the WAVES Action Agenda	In Progress	All of the recommendations from the Waves Action Agenda have been completed or reconsidered.	Complete scheduled projects	Completed
	29	Implement citywide waterfront inspections to better manage the City's waterfront and coastal assets	In Progress	The City has allocated funds to update its portfolio of waterfront assets within its Waterfront Facilities Maintenance Management System and is revising its Inspection Guidelines Manual to better account for new coastal protection assets.	Implement program	Partially Completed
	30	Study design guidelines for waterfront and coastal assets to better mitigate the effects of flooding	In Progress	The City, through DPR, has launched a study to evaluate resiliency design guidelines for waterfront and coastal structures. This study will be completed in 2015.	Complete study	Partially Completed
	31	Evaluate soft infrastructure as flood protection and study innovative coastal protection techniques	In Progress	In partnership with the City, the State has completed and released a study to evaluate the effectiveness of natural and nature-based infrastructure. The City continues to work closely with State and Federal agencies to advance natural and nature-based features as part of its coastal protection initiatives, and the City, in partnership with NPS, has launched a CUNY-led Science and Resilience Institute at Jamaica Bay to research innovative resiliency measures.	Partner with the planned Jamaica Bay Science and Resilience Center and others to begin studies	Completed
	32	Evaluate the city's vulnerability to drainage pipe flooding and identify appropriate solutions to minimize those risks	In Progress	This work will occur as a regular part of all of the City's coastal protection projects.	Complete study as part of other coastal protection projects	Completed
	33	Evaluate strategies to fund wetland restoration and explore the feasibility of wetland mitigation banking structures	In Progress	The City has allocated funds for the construction of wetland restoration in Saw Mill Creek as part of a pending mitigation banking program. Construction is expected to begin in 2015.	Complete study of mitigation banking	Completed
	34	Work with agency partners to improve the in-water permitting process	In Progress	The City, through NYCEDC, is gathering information on all relevant waterfront permit processes from federal, state and local regulatory partners and is in the early stages of website design that will make permitting more predictable.	Launch website	Partially Completed
	35	Enhance waterfront construction oversight by strengthening the City's waterfront permit and dockmaster units	In Progress	Additional personnel have been added to the Waterfront Permit Unit and new procedures have improved the permit filing process. The City continues to explore methods to enhance waterfront permitting.	Explore options to enhance waterfront permitting and dockmaster function	Completed
	36	Identify a lead entity for overseeing the collaboration on the USACE comprehensive study and for overseeing the implementation of coastal flood protection projects	Completed	The Office of Recovery and Resiliency (ORR) has been designated as the lead entity for the City's coastal protection initiatives.	Identity lead entity	Completed
	37	Call on and work with the USACE and FEMA to collaborate more closely on flood protection project standards	In Progress	The City has convened FEMA and USACE to ensure that projects are coordinated.	Identify risk reduction standards	Completed

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
BUILDINGS	STRENGTHEN NEW AND SUBSTANTIALLY REBUILT STRUCTURES TO MEET THE HIGHEST RESILIENCY STANDARDS MOVING FORWARD					
	1	Improve regulations for flood resiliency of new and substantially improved buildings in the 100-year floodplain	In Progress	The City has adopted changes to the zoning code, including a new Flood Resilience Zoning Text Amendment. This action clarified building and mechanical equipment elevation and measurement, freeboard, alternative uses of ground floor space, and parking issues; these zoning text changes are now in effect. Sixteen updates were made to the building code, including Local Law 83, which is designed to prevent the backflow of sewage; Local Law 96, regarding the adoption of best available flood maps; and Local Law 99, which allows the elevation of certain building systems in flood-prone areas including telecommunications cabling and fuel storage tanks.	Adopt changes to Construction Codes and zoning	Completed
	2	Rebuild and repair housing units destroyed and substantially damaged by Sandy	In Progress	As of April 2015, the Mayor's Office of Housing Recovery Operations (HRO), through its Build it Back program, has made over 9,200 offers to homeowners, started construction on 1,159 homes, and granted 3,298 reimbursement checks amounting to over \$60 million. As part of the Build it Back multifamily program, run jointly with HPD, HPD has provided over \$24 million in repairs and reimbursements to multifamily buildings, benefiting over 6,400 households. HRO is quadrupling its design and construction capacity in 2015 and has introduced a number of new initiatives, including temporary rental assistance to homeowners in construction, to assist applicants.	Disburse funds to rebuild and repair 500 buildings	Completed
	3	Study and implement zoning changes to encourage retrofits of existing buildings and construction of new resilient buildings in the 100-year floodplain	In Progress	The City launched 10 land use resiliency studies (Harding Park, Edgewater Park, West Chelsea, East Village/Lower East Side/ Two Bridges, Canarsie, Gerritsen Beach, Sheepshead Bay, Old Howard Beach/Hamilton Beach/Broad Channel, Rockaway Beach/Rockaway Park, Staten Island East Shore). Additionally, the City released a report Retrofitting Buildings for Flood Risk to offer guidance to building owners that are making resiliency investments.	Begin studies for 5-10 neighborhoods and citywide strategies	Completed
	4	Launch a competition to encourage development of new, cost-effective housing types to replace vulnerable stock	In Progress	The City is no longer pursuing this competition. In its place, HPD has developed prototypes for new cost-effective housing to replace vulnerable structures.	Launch and award Phase I of competition and launch Phase II	Completed
	5	Work with New York State to identify eligible communities for the New York Smart Home Buyout Program	In Progress	The City continues to coordinate with the State on its buyout program in Oakwood Beach, Ocean Breeze, and Graham Beach.	Identify all projects and complete transactions	Partially Completed
	6	Amend the Building Code and complete studies to improve wind resiliency for new and substantially improved buildings	In Progress	The City amended its building code to clarify current wind-resistance specifications for façade elements and expects to launch a wind study in 2015.	Implement initial Building Code changes	Completed
	RETROFIT AS MANY BUILDINGS AS POSSIBLE SO THAT THEY WILL BE SIGNIFICANTLY MORE RESILIENT THAN THEY ARE TODAY					
	7	Encourage existing buildings in the 100-year floodplain to adopt flood resiliency measures through an incentive program and targeted requirements	In Progress	The City released a report Retrofitting Buildings for Flood Risk to offer guidance to building owners that are making resiliency investments. The City continues to seek funding for a building resiliency incentive program.	Implement code changes and launch incentive program	Partially Completed
	8	Establish Community Design Centers to assist property owners in developing design solutions for reconstruction and retrofitting, and connect them to available City programs	Completed	In 2014, the City, in collaboration with Pratt University and other local partners, held a series of events in the Rockaways, Brighton Beach, Coney Island, Staten Island, and Canarsie to assist property owners in developing design solutions for reconstruction and retrofitting, insurance issues and provide an opportunity to connect with other related City programs.	Launch centers in targeted neighborhoods	Completed



Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
BUILDINGS	9	Retrofit public housing units damaged by Sandy and increase future resiliency	In Progress	NYCHA has secured over \$3 billion of FEMA funds to make resiliency investments across all of its Sandy-damaged developments. Design has begun for over 30 developments.	Install backup generators in vulnerable buildings; launch planning efforts for undamaged but vulnerable buildings	Partially Completed
	10	Launch sales tax abatement program for flood resiliency in industrial buildings	Completed	A sales tax abatement for flood resiliency in industrial buildings was approved by the IDA board in 2013, prioritizing 1-2 story buildings with at least 4 feet between their actual ground elevation and the applicable base flood elevation.	Launch program	Completed
	11	Launch a competition to increase flood resiliency in building systems	In Progress	The City launched a competition and expects to award \$30 million to deploy innovative resiliency technologies to small business locations. In August 2014, RISE : NYC selected 27 technologies as finalists in the program. These finalists had the opportunity to participate in a public Technology Demo Night on October 7, 2014. Following the Technology Demo Night, the RISE : NYC evaluation team expects to select winning proposals in early 2015.	Launch competition and select winners	Partially Completed
	12	Clarify regulations relating to the retrofit of landmarked structures in the 100-year floodplain	Completed	The Landmarks Preservation Commission (LPC) has issued a Frequently Asked Questions guide about making changes to a landmarked building, particularly in regard to adding or relocating mechanical equipment for buildings in flood hazard areas. Additional flood resiliency guidance will be developed by LPC over time on a case-by-case basis as the outcomes of individual cases are determined.	Issue written guidance	Completed
	13	Amend the Building Code to improve wind resiliency for existing buildings and complete studies of potential retrofits	In Progress	The New York City building code has been amended to expand the existing DOB Façade Inspection Program to include rooftop structures and equipment. The New York City building code and the New York City mechanical code have been amended to strengthen provisions to prevent wind damage to certain buildings and building systems. The City is also in the process of launching a study of the impacts of future wind events on buildings.	Implement initial Building Code changes	Completed
	14	Amend the Construction Codes and develop best practices to protect against utility service interruptions	Completed	In 2013, the City enacted several laws increasing protection against utility service interruptions.	Implement changes to Construction Codes	Completed
ECONOMIC RECOVERY	SUPPORT COMMUNITY AND ECONOMIC RECOVERY IN IMPACTED AREA					
	1	Launch Business Recovery and Resiliency Programs	In Progress	The City is no longer pursuing the Business Resiliency Investment Program. In its place, the City, through SBS, will launch a new \$3 million Business PREP program in 2015 to assist small businesses making resiliency investment and operational changes.	Launch program and begin disbursing funds	Partially Completed
	2	Launch Neighborhood Game Changer Competition	Completed	The Neighborhood Game Changer competition has been discontinued and funds have been reallocated to more effective business resiliency programs and targeted resiliency investments that will improve local commercial corridors.	Issue RFP and select winning proposals	Completed
	3	Launch Neighborhood Retail Recovery Program	In Progress	Last year, the Public Service Commission approved the NYC Superstorm Sandy Business Incentive Rate program.	Launch Business Incentive Rate for retail and approve applications	Completed
	4	Support local merchants in improving and promoting local commercial corridors	In Progress	The City, through the SBS, is currently providing ongoing support to local merchants in Sandy-affected areas through capacity building, retail façade and streetscape improvements, and marketing/business attraction activities. The new Business PREP program will expand these services.	Provide technical assistance and funding	Completed

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
ECONOMIC RECOVERY	5	Continue to support the FRESH program to increase the number of full-line grocers in underserved neighborhoods	In Progress	The City continues to advance the FRESH program. Additional FRESH stores seeking benefits for new construction, expansion, and renovation have received approval and authorization. FRESH continues to pursue the most underserved neighborhoods throughout the city.	Pursue FRESH programs in Sandy-impacted neighborhoods	Completed
	6	Reassess commercial properties citywide to reflect post-Sandy market values	Completed	For Fiscal Year 2014, DOF recognized Sandy's impact by making downward adjustments to the market values of more than 88,000 properties. These adjustments led to tax reductions for more than 50,000 properties affected by the storm. For the Fiscal Year 2015 assessment roll, DOF inspected 5,400 properties that had received physical reductions on the Fiscal Year 2014 roll in order to evaluate the current status of the properties. Market values for properties in the surge zones will remain at the Fiscal Year 2014 levels, unless the properties have been repaired or rebuilt.	Establish new market values and lower property taxes	Completed
INSURANCE	TARGET AFFORDABILITY SOLUTIONS TO LOW-INCOME POLICYHOLDERS					
	1	Support Federal efforts to address affordability issues related to reform of the NFIP	In Progress	The City provided input on the Homeowners Flood Insurance Affordability Act of 2014, slowing the steep increases in flood insurance premiums. While the National Academy of Sciences affordability study is underway, the City is conducting its own affordability studies to better understand the impacts of recent reforms on New York City's neighborhoods and residents. These studies are expected to be completed in 2015.	Complete affordability study	Partially Completed
	DEFINE RESILIENCY STANDARDS FOR EXISTING BUILDINGS					
	2	Develop FEMA-endorsed flood protection standards and certifications for existing urban buildings	In Progress	In October 2014, the City released a report Retrofitting Buildings for Flood Risk to offer guidance to building owners that are making resiliency investments. This document aligns current building and zoning codes with new flood insurance regulations.	Complete development of building standards and FEMA review	Partially Completed
	3	Call on FEMA to recognize mixed-use buildings as a distinct building category	In Progress	FEMA has recently updated its insurance policy form to allow applicants to indicate the percentage of a building that is used for commercial purposes. The City will continue to advocate for a distinct building category.	Create a mixed-use building category within the NFIP	Partially Completed
	INCORPORATE RESILIENCY STANDARDS IN INSURANCE UNDERWRITING					
	4	Call on FEMA to develop mitigation credits for resiliency measures	In Progress	The City continues to advocate to FEMA for mitigation credits. The City is working closely with FEMA's mitigation credits study and has offered extensive technical comments for FEMA's consideration that better represents building types that withstand flood and mitigation approaches to reduce flood losses in dense, urban settings. It is anticipated that FEMA will complete its mitigation credits study in 2015.	Complete study of mitigation options and risk reduction	Partially Completed
	5	Study approaches for New York City to join FEMA's Community Rating System program	In Progress	FEMA is currently conducting a Community Assistance Visit, the first step before joining the Community Rating System (CRS). Based on the results of that visit, the City will evaluate its participation in the CRS.	Complete study of City's ability to be admitted to CRS program and cost-benefit analysis	Partially Completed
	EXPAND PRICING OPTIONS FOR POLICYHOLDERS					
	6	Call on FEMA to allow residential policyholders to select higher deductibles	In Progress	The City advocated and provided technical assistance for the Homeowners Flood Insurance Affordability Act of 2013, which includes a provision for the development of higher deductible policies. The City's flood insurance affordability studies will evaluate the benefits of a higher deductible option.	Complete evaluation of higher deductible options	Partially Completed

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
INSURANCE	IMPROVE AWARENESS AND EDUCATION ABOUT INSURANCE					
	7	Support the goals of the NYS 2100 Commission to protect New York State, consumers, and businesses	In Progress	The City continues to coordinate and support DFS with the implementation of its NYS 2100 Commission goals.	Support State efforts	Completed
	8	Call on New York State to improve policyholder awareness at the point of sale or renewal	In Progress	The City advocated and provided technical assistance for the Homeowners Flood Insurance Affordability Act of 2013, which included provisions regarding establishing an insurance advocate to support public outreach. In addition, the City has met with insurance associations to develop ways of improving point of sale communication. The City will continue to advocate for improved agent training by FEMA and will utilize its consumer education campaign to improve policyholder awareness.	Support State efforts to improve policyholder awareness	Completed
	9	Launch a consumer education campaign on flood insurance	In Progress	The City continues to coordinate with the Center for New York City Neighborhoods on resources for the public around flood risk and flood insurance. This includes working closely with the Center on a flood risk website (floodhelpnyc.org). The City's consumer education campaign will launch in Summer 2015.	Complete citywide campaign	Partially Completed
	10	Launch an engagement campaign targeting insurers	In Progress	The City, in cooperation with DFS, has hosted a forum to engage private insurance companies to discuss flood products and mitigation strategies. The City continues outreach to insurers to discuss flood products and mitigation strategies.	Establish regular meetings with leading insurers	Partially Completed
UTILITIES	REDESIGN THE REGULATORY FRAMEWORK TO SUPPORT RESILIENCY					
	1	Work with utilities and regulators to develop a cost-effective system upgrade plan to address climate risks	In Progress	ConEd continues to harden critical infrastructure under a PSC-approved program. In addition, \$164 million worth of work is scheduled in 2016 and all work is scheduled to be completed by 2021. The PSC recently approved National Grid's request for recovery of incremental capital costs for improvements in the Rockaway Peninsula that will increase system resiliency and replace leak-prone gas mains. The City is assessing LIPA's storm hardening initiatives for the Rockaways and will provide testimony as to its adequacy in LIPA's 2015 Rate Case.	Incorporate cost-benefit analysis tool into regulatory framework	Completed
	2	Work with utilities and regulators to reflect climate risks in system design and equipment standards	In Progress	ConEd's \$1 billion storm hardening program was approved by the PSC and is currently underway across the City, which includes provisions to plan for climate risks based on the most recent NPCC climate projections. National Grid's replacement of leak-prone pipe also addresses climate risks by reducing methane emissions. The City is assessing LIPA's storm hardening initiatives for the Rockaways and will provide testimony as to its adequacy in LIPA's 2015 Rate Case.	Submit comments to 2014 NYISO Reliability Needs Assessment	Completed
	3	Work with utilities and regulators to establish performance metrics for climate risk response	In Progress	The PSC introduced a statewide scorecard to measure utilities' performance in preparation for, and restoration from, major outage events. There were no major storms in 2014, therefore the scorecard was not used.	Complete Con Edison rate case proceeding	Completed
	HARDEN EXISTING INFRASTRUCTURE TO WITHSTAND CLIMATE EVENTS					
	4	Work with power suppliers and regulators to harden key power generators against flooding	In Progress	Con Edison is proceeding with plans to harden generating facilities. Discussions are ongoing at the NYISO and at the Public Service Commission to develop potential compensation mechanisms for power suppliers.	Launch effort with stakeholders	Completed
	5	Work with utilities and the PSC to harden key electric transmission and distribution infrastructure against flooding	In Progress	ConEd's \$1 billion storm hardening program was approved by the PSC and is currently underway across the City, which includes efforts to harden key electric transmission and distribution infrastructure against flooding. The City is assessing LIPA's storm hardening initiatives for the Rockaways and will provide testimony as to its adequacy in LIPA's 2015 Rate Case.	Complete Con Edison rate case proceeding	Completed

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
UTILITIES	6	Work with utilities and the PSC to harden vulnerable overhead lines against winds	In Progress	ConEd's \$1 billion storm hardening program was approved by the PSC and is currently underway across the City, which includes efforts to underground a portion of its overhead wires and to employ other measures to increase the resiliency of overhead lines in high risk areas. In addition, the City completed and released a study in 2013 assessing the relative value and cost of selectively undergrounding power lines. The City is assessing LIPA's storm hardening initiatives for the Rockaways, including overhead lines, and will provide testimony as to its adequacy in LIPA's 2015 Rate Case.	Complete Con Edison rate case proceeding and Local Law 13 study	Completed
	7	Work with utilities, regulators, and gas pipeline operators to harden the natural gas system against flooding	In Progress	ConEd's \$1 billion storm hardening program was approved by the PSC and is currently underway across the City, which includes provisions to accelerate replacement of leak prone pipe and harden tunnel head houses. National Grid has commenced a program in in the Rockaway Peninsula to make its gas system more resilient through accelerated replacement of leak-prone mains and installation of automated meters and other devices.	Complete Con Edison rate case proceeding	Completed
	8	Work with steam plant operators and the PSC to harden steam plants against flooding	In Progress	ConEd's \$1 billion storm hardening program was approved by the PSC and is currently underway across the City, which includes efforts to harden steam plants against flooding.	Complete Con Edison rate case proceeding	Completed
	RECONFIGURE UTILITY NETWORKS TO BE REDUNDANT AND RESILIENT					
	9	Work with industry partners, New York State, and regulators to strengthen New York City's power supply	In Progress	The City continues to participate in proceedings at the NYISO and before the FERC to modify market rules to eliminate barriers to entry of new resources. The City also continues to participate in proceedings before the PSC related to relief of transmission congestion and support for renewable energy resources.	Continue ongoing power supply efforts	Completed
	10	Require more in-city plants to be able to restart quickly in the event of blackout	In Progress	The City continues to work with the NYISO to ensure adequate blackstart capability to meet future contingencies. The City supported revisions to the NYISO's tariffs that would maintain, as needed, the current complement of black start capable generating units within New York City.	Continue ongoing efforts	Completed
	11	Work with Con Edison and the PSC to develop a long-term resiliency plan for the electric distribution system	In Progress	The City continues to participate in the Reforming Energy Vision proceeding.	Complete Con Edison rate case proceeding	Completed
	12	Work with utilities and regulators to minimize electric outages in areas not directly affected by climate impacts	In Progress	ConEd's \$1 billion storm hardening program was approved by the PSC and is currently underway across the City, which includes network reconfiguration in the Bowling Green and Fulton network areas. Other efforts include adding sectionalizers to reduce the number of customers affected by outages on the radial system, the addition of smart grid technologies, and the use of devices and equipment that allow for continuation of service and/or expeditious restoration of service following accidents, storm damage, or other events.	Complete Con Edison rate case proceeding	Completed
	13	Work with utilities and regulators to implement smart grid technology to assess system conditions in real time	In Progress	ConEd is undertaking work to subdivide its network to limit the degree a system disruption in one area will have on adjacent areas.	Complete Con Edison rate case proceeding	Completed
	14	Work with utilities and regulators to speed up service restoration for critical customers via system configuration	In Progress	ConEd's \$1 billion storm hardening program was approved by the PSC and is currently underway across the City, which includes efforts to install customer isolation switches to protect high tension network supply feeders.	Complete Con Edison rate case proceeding	Completed



Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
UTILITIES	15	Work with utilities and regulators to speed up service restoration via pre-connections for mobile substations	In Progress	The PSC introduced a statewide Scorecard to measure utilities' performance in preparation for, and restoration from, major outage events. There were no major storms in 2014, therefore the scorecard was not used.	Complete Con Edison rate case proceeding	Completed
	16	Work with pipeline operators to expand and diversify natural gas supply	In Progress	The City continues to work with the PSC and the two delivery utilities to ensure a safe natural gas infrastructure supplying the five boroughs.	Continue ongoing efforts	Completed
	17	Work with utilities and regulators to strengthen the in-city gas transmission and distribution system	In Progress	The City continues to work with the PSC and our two delivery utilities to ensure a safe natural gas infrastructure supplying the five boroughs.	Complete Con Edison rate case proceeding	Completed
	18	Launch energy infrastructure resiliency competition	In Progress	The City launched a competition and expects to award \$30 million to deploy innovative resiliency technologies to small business locations. In August 2014, RISE : NYC selected 27 technologies as finalists in the program. The RISE : NYC evaluation team has selected winning proposals to be announced in Spring 2015.	Select winners of competition	Partially Completed
	REDUCE ENERGY DEMAND					
	19	Work with utilities and regulators to expand citywide demand response programs	In Progress	The City is working with the PSC, ConEd, and the NYISO to make the in-City demand response program more robust and to ensure continuity of such programs.	Complete Con Edison rate case	Completed
	20	Work with government and private sector partners to expand the energy efficiency of buildings	In Progress	In September 2014, the City worked with government and private sector partners to release a ten-year citywide energy efficiency plan, One City: Built to Last. As part of this plan, the City committed to an 80% reduction in greenhouse gases by 2050. To put New York City on this pathway, the City also set a 30% reduction target for building emissions by 2025 and a 35% reduction target for government buildings by 2025. These targets will be met through leadership by example, resident empowerment to take action, high energy performance standards, equitable benefits to all neighborhoods, and approaches informed by data analysis and stakeholder feedback. The City is committing \$1 billion to energy efficiency improvements in municipal buildings. The City is also launching a retrofit accelerator to assist the private sector in making these same investments.	Launch Green Light New York Center	Completed
	DIVERSIFY CUSTOMER OPTIONS IN CASE OF UTILITY OUTAGE					
	21	Work with public and private partners to scale up distributed generation (DG) and micro-grids	In Progress	The City continues to participate in the Reforming Energy Vision proceeding, which includes efforts to support distributed generation and microgrids. The City is also working with ConEd and the PSC on revisions to ConEd's standby tariffs that would lessen economic impediments to distributed generation, and is working with the PSC and NYSERDA on funding opportunities for distribute generation and micro-grids.	Launch micro-grid feasibility study	Completed
	22	Incorporate resiliency into the design of City electric vehicle initiatives and pilot storage technologies	In Progress	The City continues to monitor the development of electric vehicle-to-grid / vehicle-to-building standards, which are still only in limited pilots nationally.	Continue ongoing efforts; implement and pilot at Brooklyn Army Terminal	Completed
	23	Improve backup generation for critical customers	In Progress	The City is currently finalizing the contracting for 45 mobile generator units.	Expand City emergency generator fleet by 20 to 30 units	Partially Completed

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
LIQUID FUELS	SEEK TO HARDEN THE LIQUID FUELS SUPPLY INFRASTRUCTURE					
	1	Call on the Federal government to convene a regional working group to develop a fuel infrastructure hardening strategy	In Progress	Working closely with the Columbia University Center on Global Energy Policy, the City has convened relevant stakeholders, including Federal and State agencies, the National Petroleum Council, and private industry to discuss opportunities for a coordinated and regional liquid fuels infrastructure resiliency plan. A report will be released in October 2015.	Develop regional strategy	Partially Completed
	2	Develop a reporting framework for fuel infrastructure operators to support post-emergency restoration	In Progress	The City, through NYCEDC, has developed a database of liquid fuel assets in the New York metropolitan region. NYCEDC expects to pilot this database with relevant governmental agencies and begin input of data with industry in 2015.	Ensure development of IT systems and information reporting framework	Partially Completed
	3	Work with Buckeye and New York State to safely build pipeline booster stations in New York City to increase supply and withstand extreme weather events	In Progress	The City will continue to consider opportunities to safely ensure the supply of liquid fuels.	Ensure booster stations to withstand climate change impacts	Partially Completed
	4	Work with New York State to provide incentives for the hardening of gas stations to withstand extreme weather events	Completed	In 2013, New York State adopted into law a requirement that all gas stations within a half-mile of a major highway or evacuation route to build generator transfer switches and be able to source generators during a power outage. NYSERDA also offered incentives for generator transfer switches.	Assist in launching incentive program	Not Completed
	5	Ensure that a subset of gas stations and terminals have access to backup generators in case of widespread power outages	Completed	In 2013, the State launched its FuelNY program, with gas stations meeting a certain criteria within a half-mile of a highway exit or hurricane evacuation route now required to have quick-connects for generators.	Ensure creation of a generator pool and pre-event positioning plan	Partially Completed
	ENHANCE THE ABILITY OF THE SUPPLY CHAIN TO RESPOND TO DISRUPTIONS					
	6	Explore the creation of a transportation fuel reserve to temporarily supply the private market during disruptions	In Progress	The Federal government created a 22 million gallon gasoline fuel reserve in NY Harbor. The State created a 3 million gallon pilot gasoline fuel reserve on Long Island. For emergency diesel needs, fuel oil from the federal Home Heating Oil Reserve can be used, if appropriate emergency waivers are obtained. In 2015, the City will continue to work to advocate for a fuel supply chain resiliency strategy for NYC, in partnership with State and industry partners, that will focus on protecting critical assets. The City will also explore funding for a Regional Resiliency Assessment Program with the U.S. Department of Homeland Security on the supply chain of fuels and other critical commodities.	Evaluate feasibility and cost	Partially Completed
	7	Call on New York State to modify price gouging laws and allow flexibility of gas station supply contracts to increase fuel availability during disruptions	In Progress	The City continues to pursue regulatory opportunities to ensure the protection of consumers during fuel shortages following emergency events. This initiative can be carried out through legislation, or directly through executive action by the Governor and New York Attorney General, and will be included in the regulatory waiver playbook.	Secure passage of legislation	Partially Completed
	8	Develop a package of City, State, and Federal regulatory actions to address liquid fuel shortages during emergencies	Completed	The City, through OEM, is enhancing its playbook with a robust Citywide Emergency Fuel Operations Plan. This plan will provide a strategy for fueling priority vehicles and equipment in the event of a disruption to the supply chain. It will also include NY National Guard pre-scripted mission requests to provide site security. OEM anticipates completing the Citywide Emergency Fuel Operations Plan in 2015.	Complete rationing plan and package of regulatory waivers	Completed

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
HEALTHCARE	IMPROVE THE CITY'S ABILITY TO FUEL FIRST RESPONDERS AND PRIVATE CRITICAL FLEETS					
	9	Harden municipal fueling stations and enhance mobile fueling capability to support both City government and critical fleets	In Progress	DCAS has ordered 35 fuel trucks. The pilot inspection unit has arrived and arrival of all units is expected by the end of 2015. DCAS is currently finalizing the contracting for 45 mobile generator units. DCAS has installed automated fuel tracking for all agencies except DSNY where installations will be completed by the end of 2015.	Procure equipment	Partially Completed
	ENSURE CRITICAL PROVIDERS' OPERABILITY THROUGH REDUNDANCY AND THE PREVENTION OF PHYSICAL DAMAGE					
	1	Improve design and construction of new hospitals	Completed	The City has enacted several local laws to improve the design and construction of new hospitals in the floodplain.	Amend Construction Codes	Completed
	2	Require the retrofitting of existing hospitals in the 500-year floodplain	In Progress	The City will explore re-introducing legislation that would require retrofits to existing hospitals.	Amend Construction Codes	Not Completed
	3	Support the Health and Hospitals Corporation effort to protect public hospital emergency departments (EDs) from flooding	In Progress	The City, through HHC, has secured nearly \$1.7 billion in recovery and resiliency funding from FEMA to protect Bellevue, Metropolitan, Coler, and Coney Island Hospitals. Design for these projects will begin in 2015.	Determine strategies and identify funding for each at-risk ED	Completed
	4	Improve the design and construction of new nursing homes and adult care facilities	Completed	The City has enacted several local laws to improve the design and construction of new nursing homes and adult care facilities in the floodplain.	Amend Construction Codes	Completed
	5	Require the retrofitting of existing nursing homes in the 100-year floodplain	In Progress	The City will explore re-introducing legislation that would require retrofits to existing nursing homes.	Amend Construction Codes	Not Completed
	6	Require the retrofitting of existing adult care facilities in the 100-year floodplain	In Progress	The City will explore re-introducing legislation that would require retrofits to existing adult care facilities.	Amend Construction Codes	Not Completed
	7	Support nursing homes and adult care facilities with mitigation grants and loans	In Progress	The City expects to receive approximately \$19 million in FEMA funds for this initiative and will launch the nursing homes and adult care facility mitigation grants program upon approval by FEMA.	Develop and launch program	Partially Completed
	8	Increase the air conditioning capacity of nursing homes and adult care facilities	In Progress	Prior efforts to advance this initiative have proven ineffective. The City will identify alternative mechanisms for achieving the goals of this proposal, and will explore using the nursing home and adult care facility mitigation grant program to advance this initiative.	Develop and launch program	Not Completed
	REDUCE BARRIERS TO CARE DURING AND AFTER EMERGENCIES					
	9	Harden primary care and mental health clinics	Not Started	The City continues to pursue funding to complete this initiative.	Develop and launch program	Not Completed
	10	Improve pharmacies' power resiliency	In Progress	In 2014, DOHMH launched an emergency preparedness website for pharmacies and will continue to populate this site with helpful information to prepare for and respond to emergencies.	Implement regulatory changes	Completed
	11	Encourage telecommunications resiliency	In Progress	In 2014, DOHMH developed and distributed a City Health Information (CHI) publication dedicated to emergency preparedness for health providers. The CHI is an evidence-based clinical bulletin for healthcare providers throughout New York City. This was developed as a best practice guide w to help community-based providers understand the importance of telecommunications resiliency as well as the options they might consider and questions to ask when evaluating different solutions	Develop and distribute best practice guide	Completed
	12	Encourage electronic health record-keeping	In Progress	DOHMH's Primary Care Information Project (PCIP) sponsors numerous initiatives to help primary care and mental health providers citywide with EHR technical assistance for their practices. In August 2014, DOHMH developed and distributed a City Health Information (CHI) for healthcare providers encouraging office preparedness as well as Electronic Health Records (EHRs) and telecommunication redundancy.	Incorporate resiliency into EHR programs and conduct outreach	Completed

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
COMMUNITY PREPAREDNESS	IMPROVE THE ABILITY OF COMMUNITIES TO PREPARE FOR AND RESPOND TO DISASTERS					
	1	Launch pilot program to identify and address gaps in community capacity	In Progress	OEM continues to work with the FEMA Long Term Recovery Groups and other community based coalitions by attending meetings and organizing workshops. NYC Citizen Corps is developing a COOP training for CBOs and a Community Preparedness Toolkit for community organizations to better prepare and increase community capacity for emergencies. Both efforts are expected to be complete by the end of 2015.	Complete pilot assessment	Partially Completed
	2	Continue and Expand OEM's Community Emergency Response Teams	In Progress	Working in concert with DoITT, OEM will distribute one 700 megahertz radio to each CERT team throughout the city to ensure communication among teams during an emergency. OEM has also updated CERT curriculum to incorporate lessons learned from Hurricane Sandy.	Expand programs	Completed
	3	Expand the Worker Connect information technology tool to serve as an Emergency Services Portal	Not Started	The City continues to pursue funding to complete this initiative.	Create new emergency services portal and strengthen functionality of Worker Connect	Not Completed
	4	Explore the creation of a new online Emergency Notification Contact System	Not Started	The City continues to pursue funding to complete this initiative.	Begin to create voluntary database	Not Completed
	INCREASE ACCOUNTABILITY TO PROMOTE RESILIENCY					
	1	Establish an office within DoITT to focus on telecommunications regulation and resiliency planning	Completed	This office has been established at DoITT.	Establish and operationalize new office	Completed
	2	Establish new resiliency requirements for providers using scheduled renewals of the City's franchise agreements	In Progress	The City has begun to review existing franchise agreements and commenced planning for framework of new resiliency requirements. A new public communications structure (PCS) franchise included resiliency and disaster recovery requirements. DoITT is developing a framework of new resiliency requirements for franchise renewals and continues to explore opportunities for incorporating resiliency and disaster recovery requirements in new franchises and contracts.	Establish framework of new resiliency requirements	Partially Completed
	ENABLE RAPID RECOVERY AFTER EXTREME WEATHER EVENTS					
	3	Request business continuity plans from current City franchisees as permitted under existing franchise agreements	Completed	Business continuity plans have been requested and obtained. Planning for annual follow up meetings with franchisees is underway. Regular meetings with franchisees are ongoing.	Establish regular meetings with cell providers; develop criteria for hardening cell sites	Completed
TELECOMMUNICATIONS	HARDEN FACILITIES TO REDUCE WEATHER-RELATED IMPACTS					
	4	Develop flood protection standards for placement of telecommunications equipment in buildings	In Progress	The City has enacted several local laws to improve the design and construction of telecommunications infrastructure in buildings.	Implement programs	Partially Completed
	5	Use the DoITT franchise agreements to ensure hardening of all critical facilities	In Progress	The City has begun to review franchisee's hardening measures and plans for critical facilities, which includes site visits.	Audit critical facilities and provide guidance for hardening	Partially Completed
	6	Work with cell providers to encourage hardening of cell sites	In Progress	The City conducts regular meetings with cell providers. Discussions of carriers' plans and efforts for hardening cell sites are ongoing. DoITT will continue to encourage carriers to continue undertake hardening measures at cell sites and to assist in clearing any barriers to implementation within the City.	Establish regular meetings with cell providers; develop criteria for hardening cell sites	Partially Completed



Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
---------	----------------	------------	-------------------	-------------------------------	----------------	------------------

TELECOMMUNICATIONS	CREATE REDUNDANCY TO REDUCE RISK OF OUTAGES					
		Study options to increase conduit infrastructure redundancy and resiliency	In Progress	The City conducts regular meetings with conduit infrastructure providers; these are ongoing. DoITT will continue to explore further options, based on maps and information provided, for improving the availability and redundancy of conduit in the City.	Launch study	Partially Completed
	8	Continue implementation of ConnectNYC	Completed	The City completed all build-outs from contracts signed in 2014. Continued monitoring of active applications and applicant negotiations are ongoing with participating ISPs.	Complete second round of applications and begin installing fiber connections	Partially Completed
	9	Add telecommunications provider quality and resiliency to the WiredNYC and NYC Broadband Map ratings	Completed	WiredNYC was officially launched on Sept. 30, 2014, which included the release of broadband infrastructure maps in NYC.	Launch updated maps	Completed
TRANSPORTATION	PROTECT ASSETS TO MAINTAIN SYSTEM OPERATIONS					
	1	Reconstruct and resurface key streets damaged by Sandy	In Progress	The City, through DOT, continues to resurface and reconstruct Sandy-damaged streets. As a result of Sandy damage, NYCDOT is reconstructing 33 lane miles at a cost of \$114 million and resurfacing 155 lane miles at a cost of \$53 million.	Begin reconstruction and resurfacing	Completed
	2	Integrate climate resiliency features into future capital projects	In Progress	The City, through DOT, is developing standard guidelines for incorporating resiliency features into street reconstruction projects. Bridge, Staten Island Ferry, and Traffic units have already initiated projects with climate resiliency features.	Continue to develop standard guidelines	Completed
	3	Elevate traffic signals and provide backup electrical power	In Progress	The foundations of traffic signals in flood prone areas are being raised through the installation of coastal storm foundations which will inherently raise control boxes as well. A total of 336 coastal storm foundations will be installed in areas south of the Belt Parkway.	Begin effort	Completed
	4	Protect NYCDOT tunnels in Lower Manhattan from flooding	In Progress	The City, through DOT, has completed design for the rehabilitation of the damaged electrical, mechanical and ventilation equipment for the Battery Park and West Street underpasses. Construction is anticipated to commence by Summer 2017.	Launch design	Completed
	5	Install watertight barriers to protect movable bridge machinery	In Progress	The City, through DOT, has completed design for the rehabilitation of the damages sustained to the electrical, and mechanical equipment for the 13 movable bridges. Several of these bridges will have the mechanical and electrical equipment raised and protected above flood levels.	Launch design	Completed
	6	Protect Staten Island Ferry and private ferry terminals from climate change-related threats	In Progress	The City, through DOT, will be implementing wet and dry flood-proofing protective measures at the St George and Whitehall terminals and at the Staten Island Ferry Maintenance Facility.	Design underway	Completed
	7	Integrate resiliency into planning and project development	In Progress	The City, through DOT, has already begun making resiliency a critical consideration in prioritizing capital projects. DOT is developing standard guidelines for incorporating resiliency features into street reconstruction projects.	Begin effort	Completed
	8	Call on non-City agencies to implement strategies to address climate change threats	Completed	The City continues to coordinate with the MTA and Port Authority of New York & New Jersey in an effort to ensure greater coordination of resiliency investments.	Engage with non-City agencies	Completed

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
---------	----------------	------------	-------------------	-------------------------------	----------------	------------------

TRANSPORTATION	PREPARE THE TRANSPORTATION SYSTEM TO RESTORE SERVICE AFTER EXTREME CLIMATE EVENTS					
	9	Plan for temporary transit services in the event of subway system suspensions	In Progress	The City, through DOT, has worked with OEM to draft a Transportation Playbook covering HOV restrictions, temporary transit services, bike/pedestrian facilities and other traffic management issues in an emergency situation.	Complete initial planning	Completed
	10	Identify critical transportation network elements and improve transportation responses to major events through regular resiliency planning exercises	In Progress	DOT is working with other agencies to set up tabletop exercises to review the Transportation Playbook. One resiliency planning exercise has been held. DOT plans to hold further exercises with agency partners to increase its preparedness.	Complete initial planning, including multiple planning exercises and one live drill	Partially Completed
	11	Develop standard plans for implementing High-Occupancy Vehicle (HOV) requirements	In Progress	DOT is planning to apply for federal funding to do further contingency planning to respond to future climate events.	Complete plan	Partially Completed
	12	Plan for and install new pedestrian and bicycle facilities to improve connectivity to key transportation hubs	In Progress	The City, through DOT, has worked with OEM to draft a Transportation Playbook covering HOV restrictions, temporary transit services, bike/ped facilities and other traffic management issues in an emergency situation. DOT continues to work with partner agencies to regularly update the formal plans. Citi Bike's planned Phase II expansion will double the size of the bike share network to 12,000 bicycles and about 700 stations by the end of 2017. The expanded network will cover several neighborhoods that are vulnerable to weather-related transportation interruptions, including Red Hook, Greenpoint, and Long Island City.	Develop plan for improvements; begin implementation of most critical components	Completed
	13	Construct new ferry landings to support private ferry services	In Progress	The City will launch a new Citywide Ferry Service that will knit together existing East River routes with new landings and services to Astoria, the Rockaways, South Brooklyn, Soundview and the Lower East Side. Service will launch in 2017. Further expansion to Stapleton and Coney Island will constitute a second phase of expansion, pending additional funding. The project will include the construction of multiple new ferry landings.	Identify locations and launch design	Completed
	14	Deploy the Staten Island Ferry's Austen Class vessels on the East River Ferry and during transportation disruptions	In Progress	DOT has secured an FTA Hurricane Sandy Competitive Resilience Grant, providing funds for two "flex landings," which will be capable of handling Austen-class vessels and can be deployed at multiple locations, including East River terminals. Existing ferry landings at Hunters Point and East 34th Street will also be retrofitted to accommodate the New Generation Vessels also being procured as part of the FTA grant.	Complete operational plans for various types of deployment	Partially Completed
	15	Improve at all levels communications about the restoration of transportation services	In Progress	The City, through DOT, has worked with OEM to draft a Transportation Playbook covering HOV restrictions, temporary transit services, bike/ped facilities and other traffic management issues in an emergency situation. NYCDOT continues to work with partner agencies to regularly update the formal plans and improve communications.	Put communications plan in place	Partially Completed
	IMPLEMENT NEW AND EXPANDED SERVICES TO INCREASE SYSTEM FLEXIBILITY AND REDUNDANCY					
	16	Expand the city's Select Bus Service network	In Progress	Seven SBS routes are currently in operation. Thirteen additional routes will be added by 2018 including the Woodhaven line which will service the Rockaways, a climate vulnerable area.	Implement four SBS routes	Completed
	17	Expand the network of bus priority strategies on arterial highways	In Progress	The City continues to pursue funding for this initiative.	Initiate planning for first highway priority corridor	Not Completed
	18	Expand ferry services in locations citywide	In Progress	The City will launch a new Citywide Ferry Service that will knit together existing East River routes with new landings and services to Astoria, the Rockaways, South Brooklyn, Soundview and the Lower East Side. Service will launch in 2017. Further expansion to Stapleton and Coney Island will constitute a second phase of expansion, pending additional funding.	Complete Citywide Ferry Study	Completed

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
PARKS	ADAPT PARKS AND EXPAND GREEN INFRASTRUCTURE TO SHIELD ADJACENT COMMUNITIES FROM THE IMPACTS OF EXTREME WEATHER EVENTS					
	1	Restore city beaches	In Progress	All City beaches were opened to the public in time for the 2013 summer season and included new comfort stations to replace those damaged by Sandy. DPR continues to improve recreational opportunities and amenities at city beaches, including reconstruction of damaged boardwalks.	Engage community and begin design options	Completed
	2	Harden or otherwise modify shoreline parks and adjacent roadways to protect adjacent community (See Coastal Protection Initiative 30)	In Progress	DPR, working with NYCEDC, has launched a new waterfront inspection program and is developing design guidelines for the flood zone to better enable parks to serve as a buffer for adjacent areas.	Complete preliminary design investigation for pilot	Partially Completed
	3	Reinforce or redesign bulkheads in coastal parks (See Coastal Protection Initiative 6; see Coastal Protection Initiative 29)	In Progress	DPR, working with NYCEDC, has launched a new waterfront inspection program and will use the results of those inspections to better manage its waterfront assets.	Inspect damaged bulkheads on parkland and develop plan	Completed
	4	Expand the City's green streets plan, including for Jamaica Bay	In Progress	The City, through DPR and in partnership with ORR, secured a NFWF grant awarded to DPR for green Infrastructure in Brighton Beach. Issued RFP for engineering services.	Expand program to area around Jamaica Bay	Completed
	RETROFIT OR HARDEN PARK FACILITIES TO WITHSTAND THE IMPACTS OF CLIMATE CHANGE					
	5	Fortify marinas and piers	In Progress	The City, through DPR, has secured FEMA funds to upgrade and fortify the 79th Street Boat Basin, World's Fair Marina, Sheepshead Bay Piers, Bayside Marina, Lemon Creek, Hammonds Cove, and Paerdegat Basin marinas.	Complete preliminary design investigation	Completed
	6	Relocate or increase the resiliency of playgrounds and athletic fields	In Progress	The City, through DPR, continues to assess and upgrade playgrounds and athletic fields in at-risk neighborhoods for increased resiliency. These include Tiffany Street Pier, Brigham Park, Lindower Baseball Field, Red Hook Baseball Field, Fort Washington, MacNeil Seawall, Rockaway Roller Hockey Rink, Sandpiper Playground, New Dorp Soccer Field, Manresa Field, Kaiser Park, and the Ocean Breeze Riding Area.	Complete preliminary design investigation	Completed
	7	Protect mechanical systems at major park facilities and buildings	In Progress	The City, through DPR will begin design in 2015 at Tony Dapolito Recreation Center and in 2015 will complete design for the Asser Levy Recreation Center boiler. As funding is made available, DPR will continue to assess and upgrade its facilities.	Complete preliminary design investigation	Completed
	8	Move or protect critical operations centers	In Progress	At the Olmsted Center, DPR has completed procurement and begun construction of flood mitigation measures, including the incorporation of berms, stormwater detention areas, a flood gate, flood vents, concrete wall panels, tide gates, and elevation of the Annex.	Begin to construct protective measures	Completed
	PROTECT WETLANDS, OTHER NATURAL AREAS, AND THE URBAN FOREST					
	9	Work with the Federal government to transform Jamaica Bay	In Progress	The City continues to work with its Federal government partners and outside institutions to improve and transform Jamaica Bay. The General Management Plan was completed with a Record of Decision in Summer 2014. The Science and Resilience Institute at Jamaica Bay is developing a research and policy agenda and recently hired a new executive director to lead the scientific work in Jamaica Bay.	Continue to advance partnership and launch transformation	Completed
	10	Increase the health and resiliency of natural areas, including Tibbetts Brook	In Progress	The City, through DPR and in partnership with ORR, secured a NFWF grant for Tibbetts Brook. DPR will issue an RFP for daylighting Tibbetts Brook in 2015. Additionally, a final draft of the Alley Creek Watershed Plan was completed. A Bronx River fish passage was constructed and the first phase of a pilot stormwater capture program was completed at Shoelace Park.	Launch projects in Alley Creek and Bronx River watersheds and tidal wetlands in Staten Island, Bronx, and Queens	Completed

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
PARKS	11	Improve the health and resiliency of the city's urban forest	Completed	The City, through DPR, has hired 20 foresters to improve the health and resiliency of the city's urban forest. Tree Trust, through the City Parks Foundation, has expanded several hundred tree beds citywide this year. DPR will continue to increase pruning capacity and operations and expand tree beds.	Hire and train 10 foresters	Completed
	12	Increase growth of local plant material for restoration work	Completed	Production of beachgrass at Floyd Bennett Field has been completed for 2014. The grass was harvested at the end of 2014 and will be made available for dune plantings. The production field will be replanted for the next growing season.	Launch improvements to Greenbelt Native Plants Center	Completed
	DEVELOP TOOLS FOR COMPREHENSIVE CLIMATE ADAPTATION PLANNING AND DESIGN					
	13	Establish a center for resiliency and restoration efforts in the Jamaica Bay-Rockaway Parks	Completed	The Science and Resiliency Institute at Jamaica Bay launched in 2013 with a scientific consortium led by CUNY. In 2014, the Institute played a key role in the City's efforts to work with the USACE in Jamaica Bay. The Institute's first executive director was hired in 2014.	Launch initial operations of center	Completed
	14	Quantify the benefits of the city's ecosystems and green infrastructure	In Progress	The City, through DPR, continued its work to quantify the benefits of green infrastructure, including stormwater retention, infiltration and sewer flow, evapotranspiration, and pollutant removal.	Commission studies on the impact of the city's green infrastructure program	Completed
	15	Create climate adaptation plans for all parks in the 100-year floodplain	In Progress	The City, through DPR, has mapped parks in the 100-year floodplain and continues to implement improvements based on its High-Performance Landscape Guidelines, which are currently being revised.	Map and catalogue vulnerable sites	Completed
ENVIRONMENTAL PROTECTION AND REMEDIATION	16	Map the city's overhead utilities and street trees	In Progress	The City, through DPR, has mapped its street trees and met with ConEd and looks forward to working with ConEd to complete the necessary analysis.	Launch mapping effort	Completed
	PROTECT SITES WITH HAZARDOUS SUBSTANCES AND ENCOURAGE BROWNFIELD REDEVELOPMENT					
	1	Identify cost-effective measures to safeguard exposed substances in the 100-year floodplain	Completed	The City's Open Industrial Uses study was completed in 2014, identifying measures that can be undertaken to safeguard open industrial uses, including those in the floodplain.	Complete Open Industrial Uses study	Completed
	2	Develop a catalogue of best practices for storing enclosed hazardous substances in the 100-year floodplain	In Progress	Building on the results of the Open Industrial Uses Study, the City, through DCP, has launched a study to evaluate measures to improve resiliency in industrial zones. The study is expected to be completed in 2016.	Begin process of developing best practices	Completed
	3	Accelerate brownfield cleanup in the 100-year floodplain to prevent release of pollutants	Completed	To accelerate cleanup of flood-prone areas, OER expanded the NYC Brownfield Incentive Grant program to establish a new Climate Change Resilience Bonus Cleanup Grant with funding from the New York State Regional Economic Development Council and city sources, to provide up to \$10,000 in bonus grants for cleanups in the NYC Voluntary Brownfield Cleanup Program in the 100-year floodplain.	Launch expansion of existing Brownfield Incentive Grant program	Completed
ENVIRONMENTAL PROTECTION AND REMEDIATION	4	Explore strengthened cleanup standards on industrial waterfront brownfields	Completed	OER established new regulations to strengthen standards for cleanup of waterfront industrial properties. The impact of future storms on communities in coastal industrial areas will be lessened by reducing the level of contaminants that can be left on waterfront brownfield sites, especially environmental justice neighborhoods that are already greatly overburdened by pollution.	Examine existing soil cleanup standards and evaluate how to strengthen protections	Completed
	5	Launch brownfield climate change resiliency audits and improve storm preparedness	Completed	OER is now performing resiliency surveys at no charge for developers of brownfield sites in the Brownfield Cleanup Program. These surveys educate developers on the most protective building design practices to lower vulnerability to severe storms and other effects of climate change and on incentives to achieve these goals. After completing approximately 20 surveys, OER will publish a report on findings and best management practices to educate the broader development community.	Begin audits of brownfield cleanup and publish report findings	Completed



Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
ENVIRONMENTAL PROTECTION AND REMEDIATION	6	Launch full operations of the NYC Clean Soil Bank	Completed	OER was delegated authority to make solid waste beneficial use determinations by New York State and established the NYC Clean Soil Bank in 2013 to enable no-cost exchange of clean native soil from remediated brownfield sites to City construction projects, including those designed to elevate grades and promote climate change resiliency and new affordable housing projects. In its first six months of operation, the Clean Soil Bank enabled transfer of more than 67,000 tons of clean native soil and saved the City and brownfield developers more than \$2.5 million in soil disposal and purchase costs.	Launch NYC Clean Soil Bank	Completed
	7	Perform update of SPEED, the City's online environmental research engine	In Progress	Subject to available funding, the City will expand the information available in SPEED to enable climate change resiliency analyses, and to improve the efficacy of its use before, during, and after future extreme weather. Using an existing State grant, OER also will establish an innovative IT application for use by community brownfield planners working to improve local brownfield cleanup, development, and resiliency efforts. In 2014 OER worked to expand support for grass roots planning for climate resiliency by creating networks of community-based organizations. OER has established 15 new place-based Community Brownfield Planning Areas in communities in all five boroughs, including five new planning areas in neighborhoods heavily impacted by flooding from Sandy (Red Hook in Brooklyn, Edgemere in the Rockaways in Queens, Stapleton and West Shore on Staten Island, and East Harlem in Manhattan).	Complete update to SPEED database	Completed
WATER AND WASTEWATER	PROTECT WASTEWATER TREATMENT FACILITIES FROM STORM SURGE					
	1	Adopt a wastewater facility design standard for storm surge and sea level rise	Completed	The City, through DEP, has adopted internal guidelines for wastewater facility design for storm surge and sea level rise. DEP will continue to implement these guidelines in new capital projects.	Adopt new design guidelines	Completed
	2	Harden pumping stations	In Progress	The City, through DEP, has secured \$156 million in Federal funding to harden pumping stations and wastewater treatment plants. DEP will continue to incorporate resiliency measures in repairs and capital projects.	Incorporate resiliency measures in repairs and capital projects	Completed
	3	Harden wastewater treatment plants	In Progress	The City, through DEP, has secured \$156 million in Federal funding to harden pumping stations and wastewater treatment plants. DEP will continue to incorporate resiliency measures in repairs and capital projects.	Incorporate resiliency measures in repairs and capital projects	Completed
	4	Explore alternatives for the Rockaway Wastewater Treatment Plant	In Progress	The feasibility study is underway to explore alternatives for the Rockaway Wastewater Treatment Plan and is expected to be completed in 2015.	Initiate feasibility study	Completed
	5	Develop cogeneration facilities at North River Wastewater Treatment Plant	In Progress	Funding has been secured for the cogeneration facilities at North Rivers Wastewater Treatment Plant and the project is currently in design.	Substantially complete design of cogeneration facilities	Completed
	6	Explore opportunities to expand cogeneration and other energy measures	In Progress	The Wards Island Wastewater Treatment Plants feasibility study is currently underway.	Initiate feasibility study	Completed
	7	Encourage regional resiliency planning	In Progress	DEP helped organize a workshop at the February 2014 New York Water Environment Association annual conference on “Preparing for Climate Change Impacts to Wastewater Infrastructure in Coastal Communities.” DEP presented the NYC Wastewater Resiliency Plan and invited utilities from Nassau and Westchester counties to present on their resiliency projects. DEP will continue to present NYC’s wastewater resiliency approach as opportunities arise.	Share results of DEP’s detailed wastewater risk and adaptation analysis	Completed

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
WATER AND WASTEWATER	IMPROVE AND EXPAND DRAINAGE INFRASTRUCTURE					
	8	Reduce combined sewer overflows with Green Infrastructure	In Progress	DEP and partner agencies have initiated construction on multiple area-wide contracts covering approximately 27,000 acres of the City. DEP is currently in construction or final design on approximately 2,000 bioswales and stormwater greenstreets. Consistent with the 2012 Amended CSO Consent Order, DEP has also completed and submitted four long-term control plans: Alley Creek/Little Neck Bay, Westchester Creek, Hutchinson River and Flushing Creek. DEP will continue to comply with the milestones set forth in the 2012 Amended CSO Consent Order.	Complete four long-term control plans	Completed
	9	Reduce combined sewer overflows with high-level storm sewers citywide	In Progress	In July 2014, DEP began construction of an \$18 million Bluebelt and high level storm sewer project (HLSS) at Twin Ponds in the Laurelton area. DEP will construct two miles of high level storm sewers that will capture stormwater before it enters the combined sewer and divert it directly to the Twin Ponds Bluebelt.	Begin or continue construction of 4 high-level storm sewer capital projects	Partially Completed
	10	Continue to implement and accelerate investments in Bluebelts across the city	In Progress	DEP continues to build out the South Richmond Bluebelt. The Mid-Island Bluebelt construction is anticipated to begin in 2015.	Continue build out of South Richmond Bluebelt and begin construction of Mid-Island Bluebelt	Partially Completed
	11	Build out stormwater sewers in areas of Queens with limited drainage systems	In Progress	DEP is installing 84 catch basins and approximately 2.8 miles of new sewer lines in Springfield Gardens, Queens. As a component of this project, stormwater from the surrounding area has been redirected into a newly constructed wetland conveyance system as part of the Springfield Lake Bluebelt initiative, and now makes its way through Springfield Lake. In 2015, DEP will complete construction of the fourth phase of a \$175 million project to improve drainage in Springfield Gardens, Queens.	Begin or continue construction of three storm sewer build-out capital projects	Partially Completed
	12	Periodically review rainfall trends and implications for stormwater infrastructure	Completed	The latest assessment of precipitation data was completed and featured in the NYC Wastewater Resiliency Plan.	Create process to reassess precipitation data	Completed
	PROMOTE REDUNDANCY AND FLEXIBILITY TO ENSURE CONSTANT SUPPLY OF HIGH-QUALITY WATER					
	13	Repair the leak in the Delaware Aqueduct	In Progress	The construction of the access shafts is underway. The project is currently on schedule to for completion in 2016.	Continue construction of bypass tunnel	Completed
	14	Improve interconnection between the Catskill and Delaware aqueducts and maximize capacity to deliver water from the Catskill/Delaware system	In Progress	Construction contracts are currently being procured.	Begin construction of inter-connection	Partially Completed
	15	Continue the Watershed Protection Program to maintain drinking water quality	In Progress	DEP continues to implement the watershed protection program, including the land acquisition program.	Incorporate updates to Long-Term Watershed Protection Program	Completed

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
FOOD SUPPLY	IDENTIFY AND HARDEN CRITICAL FOOD DISTRIBUTION ASSETS					
	1	Study the food distribution system to identify other prospective vulnerabilities	In Progress	The City is in the process of procuring a consultant to assist in a food system resiliency study. This study is expected to be completed in 2016.	Launch study	Completed
	2	Expand upon prior energy studies, to explore options for cost-effective, continuous power for the Hunts Point Food Distribution Center	In Progress	The study has been completed and will inform ongoing energy resiliency work in Hunts Point.	Expand current study	Completed
	IMPROVE THE RESILIENCY OF CONSUMER ACCESS					
	3	Call on New York State to issue preparedness guidelines to retailers in anticipation of extreme weather events	Completed	The City, in cooperation with the State, has drafted and released preparedness guidelines.	Disseminate State-issued preparedness guidelines	Completed
	4	Call on the State legislature to pass City-sponsored legislation mandating electric generators for food retailers	In Progress	Legislation was introduced and has stalled at the State level. OEM will explore other options.	Advance legislation	Completed
	5	Continue to support the FRESH program to increase the number of full-line grocers in underserved neighborhoods	In Progress	The City continues to advance the FRESH program. Additional FRESH stores seeking benefits for new construction, expansion and renovation have received approval and authorization. FRESH continues to pursue the most underserved neighborhoods throughout the city.	Pursue FRESH programs in Sandy-impacted neighborhoods	Completed
	6	Expand DCAS food procurement pilots towards contracts with larger, more resilient distributors that have active New York operations	Completed	DCAS has registered a contract with Garner Environmental Services effective July 1, 2014 which provides for emergency procurement and delivery of meals ready to eat, other food products, and mass feeding services in response to emergency conditions.	Begin expansion of suppliers	Completed
	7	Implement preparedness measures for continued availability of SNAP benefits for vulnerable consumers following large-scale power outages	Completed	This initiative is completed. Waivers for immediate submissions have been completed.	Prepare waiver for immediate submission if necessary	Completed
	PROTECT SOLID WASTE FACILITIES AND DISPOSAL NETWORKS					
SOLID WASTE	1	Harden critical City-owned facilities	In Progress	In 2014, DSNY completed flood mitigation assessments of six major facilities -- the Manhattan Borough Repair Shop, the Manhattan District 3 Garage on Pier 36, a DSNY-owned office building at 44 Beaver Street, the Brooklyn 11 District Garage, the DSNY general supply warehouse in Greenpoint and the Bronx 12 District Garage. As a result of these assessments, DSNY has developed mitigation project proposals that will be included in future facility capital upgrades. DSNY will continue to Incorporate resiliency measures in repairs and capital projects as appropriate.	Incorporate resiliency measures in repairs and capital projects	Completed
	2	Work with third-party owners to protect critical assets and networks	In Progress	All long-term refuse and recycling vendors have taken steps to reduce vulnerability to coastal flooding. In addition, DSNY has identified and catalogued potential system vulnerabilities, including those in the region's transportation network, that could pose a threat to the City's solid waste management system and developed contingencies to operate in the case of an emergency.	Develop an inventory of critical system vulnerabilities and catalogue known risks	Completed

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
BROOKLYN-QUEENS WATERFRONT	COASTAL PROTECTION					
	1	Work with the Port Authority to continue a study of innovative coastal protection measures using clean dredge material in Southwest Brooklyn	In Progress	The City continues to work with the Port Authority on coastal protection measures in Red Hook, as part of the City's efforts to implement an integrated flood protection system.	Complete study and launch pilot measures	Partially Completed
	2	Call on and work with the USACE to develop an implementation plan and preliminary designs for a local storm surge barrier along the Gowanus Canal	In Progress	The City has launched a feasibility study for a Gowanus Canal local storm surge barrier.	Complete preliminary feasibility study and design and launch USACE study	Partially Completed
	3	Implement strategies to protect Brooklyn Bridge Park and DUMBO	In Progress	Construction of the John Street section of the Park is nearing completion. A developer has been designated and construction of the development site is expected to be completed in 2016.	Begin construction of the John St. section of the park; designate developer for John St. lower site; complete study of DUMBO resiliency measures	Partially Completed
	4	Support private investments that reduce flood risk along Newtown Creek	In Progress	The City expects to serve businesses along Newtown Creek through its new Business PREP program, which will launch in 2015.	Advertise support to businesses; provide technical assistance	Partially Completed
	5	Create an implementation plan for comprehensive flood-protection improvements on public and private property along the Williamsburg, Greenpoint, and Long Island City coastlines	In Progress	The City will continue to work with the USACE to advance projects in vulnerable locations citywide, including the Williamsburg, Greenpoint, and Long Island City coastlines. As new waterfront development occurs, the City looks to leverage opportunities created by new construction to advance flood protection.	Commence study	Completed
	BUILDINGS					
	6	Implement planned upgrades to vulnerable City-owned, industrial properties	In Progress	The City is implementing upgrades to City-owned industrial properties including electrical equipment elevation at Brooklyn Army Terminal and Bush Terminal.	Commence property upgrades and substantially complete	Completed
	CRITICAL INFRASTRUCTURE					
	7	Improve connections between Red Hook and the rest of Brooklyn	Completed	DOT has completed work at this location to allow a better flow of pedestrian traffic and public transit at this location. Enhancements to Mill Street connection and BQE underpass are complete.	Complete enhancements to Mill street connection and BQE underpass	Completed
	8	Call for the MTA to explore Red Hook-Lower Manhattan bus connections	In Progress	The City will launch a new Citywide Ferry Service that will include Red Hook. Service will launch in 2017.	Complete assessment	Partially Completed
	9	Implement expanded free summer weekend ferry service from Manhattan to Red Hook in 2013	Completed	The City will launch a new Citywide Ferry Service that will include Red Hook. Service will launch in 2017.	Complete summer 2013 service and evaluate results	Completed



Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
BROOKLYN-QUEENS WATERFRONT	COMMUNITY AND ECONOMIC RECOVERY					
	10	Create and implement a revitalization strategy for targeted retail and community spaces within Red Hook Houses	Not Started	The City continues to pursue funding to begin this work.	Complete assessment	Not Completed
	11	Implement planned and ongoing investments by the City and private partners	In Progress	The City continues to implement investments to increase resiliency along the Brooklyn-Queens Waterfront.	Complete first phase of Bush Terminal Park	Completed
EAST AND SOUTH SHORES OF STATEN ISLAND	COASTAL PROTECTION					
	1	Call on and work with the USACE to study the construction of a floodgate at Mill Creek	In Progress	The City will continue to work with the USACE on its South Shore phase 2 feasibility study and possibly through its CAP program to advance projects in vulnerable locations along the South Shore, including at Mill Creek.	Commence study	Completed
	BUILDINGS					
	2	Assist Staten Island University Hospital (SIUH) in applying for hazard mitigation funding	Completed	The City committed \$28 million to both SIUH campuses to upgrade the facilities against future climate risks. Prior to this, the City provided technical assistance to SIUH in submitting their HMGP grant application to the State for HMGP funding, resulting in a State award of \$12M in HMGP funding to protect critical infrastructure at the North Campus.	Provide technical support to SIUH	Completed
	CRITICAL INFRASTRUCTURE					
	3	Implement and expedite roadway and sewer capital projects along Hylan Boulevard, especially in vulnerable South Shore areas	In Progress	NYCDOT is currently working on 13 street reconstruction projects in the South Shore areas.	Commence sewer enhancement and paving projects; complete intersection improvements	Partially Completed
	4	Call on and work with the MTA to create an implementation plan for the relocation of Richmond Valley SIR station to Page Avenue	In Progress	The City has called on the MTA to secure funding for this study.	Commence relocation feasibility study	Not Completed

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
EAST AND SOUTH SHORES OF STATEN ISLAND	5	Study potential new ferry routes serving Staten Island and issue a Request for Expressions of Interest (RFEI) to gauge market interest	In Progress	NYCEDC is working to lease City-owned land adjacent to the planned New York Wheel and Empire Outlets development for a ferry landing to serve smaller vessels coming from various locations across the harbor. In addition, further expansion to Stapleton could constitute a second phase of expansion in the recently announced Citywide Ferry Service, subject to the availability of additional funding. Ferry Service to all boroughs was examined in NYCEDC's Comprehensive Citywide Ferry Study.	Commence Comprehensive Citywide Ferry Study	Completed
	6	Secure available Federal funding to implement the Community Wildfire Protection Plan for fire-prone areas on the East Shore	In Progress	The City, through DPR, continues to seek funds for this initiative.	Apply for relevant funding	Completed
	7	Launch the first capital project for the Mid-Island Bluebelt in Midland Beach	In Progress	Construction of the first capital project for the Mid-Island Bluebelt in Midland Beach is projected to start in 2015.	Finalize Environmental Impact Statement; obtain all necessary permits; begin property acquisition	Completed
	8	Explore expansion of the City's mitigation banking pilot as a funding mechanism to facilitate the construction of the Mid-Island and South Shore Bluebelts	Not Started	Upon successful demonstration of the Saw Mill Creek mitigation banking pilot, the City will explore expanding mitigation banks to other locations citywide.	Develop pilot mitigation banking structure	Completed
	COMMUNITY AND ECONOMIC RECOVERY					
	9	Issue a Request for Expressions of Interest (RFEI) for new concessions and services at City-controlled beaches in the East Shore	Completed	An RFEI for concessions on City-controlled beachfront issued in 2014 yielded several activations over the summer including: Staten Island Beach Fest; 7 weekends of programming and activations at Midland Beach, and; Fantasy Shore Amusement Park at Midland Beach and the Sunset Festival.	Issue RFEI; activities subject to RFEI response	Completed
	10	Create a comprehensive revitalization plan for Great Kills Harbor to increase resiliency and to draw additional investment	In Progress	The City submitted an application to NFWF for this project but was not awarded funding. The City will continue to identify possible funding alternatives for this initiative.	Complete plan	Not Completed
	11	Create a strategic plan for public recreational land, including the beachfront recreation areas and open space	In Progress	As part of a strategic East Shore planning exercise, DPR anticipates leading a conceptual recreation planning process for the East Shore of Staten Island in 2015.	Complete plan	Not Completed
	12	Implement planned and ongoing investments by the City and private partners	In Progress	Ocean Breeze construction is ongoing. The New Stapleton Waterfront construction commenced in early 2014 and is on schedule for 2016 completion. A Brielle Avenue developer was selected and is a preparing ULURP application.	Complete Ocean Breeze track and field athletic complex; select respondent for Brielle Avenue municipal site	Partially Completed
	COASTAL PROTECTION					
	1	Call for USACE to develop an implementation plan to mitigate inundation risks through Rockaway Inlet, exploring a surge barrier and alternative measures	In Progress	The City continues to work with the USACE through the Rockaway Reformulation study to evaluate a Rockaway Inlet storm surge barrier that would reduce risk, as part of a comprehensive strategy, in all vulnerable neighborhoods surrounding Jamaica Bay.	Launch study	Completed
	2	Develop an implementation plan to address frequent tidal inundation in Broad Channel and Hamilton Beach, incorporating international best practices	In Progress	The City continues to evaluate resiliency options in Broad Channel through DCP's Resilient Neighborhoods study.	Complete study	Partially Completed

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
SOUTH QUEENS	3	Complete short-term dune improvements on the Rockaway Peninsula	In Progress	Short-term dune improvements were completed in 2014. The City continues to work with the USACE on its Rockaway Reformulation Study. Investment options on the beach and in Jamaica Bay are currently being evaluated, with final selection of preferred alternatives expected in 2015.	Complete dune improvements	Completed
	<b>BUILDINGS</b>					
	4	Complete design competition to enhance resiliency of planned Arverne East Project	Completed	The winners of the Arverne East resiliency enhancement design competition were announced in October 2013 and the City is working with the developer and winning team to pursue implementation.	Complete competition and announce winning submission	Completed
	<b>CRITICAL INFRASTRUCTURE</b>					
	5	Build a new multi-specialty ambulatory surgical center on the Rockaway Peninsula	In Progress	NYCEDC sold the Rockaway Courthouse to a private developer in March 2015. The site will be renovated and reopened as a medical center, providing new health care services to the Rockaways.	With private developer, complete center and make operational	Partially Completed
	6	Expand ferry service to the Rockaway Peninsula	In Progress	The City will launch a new Citywide Ferry Service that will knit together existing East River routes with new landings and services to Astoria, the Rockaways, South Brooklyn, Soundview and the Lower East Side. Service will launch in 2017.	Construct flexible ferry infrastructure; commence comprehensive Citywide Ferry Study	Partially Completed
	<b>COMMUNITY AND ECONOMIC RECOVERY</b>					
	7	Get New Yorkers “Back to the Beach” for summer 2013	Completed	All City beaches were opened to the public in time for the 2013 season and included new comfort stations to replace those damaged by Sandy. DPR continues to improve recreational opportunities and amenities at city beaches.	Complete summer 2013 beach programs; complete near-term restoration of the boardwalk	Completed
	8	Explore opportunities for long-term activation of the beachfront	In Progress	The City continues to prioritize funding for the Rockaway Parks Conceptual plan and is continuing to rebuild the Rockaway boardwalk.	Continue to address substantially damaged areas of boardwalk; explore options for new beachfront destinations issue; RFEI for cultural programming partners	Partially Completed
	9	Develop a revitalization strategy for the Beach 108th Street corridor	In Progress	The City continues to foster the revitalization of the Rockaway Peninsula through investments such as the upcoming launch of Citywide Ferry Service as well as pursuing funding opportunities, jointly with the State, for targeted infrastructure and resiliency improvements in key commercial corridors throughout the Rockaways, including Beach 108th Street, Beach 116th Street, Mott Avenue, and surrounding business districts.	Complete strategy	Partially Completed
	10	Develop a comprehensive commercial revitalization plan for Beach 116th Street	In Progress	The City continues to foster the revitalization of the Rockaway Peninsula through investments such as the upcoming launch of Citywide Ferry Service as well as pursuing funding opportunities, jointly with the State, for targeted infrastructure and resiliency improvements in key commercial corridors throughout the Rockaways, including Beach 108th Street, Beach 116th Street, Mott Avenue, and surrounding business districts.	Complete plan	Partially Completed
	11	Develop a commercial revitalization strategy for Far Rockaway, potentially involving repositioning of City- and MTA-controlled sites	In Progress	The Urban Land Institute’s Technical Assistance Panel report was completed. Beach 20th Street Plaza design has been finalized and construction is expected to be completed in 2015.	Complete plan; issue RFP for NYC/DOT/MTA controlled sites; complete Beach 20th Street plaza	Partially Completed

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
SOUTH QUEENS	12	Launch a satellite Workforce1 Career Center in Far Rockaway	Completed	A Workforce1 Career Center satellite launched in Far Rockaway in August 2013. SBS released an RFP for the Far Rockaway Economic Advancement Initiative in 2014. In addition, SBS, in collaboration with NYCHA, CEO, and Citi Community Development, is also launching a \$1.1 million investment to expand place-based economic empowerment and mobility and connect Far Rockaway residents to high-quality, full-time employment.	Complete and open Center	Completed
	13	Implement planned and ongoing investments by the City and private partners	In Progress	The City continues to implement investments to increase resiliency in South Queens.	Launch Jamaica Bay/Rockaway Restoration Corps, complete Beach 73rd Street YMCA	Partially Completed
SOUTHERN BROOKLYN	<b>COASTAL PROTECTION</b>					
	1	Call on and work with the USACE to study additional Sea Gate oceanfront protections	In Progress	The City will continue to work with the USACE on its NY Harbor study to advance projects in vulnerable locations citywide, including Sea Gate. Bulkheads will be improved in Sea Gate with State funds.	Launch study	Completed
	2	Continue to work with the USACE to study strengthening the Coney Island/Brighton Beach nourishment	In Progress	The City will continue to work with the USACE on its NY Harbor study to advance projects in vulnerable locations citywide, including Coney Island and Brighton Beach.	Launch study	Completed
	3	Call on and work with the USACE to study Manhattan Beach oceanfront protections	In Progress	The City will continue to work with the USACE on its NY Harbor study to advance projects in vulnerable locations citywide, including Manhattan Beach.	Launch study	Completed
	4	Call on and work with the USACE to study mitigating inundation risks through Rockaway Inlet, exploring a surge barrier and alternative measures	In Progress	The City continues to work with the USACE through the Rockaway Reformulation study to evaluate a Rockaway Inlet storm surge barrier that would reduce risk, as part of a comprehensive strategy, in all vulnerable neighborhoods surrounding Jamaica Bay.	Launch study	Completed
	5	Develop an implementation plan and preliminary designs for new Coney Island Creek wetlands and tidal barrier	In Progress	The City has launched a feasibility study for a Coney Island Creek tidal barrier.	Complete preliminary feasibility study and design and identify next steps	Partially Completed
	<b>BUILDINGS</b>					
	6	Study additional resiliency initiatives for ground-floor housing within NYCHA buildings	In Progress	NYCHA has assessed 1007 ground/first floor apartments in approximately 250 Sandy damaged buildings. Design of dry flood proofing measures has commenced. NYCHA will continue to develop plans to protect ground/first floor apartments with FEMA funding.	Complete outreach process and study	Partially Completed
	<b>CRITICAL INFRASTRUCTURE</b>					
	7	Support CUNY launch of study and pilot of new technologies for high-rise buildings	Not Started	The City will support CUNY in its efforts.	CUNY to identify site and launch study and pilot	Not Completed
	8	Study options to ensure resiliency of private cogeneration facilities in the area	Not Started	In 2014, the City explored, with stakeholders in Southern Brooklyn, opportunities to develop cogeneration facilities. The City will continue to pursue future cogeneration opportunities and work to secure funding for any necessary studies.	Launch study	Not Completed
	9	Construct new Coney Island Hospital outpatient clinic to replace the destroyed Ida G. Israel facility	In Progress	HHC is building a temporary clinic on an HPD site near the former Ida G. Israel facility. HHC is still searching for a suitable permanent site.	Open interim facility	Partially Completed



Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
SOUTHERN BROOKLYN	10	Call for the USACE to develop an implementation plan for the reinforcement of existing Belt Parkway edge protections	In Progress	The City will continue to work with the USACE on its NY Harbor study to advance projects in vulnerable locations citywide, including along the Belt Parkway	Complete study	Partially Completed
	11	Restore recreational infrastructure along Southern Brooklyn Beaches	In Progress	DPR continues to restore recreational infrastructure along Southern Brooklyn beaches.	Complete restoration of infrastructure and facilities	Partially Completed
	12	Complete planned drainage improvements in Coney Island to mitigate flooding	In Progress	The first capital project in Coney Island is currently in construction. The project includes the installation of a new larger outfall at West 15th Street, new storm sewers, replacement of existing sanitary sewers, replacement and upgrading of existing trunk and distribution water mains in West 15th Street between Hart Place and Surf avenue, as well as the replacement of existing storm sewers in a portion of Surf Avenue between Stillwell and West 17th Streets.	Commence first phases of construction and advance design for future phases	Completed
	13	Provide technical assistance to support Sea Gate in repairing Sandy-damaged infrastructure	In Progress	The City is in conversations with Sea Gate leadership on opportunities to assist its infrastructure repairs and is working actively with the USACE to complete coastal protections in Sea Gate. The City will continue to work with Sea Gate Association to study private infrastructure and prepare scope for repairs.	Work with Sea Gate Association to study private infrastructure and prepare scope for repairs	Partially Completed
	COMMUNITY AND ECONOMIC RECOVERY					
	14	Work with Brooklyn Chamber of Commerce to assist in organizing Sheepshead Bay businesses	In Progress	Sheepshead Bay neighborhood was not eligible for AvenueNYC funding, as it is not low to moderate income, thus Brooklyn Alliance did not apply for funding.	Assist local merchant organizing efforts	Not Completed
	15	Support area recovery through the rebuilding and expansion of the entertainment district	In Progress	The Coney Island entertainment district had a historic season in 2014, attracting millions of visitors. The new roller coaster—the Thunderbolt—opened in June to great acclaim, and the Aquarium commenced work on their Ocean Wonders expansion project, as planned, and received key approvals from FEMA for major repair efforts for damage from Sandy. Further investments in the Coney Island entertainment district, including new rides and attractions, are planned by private operators and developers in area. The City will continue to support the Aquarium expansion including completion of the Ocean Wonders expansion project which is anticipated to be completed in 2016.	Complete phase 5 of amusement area expansion with new roller coaster; commence Aquarium expansion	Partially Completed
	16	Study opportunities along Coney Island Creek to generate economic activity and facilitate resiliency investments	In Progress	The City has launched a feasibility study for a Coney Island Creek tidal barrier. As part of that study, NYCEDC continues to seek feedback from local stakeholders on related economic development opportunities.	Complete study of economic development opportunities	Partially Completed
	17	Implement planned and ongoing investments by the City and private partners	In Progress	There have been continued investments over the past year in Coney Island’s recreational and amusement attractions. NYC Parks Department has continued to progress renovations at Calvert Vaux Park. A second phase of the West 8th Street Access Project is under construction, further improving pedestrian connections from the subway station to the Boardwalk via a new plaza at West 10th Street. Construction will soon commence on the Seaside Park and Community Arts Center project, which will bring new open space and a cultural attraction to a long-neglected landmark building on the Boardwalk at West 21st Street. The City continues to work with private partners to advance the revitalization of the Coney Island’s entertainment district, building on last years’ opening of a state-of-the-art roller coaster and including progress on major efforts such as the expansion of the New York Aquarium.	Complete Calvert Vaux Park fields; West 8th Street Access Project; Coney Island Commons and YMCA	Partially Completed

Chapter	Initiative No.	Initiative	Initiative Status	Initiative Status Description	2014 Milestone	Milestone Status
SOUTHERN MANHATTAN	COASTAL PROTECTION					
	1	Create an implementation plan and design for an integrated flood protection system for remaining Southern Manhattan areas	In Progress	The City, with support from the State, allocated \$6.75 million in additional funds to conduct preliminary design and planning south of Montgomery Street to Battery Park City. In addition, the City allocated \$8 million in capital funds for the implementation of the first-phase of construction in Battery Park. The City continues to pursue additional funds for further implementation, building on the Rebuild by Design planning and design process.	Commence competition and design study	Completed
	2	Conduct a study for a multi-purpose levee along Lower Manhattan’s eastern edge to address coastal flooding and create economic development opportunities	Completed	The City completed this feasibility study, demonstrating that the concept of a multipurpose levee was feasible. The City will continue to pursue protections against long-term climate change impacts.	Complete initial feasibility study	Completed
	CRITICAL INFRASTRUCTURE					
	3	Construct physical enhancements to Water Street	In Progress	DOT made several safety improvements to Water Street, including the creation of an expanded pedestrian plaza, and an increase in time allowed for pedestrian street crossing.	Complete temporary improvements and design permanent improvements	Completed
	COMMUNITY AND ECONOMIC RECOVERY					
	4	Implement temporary programming of Water Street privately owned public spaces (POPS)	Completed	DOT completed temporary art installations in Water Street and Whitehall Plaza and art panel installations on Gouverneur Lane and Water Street between Wall Street and Maiden Lane. NYCEDC facilitated temporary improvements and activations of POPS with local partner during Spring and Summer 2014.	Approve zoning changes, select programming partner, and commence programming	Completed
	5	Launch a program to enable permanent improvements to Water Street privately owned public spaces (POPS)	Completed	DCP is currently working with NYCEDC and the Alliance for Downtown New York (ADNY) to draft zoning text to facilitate upgrades of the Water Street POPS and infill of the arcades for retail use. By April 2015, NYCEDC and ADNY will be preparing the land use application. By the end of 2015, the zoning text should be in public review or completed.	Create design criteria and solicit design proposals; facilitate land use approvals	Completed
	6	Implement planned and ongoing investments in the South Street Seaport	In Progress	The City continues to implement investments in the South Street Seaport.	Complete resiliency improvements to Schermerhorn Row and Museum Block	Completed
	7	Use the Job Creation & Retention Program to attract and retain businesses in Sandy-impacted areas of Lower Manhattan	In Progress	The Job Creation & Retention Program was extended through 2015 and the vast majority of project funding has been expended on projects in southern Manhattan, with the remainder of the funds to be expended by the end of the year.	Extend and create a new program to make awards to new and renewing tenants	Completed
	8	Expand Take the HELM program (Hire and Expand in Lower Manhattan)	In Progress	The Take the HELM program was created in 2012 to reward innovative technology and creative companies for moving to Lower Manhattan south of Chambers Street. Since 2012, two successful iterations of the competition have been completed and nine companies have been awarded cash prizes of \$250,000 for moving to or relocating in Lower Manhattan. In 2015, a third iteration of the program will help develop a more resilient Lower Manhattan by building stronger networks and deeper collaboration among tech/creative tenants.	Expand competition and make awards to businesses new to Lower Manhattan in the 100-year floodplain	Completed
	9	Implement planned and ongoing investments by the City and private partners	In Progress	The City continues to implement investments to increase resiliency in Southern Manhattan.	Complete Hudson Yards South Tower, Peck Slip School	Partially Completed

References

Abrams, S.A., et al., Greater Mortality and Morbidity in Extremely Preterm Infants Fed a Diet Containing Cow Milk Protein Products, Prolacta Bioscience (2014)

Academy of Pediatrics, Childhood Obesity and Neighborhood Food Store Availability in an Inner City Community (2009)

Aligne, C.A., et al, Association of Pediatric Dental Caries with Passive Smoking (2003)

American Academy of Pediatrics Policy Statement: Breastfeeding and the Use of Human Milk, Pediatrics (2012)

Amtrak Agency Communication (2015)

Association of Bay Area Governments, Plan Bay Area (2013)

Behm, I., et al., Increasing Prevalence of Smoke-free Homes and Decreasing Rates of Sudden Infant Death Syndrome in the United States: An Ecological Association Study, Tobacco Control (2011)

Blaes, A., et al., Effects of a Playground Marking Intervention on School Recess Physical Activity in French Children, Preventive Medicine (2013)

Boston Consulting Group, Evaluating NYC Media Sector Development and Setting the Stage for Future Growth (2012)

Boutelle, K., Using Signs, Artwork and Music to Promote Stair Use in a Public Building, American Journal of Public Health (2004)

Broadway League, Broadway Calendar Year Statistics (2014)

Broadway League, Broadway’s Economic Contribution to NYC 2012-2013 (2013)

Bullard, R., People-of-Color Environmentalism, from Dumping in Dixie: Race, Class, and Environmental Quality (1990)

Campbell, J.C., et al., Risk Factors for Femicide in Abusive Relationships: Results from a Multi-site Case Control Study, American Journal of Public Health (2003)

Center for an Urban Future: Caution Ahead (2014)

Center for an Urban Future, Launching Low Income Entrepreneurs (2013)

Center for an Urban Future, Small Business Success (2014)

Center for Public Education, Starting Out Right: Pre-k and Kindergarten: Full Report (2012)

Centers for Disease Control and Prevention, Heat Illness and Deaths - New York City, 2000–2011 (2013)

CityLab, A New Campaign Takes Aim at New York’s Growing Chain Stores (2015)

City of New York, A Stronger, More Resilient New York (2013)

City of New York, Career Pathways: One City Working Together (2014)

City of New York, Center for Economic Opportunity, The CEO Poverty Measure, 2005-2013, (April 2014)

City of New York, Food Metrics Report (2014)

City of New York, Housing New York: A Five-Borough, Ten-Year Plan (2014)

City of New York, Inventory of New York City Greenhouse Gas Emissions (2014)

City of New York, Office of Management Budget, Capital Plan Summary, 2014-2023 (2013)

City of New York, Office of the Comptroller, Internet Inequality: Broadband Access in NYC (2014)

City of New York, Office of the Mayor, Transcript: de Blasio Administration Launches Major Manufacturing Expansion at Brooklyn Navy Yard (2014)

City of New York, One City: Built to Last (2014)

City of New York, One City, Rebuilding Together (2014)

City of New York, PlaNYC 2007 (2007)

City of New York, Ready to Launch: NYC’s Implementation Plan for Free, High-Quality, Full-Day Universal Pre-Kindergarten (2014)

City of New York, Vision Zero Action Plan (2014)

Coca, V., The Research Alliance for New York City Schools, New York City Goes to College: A First Look at Patterns of College Enrollment, Persistence, and Degree Attainment for NYC High School Students (2014)

Con Edison NYC Infrastructure Plan 2015-2019

Con Edison, Storm Hardening and Resiliency Collaborative Report (2013)

Connecticut Department of Transportation, Transportation Infrastructure Capital Plan 2015-2019 (2014)

Contra Costa Health Services, Closing the Black-White Gap in Birth Outcome: A Life-Course Approach (2010)

Coultas, D. B., Passive Smoking and Risk of Adult Asthma and COPD: An Update, Thorax (1998)

Demographic Snapshots (DOE) (2014)

Environmental Protection Agency, 2011 National Emissions Inventory, Version 1 (2011)

Environmental Protection Agency, Air Quality System: Air Quality Statistics Report (2014)

Environmental Protection Agency, Heavy-Duty Highway Compression-Ignition Engines and Urban Buses - Exhaust Emission Standards (2013)

Fiscal Policy Institute, New York City’s Recovery Finally Starts Generating Wage Gains (2015)

Five Borough Farm, Seeding the Future of Urban Agriculture in New York City (2012)

Gillespie, L.D., et al., Cochrane Database Systems Review, Interventions for Preventing Falls in Older People Living in the Community (2012)

Greater London Authority, The London Plan, 2013-2015 (2013)

Helicon Collaborative, Evaluation: The Rockefeller Foundation Cultural Innovation Fund (2013)

Hoeing, H., Critical Review: Vegetables and Fruit in the Prevention of Chronic Diseases, European Journal of Nutrition (2012)

Jackson, M.R., et al., The Urban Institute’s Arts and Culture Indicators in Community Building Project, Culture Counts in Communities: A Framework for Measurement (2002)

Jackson, R.J., et al., Health and the Built Environment: 10 Years After, American Journal of Public Health (2013)

Kaczynski, A.T., et al., Association of Workplace Supports with Active Commuting, Preventing Chronic Disease (2010)

Kane, T., The Impact of After-School Programs: Interpreting the Results of Four Recent Evaluations (Working Paper) (2004)

Kheirbek, I., et al., The Public Health Benefits of Reducing Fine Particulate Matter through Conversion to Cleaner Heating Fuels in New York City, Environmental Science and Technology (2014)

Klepeis, N.E., et al., The National Human Activity Pattern Survey (NHAPS): A Resource for Assessing Exposure to Environmental Pollutants, Journal of Exposure Analysis and Environmental Epidemiology (2001)

Klinenberg, E., Heat Wave: A Social Autopsy of Disaster in Chicago (1995)

Larson, N.I., et al., Neighborhood Environments: Disparities in Access to Healthy Foods in the U.S., American Journal of Preventive Medicine (2009)

Law, M.R., et al., Environmental Tobacco Smoke Exposure and Ischaemic Heart Disease: An Evaluation of the Evidence, British Medical Journal (1997)

Law, M.R., Hackshaw, A. K., Environmental Tobacco Smoke, British Medical Bulletin (1996)

Lesnick, J., et al., Chapin Hall at the University of Chicago, Reading on Grade Level in Third Grade: How Is It Related to High School Performance and College Enrollment? (2010)

Local Economies Project, Hudson Valley Food Hubs (2013)

Lu, M.C., Halfon, N., Racial and Ethnic Disparities in Birth Outcomes: A Life-Course Perspective, Maternal and Child Health Journal (2003)

Map the Meal Gap, Feeding America (2014)

McCord, M.T., et al., School-Based Clinic Use and School Performance, Journal of Adolescent Health (1993)

Metropolitan Transportation Authority, Capital Program 2010-2014 (2010)

Metropolitan Transportation Authority, Capital Program 2015-2019 (2014)

Metropolitan Transportation Authority, Ridership at a Glance (2013)

Metsios, G. S., et al., Passive Smoking and the Development of Cardiovascular Disease in Children: A Systematic Review, Cardiology Research and Practice (2011)

Morgan, W.J., et al., Results of a Home-based Environmental Intervention Among Urban Children with Asthma, New England Journal of Medicine (2004)

National Association for College Admission Counseling, Effective Counseling in Schools Increases College Access (2006)

National Grid Agency Communication (2015)

National Institutes of Health, FY 2013 RePORTER Project Data (2013)

National League of Cities, Cities and the Nation’s Disposal Crisis: A Report of the National League of Cities and the U.S. Conference of Mayors Solid Waste Management Task Force (1973)

New Jersey Department of Transportation, Statewide Transportation Improvement Program (2013)

New Jersey Turnpike Authority, Annual Budget (2015)

New York City Community Schools Strategic Plan (2015)

New York City Council, Foodworks: A Vision to Improve NYC’s Food System (2011)

New York City Department of City Planning, Going to Market: New York City’s Neighborhood Grocery Store and Supermarket Shortage (2008)

New York City Department of City Planning, New York City Population Projections by Age/ Sex and Borough: 2010-2040 (2013)

New York City Department of City Planning, Retrofitting Buildings for Flood Risk (2014)

New York City Department of Environmental Protection, City Announces Innovative New Partnerships That Will Reduce the Amount of Organic Waste Sent to Landfills, Produce a Reliable Source of Clean Energy and Improve Air Quality (2013)

New York City Department of Environmental Protection, Final Environmental Impact Statement (FEIS) for the Water for the Future Program: Delaware Aqueduct Rondout-West Branch Tunnel Repair (2012)

New York City Department of Environmental Protection, New York City 2014 Drinking Water Supply and Quality Report (2014)

New York City Department of Health and Mental Hygiene, 2013 Report from the New York City Fatality Review Advisory Team: Understanding Child Injury Deaths (2014)

New York City Department of Health and Mental Hygiene, Active Design Guidelines (2010)

New York City Department of Health and Mental Hygiene, Air Pollution and the Health of New Yorkers: The Impact of Fine Particles and Ozone (2011)

New York City Department of Health and Mental Hygiene, Child Community Health Survey (2009)

New York City Department of Health and Mental Hygiene, Community Health Survey (2013)

New York City Department of Health and Mental Hygiene, Eating Well in Harlem: How Available Is Healthy Food? (2007)

New York City Department of Health and Mental Hygiene, Environment and Health Data Portal (2011)

New York City Department of Health and Mental Hygiene, Epi Data Brief Heat-related Deaths in NYC (2013)

New York City Department of Health and Mental Hygiene, Epi Data Brief: Describing the Food Environment in the South Bronx Neighborhood of Crotona-Tremont (2014)

New York City Department of Health and Mental Hygiene, New York City Community Air Survey (2014)

New York City Department of Health and Mental Hygiene, New York City Trends in Air Pollution and Its Health Consequences (2013)

New York City Department of Health and Mental Hygiene, Summary of Vital Statistics, The City of New York - Mortality (2015)

New York City Department of Health and Mental Hygiene, Unpublished Analysis of Clean Heat Data as of 1/2014 (2015)

New York City Department of Health and Mental Hygiene, Youth Risk Behavior Survey

New York City Department of Homeless Services, Daily Report Shelter Census

New York City Department of Housing Preservation and Development, Initial Findings of the 2014 Housing Vacancy Survey (2015)

New York City Department of Sanitation, Commercial Waste Study (2012)

New York City Department of Sanitation, Residential Waste Characterization Study (2013)

New York City Department of Sanitation, Solid Waste Management Plan (2006)

New York City Department of Transportation, Bicycle Survey (2007)

New York City Department of Transportation, Cycling Index (2013)

New York City Economic Development Corporation, Applied Sciences NYC Overview (2015)

New York City Economic Development Corporation, City Investment of \$3.5 Million Will Support Local Apparel Manufacturing, Emerging Fashion Designers, and the Creation of Quality Jobs, Press Release (2014)

New York City Economic Development Corporation, Fashion.NYC.2020 (2010)

New York City Economic Development Corporation, Higher Education Industry Snapshot (2010)

New York City Economic Development Council, JFK Air Cargo Study (2013)

New York City Emergency Management Department, Hazard Mitigation Plan (2014)

New York City Mayor’s Office of Operations, New York City Mayor’s Management Report (2014)

New York City Mayor’s Office of Operations, Preliminary New York City Mayor’s Management Report (2015)

New York City Mayor’s Office to Combat Domestic Violence, Domestic Violence Fact Sheet (2014)

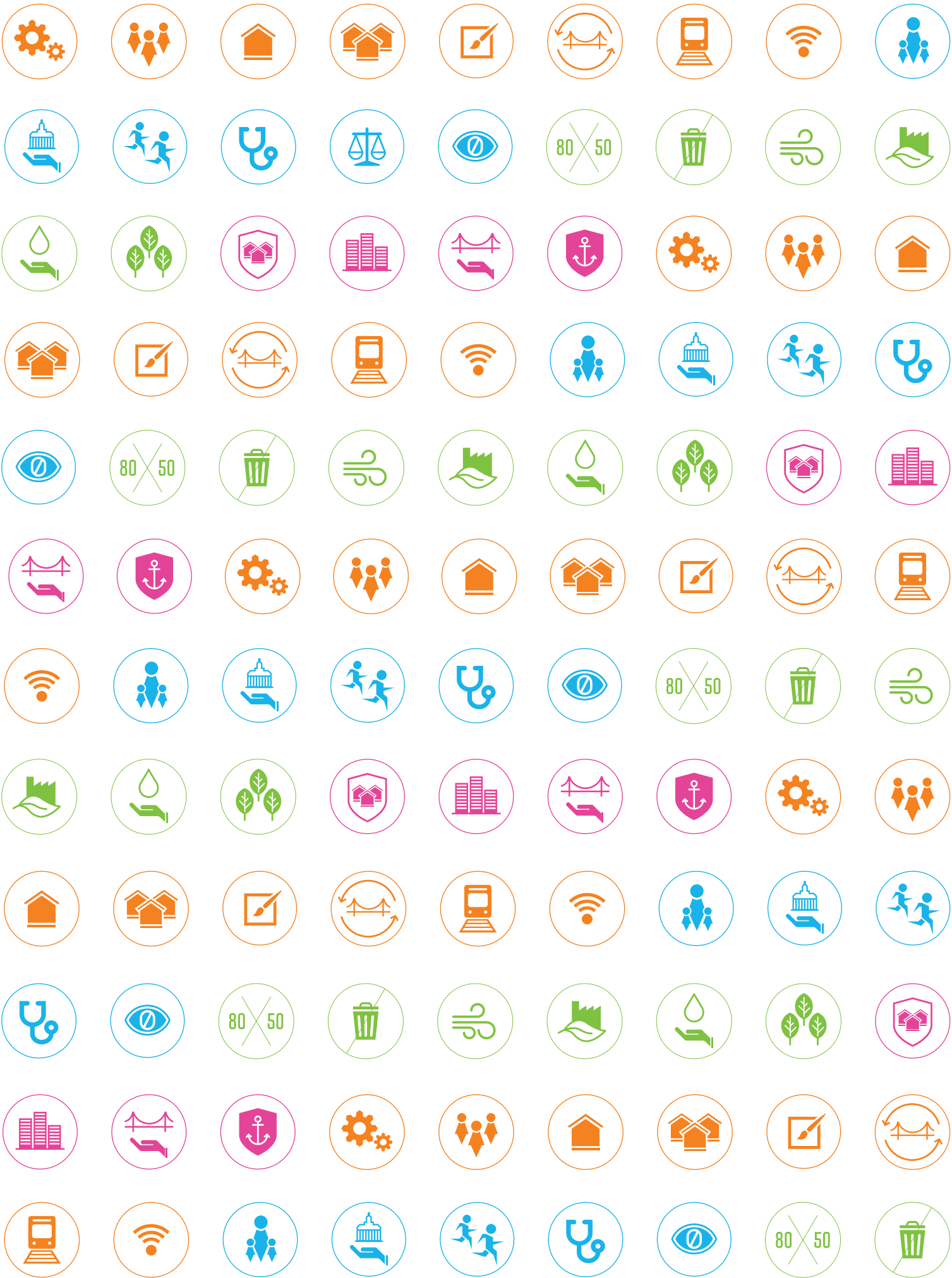
New York City Mayor’s Office to Combat Domestic Violence, Domestic Violence Snapshots: New York City Community Districts (2014)





[nyc.gov/onenyc](https://nyc.gov/onenyc)  
#OneNYC







New York City Mayor’s Office to Combat Domestic Violence, New York City Domestic Violence Fatality Review Committee: 2014 Annual Report (2014)	Philipp, B.L., et al., Baby-Friendly Hospital Initiative Improves Breastfeeding Initiation Rates in a US Hospital Setting, Pediatrics (2001)
New York City Panel on Climate Change 2015 Report, Building the Knowledge Base for Climate Resiliency (2015)	Port Authority of New York and New Jersey, Cross Harbor Freight Program
New York City Parks and Recreation, Framework for an Equitable Future (2014)	RAND Corporation, Flood Insurance in NYC Following Hurricane Sandy (2013)
New York City Preliminary Capital Budget Fiscal Year 2016 (2015)	Regional Greenhouse Gas Initiative, Regional Investment of RGGI CO2 Allowance Proceeds (2012)
New York City Regional Economic Development Council, 2014 Progress Report (2014)	Regional Plan Association, Fragile Success (2014)
New York Metropolitan Transportation Council, Hub Bound Data Files (2013)	Rehm, C.D., et al., American Journal of Clinical Nutrition, The Quality and Monetary Value of Diets Consumed by Adults in the United States (2011)
New York Metropolitan Transportation Council, Population and Employment Projections 2040 (2013)	Ridgers, N.D., et al., Long-term Effects of Playground Markings and Physical Structures on Children’s Recess Physical Activity Levels, Preventive Medicine (2007)
New York Police Department and New York City Department of Transportation, Crash Data (2015)	Rosenberg, T.J., et al., Maternal Obesity and Diabetes as Risk Factors for Adverse Pregnancy Outcomes: Differences Among Four Racial/Ethnic Groups, American Journal of Public Health (2005)
New York Power Authority, Financial Plan 2015-2019 (2015)	Safe Horizon (2015)
New York State Board of Elections (2015)	Sallis, J.F., Glanz, K., Physical Activity and Food Environments: Solutions to the Obesity Epidemic, Milbank Quarterly (2009)
New York State Department of Labor, Quarterly Census of Employment and Wages (2013)	Schweinhart, L.J., et al., The High/Scope Perry Preschool Study Through Age 40 (2011)
New York State Department of Motor Vehicles, Summary of New York City Motor Vehicle Crashes (2015)	Scrivener, S., et al., MDRC, Doubling Graduation Rates: Three-Year Effects of CUNY’s Accelerated Study in Associate Programs (ASAP) for Developmental Education Students (2015)
New York State Department of Transportation, Projects in Your Neighborhood (2015)	Singapore Urban Redevelopment Authority, A High Quality Living Environment for All Singaporeans (2013)
New York State Energy Research and Development Authority, Energy Efficiency and Renewable Energy Potential Study of New York State; Volume 3: Renewable Energy Methodology and Detailed Results (2014)	Small Business First, City of New York (2014)
New York State Energy Research and Development Authority, New York Offshore Wind Cost Reduction Study (2015)	State University of New York, Agency Communication (2015)
New York State Parks, Recreation and Historic Preservation, Agency Communication (2015)	Stratton, G., Mullan E., The Effect of Multicolor Playground Markings on Children’s Physical Activity Level During Recess, Preventive Medicine (2005)
New York State Thruway Authority, Capital Program Projects Map (2015)	Trust for Public Land, City Park Facts (2014)
NYC Vital Signs, Falls Among Older Adults in New York City (2014)	U.S. Army Corps of Engineers, North Atlantic Coast Comprehensive Study (2015)
Office of English Language Learners Language Access Report (2013)	U.S. Bureau of Labor Statistics, 2009-2014
Otsuka, R., et al., Acute Effects of Passive Smoking on the Coronary Circulation in Healthy Young Adults, The Journal of the American Medical Association (2001)	U.S. Census Bureau, 2009-2013 5-Year American Community Survey (2014)
	U.S. Census Bureau, American Community Survey, 2009-2013

U.S. Census Bureau, American Community Survey, Public Use Microdata Sample (2013)
U.S. Census Bureau, County Business Patterns (2012)
U.S. Census Bureau, Housing and Vacancy Survey (HVS) (2015)
U.S. Census Bureau, July 2014 Estimates (2014)
U.S. Census Bureau, LEHD Origin-Destination Employment Statistics (2011)
U.S. Department of Health and Human Services, The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General (2006)
U.S. Department of Labor, Bureau of Labor Statistics, Current Employment Statistics, 2009-2014
United Nations, World Urbanization Prospects (2014)
Vanderbilt Corridor ULURP certification, Department of City Planning (2014)
Verizon Agency Communication (2015)
Wheeler, S.M., Beatley, T., The Sustainable Urban Development Reader (2008)
White, E.B., Here is New York (1949)
White House Report: The Economics of Early Childhood Investments (2014)
World Health Organization Report: Evidence for the Ten Steps to Successful Breastfeeding (1998)
Zupan, J., Regional Plan Association, Upgrading to World Class: The Future of the New York Region’s Airports (2011)

## Glossary

<b>100-year floodplain</b>	The geographical area with a 1 percent or greater chance of flooding in any given year
<b>500-year floodplain</b>	The geographical area with a 0.2 percent chance of flooding in any given year
<b>ACS</b>	New York City Administration for Children’s Services
<b>BIC</b>	City of New York Business Integrity Commission
<b>BOEM</b>	Bureau of Ocean Energy Management
<b>CAU</b>	Mayor’s Community Affairs Unit
<b>CBO</b>	Community-Based Organization
<b>CEO</b>	Center for Economic Opportunity
<b>CERT</b>	Community Emergency Response Teams
<b>CSO</b>	Combined Sewer Outflow
<b>CUNY</b>	City University of New York
<b>DCA</b>	New York City Department of Consumer Affairs
<b>DCAS</b>	New York City Department of Citywide Administrative Services
<b>DCP</b>	New York City Department of City Planning
<b>DDC</b>	New York City Department of Design and Construction
<b>DEP</b>	New York City Department of Environmental Protection
<b>DFTA</b>	New York City Department for the Aging
<b>DHS</b>	New York City Department of Homeless Services
<b>DOB</b>	New York City Department of Buildings
<b>DOC</b>	New York City Department of Correction
<b>DOE</b>	New York City Department of Education
<b>DOF</b>	New York City Department of Finance
<b>DOH</b>	New York City Department of Health and Mental Hygiene
<b>DOHMH</b>	New York City Department of Health and Mental Hygiene
<b>DOI</b>	New York City Department of Investigation
<b>DOITT</b>	New York City Department of Information Technology and Telecommunications
<b>DOP</b>	New York City Department of Probation
<b>DOT</b>	New York City Department of Transportation
<b>DPR</b>	New York City Department of Parks and Recreation
<b>DSNY</b>	New York City Department of Sanitation
<b>DYCD</b>	New York City Department of Youth and Community Development
<b>EPA</b>	U.S. Environmental Protection Agency
<b>FAA</b>	Federal Aviation Administration
<b>FDNY</b>	New York City Fire Department
<b>FEMA</b>	Federal Emergency Management Agency
<b>FERC</b>	Federal Energy Regulatory Commission
<b>FHWA</b>	Federal Highway Administration
<b>FIRM</b>	Flood Insurance Rate Map
<b>FRESH</b>	Food Retail Expansion to Support Health
<b>HHC</b>	New York City Health and Hospitals Corporation

<b>HPD</b>	New York City Department of Housing Preservation and Development
<b>HRA</b>	New York City Human Resources Administration
<b>HRO</b>	New York City Mayor’s Office of Housing Recovery Operations
<b>HUD</b>	U.S. Department of Housing and Urban Development
<b>LIPA</b>	Long Island Power Authority
<b>LIRR</b>	Long Island Rail Road
<b>LPC</b>	Landmarks Preservation Commission
<b>MMR</b>	Mayor’s Management Report
<b>MOIGA</b>	New York City Mayor’s Office of Intergovernmental Affairs
<b>MOS</b>	New York City Mayor’s Office of Sustainability
<b>MTA</b>	Metropolitan Transportation Authority
<b>NAC</b>	Natural Areas Conservancy
<b>NFIP</b>	National Flood Insurance Program
<b>NPCC</b>	New York City Panel on Climate Change
<b>NPS</b>	National Parks Service
<b>NYCEDC</b>	New York City Economic Development Corporation
<b>NYCEEC</b>	New York City Energy Efficiency Corporation
<b>NYCEM</b>	New York City Emergency Management Department
<b>NYCHA</b>	New York City Housing Authority
<b>NYCSCA</b>	New York City School Construction Authority
<b>NYPA</b>	New York Power Authority
<b>NYPD</b>	New York City Police Department
<b>NYSDEC</b>	New York State Department of Environmental Conservation
<b>NYSDOH</b>	New York State Department of Health
<b>NYSDOS</b>	New York State Department of State
<b>NYSDOT</b>	New York State Department of Transportation
<b>NYSERDA</b>	New York State Energy Research and Development Authority
<b>NYSOSC</b>	New York State Office of the Comptroller
<b>OER</b>	New York City Mayor’s Office of Environmental Remediation
<b>OMB</b>	New York City Office of Management and Budget
<b>ORR</b>	New York City Mayor’s Office of Recovery and Resiliency
<b>PANYNJ</b>	Port Authority of New York and New Jersey
<b>SBS</b>	New York City Department of Small Business Services
<b>SCA</b>	New York City School Construction Authority
<b>SWMP</b>	Solid Waste Management Plan
<b>TLC</b>	New York City Taxi and Limousine Commission
<b>UHI</b>	Urban Heat Island
<b>USACE</b>	U.S. Army Corps of Engineers
<b>USFS</b>	United States Forest Service

Image Credits

Introduction, Today and Tomorrow	Page 92 (Ferry passengers) Photo credit: Hannah Henn	Vision 3	Page 231 (Build it Back home) Photo: Mayor’s Office of Housing Recovery Operations
Page 9 (NYC Timeline) Photo credit: NYC Municipal Archives, Shutterstock	Page 95 (Red Hook Container Terminal) Photo credit: Joshua Nelson	Page 163 (Jamaica Bay Wildlife Refuge) Photo credit: New York City Department of Environmental Protection	Page 232 (Retrofit strategy for an attached home) Rendering credit: NYC Department of City Planning
Page 18 (Town Hall Meeting) Photo credit: Courtesy of NYCHA	Page 97 (Crowded baggage claim at LGA) Photo credit: iStockPhoto, Stephen Chernin	Page 163 (Port Richmond Waste Water Treatment Plant solar panels) Photo credit: Emily Dean, Department of Citywide Administrative Services	Page 241 (Cortlandt Street Tunnel) Photo credit: Cortland St Tunnel Image © MTA New York CIty Transit / Marc A. Hermann
Page 19 (Clergy photo) Photo credit: Raghavan Kumar	Page 101 (Students in a cafeteria at Frank Sinatra School of the Arts High School in Queens) Photo credit: NYC Department of Education	Page 194 (Brownfield site) Photo credit: Mayor’s Office of Environmental Remediation	Page 247 (East Side Coastal Resiliency) Rendering credit: Bjarke Ingels Group
Page 21 (PAL Program) Photo credit: NYCHA	Vision 2	Page 204 (Transmitter water bottle refilling station and fountain) Photo credit: Design by WXY	Page 250 (Multipurpose levee) Rendering credit: NYC Economic Development Corporation
Page 23 (5 boro bike tour) Photo credit: NYC & Company	Page 127 (Saolme Urena de Henriquez Campus School) Photo credit: Julio Alvarado	Vision 4	Cover image Ramiro Olaciregui / Getty Images
Page 24-25 (Skyline) Photo credit: NYC & Company	Page 131 (Brooklyn Public Library) Photo credit: Shutterstock	Page 221 (Hunts Point Resiliency) Rendering credit: PennDesign/ OLIN	We would like to thank the New York City Mayoral Photography Office for the many photos they provided for this report.
Page 32 (Infrastructure needs) Photo credit: DEP	Page 137 (Staircase) Photo credit: Nikolas Koenig courtesy of I100 Architect	Page 221 (Harding Park) Photo credit: NYC Department of City Planning	
Page 42-43 (Technology spotlight) Photo: NYC & Company	Page 137 (Riverside Health Center) Photo credit: Nikolas Koenig courtesy of I100 Architect	Page 221 (Starlight Park) Photo credit: NYC Department of Parks and Recreation	
Vision 1		Page 223 (Sheryl Nash-Chisholm) Photo credit: Red Hook Initiative	
Page 52 (Applied Science) Photo/Rendering credit: Kilograph		Page 224 (CERT Volunteer) Photo credit: NYC Emergency Management Department	
Page 57 (Brooklyn Navy Yard - Building 92) Photo credit: Tom Olcott			
Page 81 (Casita Maria and Dancing in the Streets) Photo credit: Danza Fiesta at Paseo Photo courtesy of Casita Maria and Dancing in the Streets			
Page 87 (Port Authority Bus Terminal) Photo credit: Michael Nagle			

Acknowledgments

OneNYC is the product of the tremendous dedication, hard work, and input from nearly all City offices and agencies, as well as the immense number of community and non-profit organizations, elected officials, experts, academics, and private sector leaders who contributed their time and energy to share their knowledge of the city, helping us shape the innovative strategies and initiatives in OneNYC. We want to thank the exceptionally hardworking and talented team at NYC & Company for all of their assistance. And finally, OneNYC would not have been possible without the help of over 10,000 New Yorkers who voiced their opinions at town hall meetings and online, providing invaluable insights and ideas about our city. OneNYC is for them—and for future generations.

We would especially like to thank the following:

Steering Committee

Anthony Shorris, Chair, First Deputy Mayor

Larian Angelo, First Deputy Director, Office of Management and Budget

Richard Buery, Deputy Mayor for Strategic Policy Initiatives

William Goldstein, Senior Advisor to the Mayor for Recovery, Resiliency, and Infrastructure

Mindy Tarlow, Director, Office of Operations

Carl Weisbrod, Chairman, New York City Planning Commission; Director, New York City Department of City Planning

Daniel A. Zarrilli, Director, Office of Recovery and Resiliency

Project Director

Nilda Mesa, Director, Office of Sustainability

OneNYC Team

Ibrahim Abdul-Matin, Susan Ambrosini, Tina Chiu, Kate Collignon, Sarah Currie-Halpern, Linara Davidson, Michael DeLoach, Nellie Dunn, Casey Enders, Rick Fromberg, Danny Fuchs, Ben Furnas, Pablo Illanes, Lolita Jackson, Asima Jansveld, Morgan Jones, Purnima Kapur, Trevor Kenmure, Jee Mee Kim, Kumar Kintala, Matthew Klein, Jonathan Law, Douglas Le, Nicolas Lefevre-Marton, Jose Lewis, Gwendolyn Litvak, Xiao Linda Liu, Anish Melwani, Morgan Monaco, Olivia Moss, Sophie Nitkin, Joseph Pikiewicz, Albert Pulido, Vincent Riscica, Jack Robbins, RoseAnn Ryan, Kavya Shankar, Jessica Singleton, Amy Spitalnick, Jamie Torres Springer, Daniel Steinberg, Sonam Velani, Kelly Wang, Dominic Williams, Adam Zaranko

The incredibly hardworking staffs at the following City offices and agencies:

Office of the First Deputy Mayor, Office of the Deputy Mayor for Health and Human Services, Office of the Deputy Mayor for Housing & Economic Development, Office of the Deputy Mayor for Strategic Policy Initiatives, Administration for Children’s Services, Business Integrity Commission, Center for Economic Opportunity, Civilian Complaint Review Board, Commission on Human Rights, Community Affairs Unit, Department for the Aging, Department of Buildings, Department of City Planning, Department of Citywide Administrative Services, Department of Consumer Affairs, Department of Correction, Department of Cultural Affairs, Department of Design and Construction, Department of Education, Department of Environmental Protection, Department of Finance, Department of Health and Mental Hygiene, Department of Homeless Services, Department of Housing Preservation and Development, Department of Information Technology and Telecommunications, Department of Investigation, Department of Parks and Recreation, Department of Probation, Department of Records and Information Services, Department of Sanitation, Department of Small Business Services, Department of Transportation, Department of Youth and Community Development, Health and Hospitals Corporation, Human Resources Administration, Landmarks Preservation Commission, Law Department, Mayor’s Office for Food Policy, Mayor’s Office for People with Disabilities, Mayor’s Office of Administrative Trials and Hearings, Mayor’s Office of Appointments, Mayor’s Office of Contract Services, Mayor’s Office of Criminal Justice, Mayor’s Office of Environmental Remediation, Mayor’s Office of Housing Recovery Operations, Mayor’s Office of Immigrant Affairs, Mayor’s Office of Intergovernmental Affairs, Mayor’s Office of International Affairs, Mayor’s Office of Labor Relations, Mayor’s Office of Management and Budget, Mayor’s Office of Media and Entertainment, Mayor’s Office of Operations, Mayor’s Office of Recovery and Resiliency, Mayor’s Office of Strategic Partnerships, Mayor’s Office of Sustainability, Mayor’s Office of Technology & Innovation, Mayor’s Office of Veteran’s Affairs, Mayor’s Office to Combat Domestic Violence, NYC & Company, NYC 311, NYC Economic Development Corporation, NYC Emergency Management Department, NYC Fire Department, NYC Housing Authority, NYC Housing Development Corporation, NYC Police Department, NYC Service, Office of the Chief Medical Examiner, Public Design Commission, Recovery, Resiliency and Infrastructure, School Construction Authority, Taxi and Limousine Commission

OneNYC is published pursuant to Local Law 84 of 2013.



## Mayor's Sustainability Advisory Board

### Co-Chairs

Larisa Ortiz, Larisa Ortiz Associates; Commissioner, New York City Planning Commission

Donovan Richards, Jr., City Council, Chair, Committee on Environmental Protection

Jeffrey D. Sachs, Director of The Earth Institute, Quetelet Professor of Sustainable Development, and Professor of Health Policy and Management at Columbia University; Special Advisor to United Nations Secretary-General Ban Ki-moon on the Millennium Development Goals

### Members

Vincent Alvarez, President, New York City Central Labor Council

Richard T. Anderson, President, New York Building Congress

Jennifer Jones Austin, CEO and Executive Director, The Federation of Protestant Welfare Agencies

John Banks, President, Real Estate Board of New York

Xavier de Souza Briggs, Vice President, Ford Foundation

Carlton Brown, CEO, Full Spectrum of NY, LLC

Marcia Bystryn, President, New York League of Conservation Voters

Andrew H. Darrell, Chief of Strategy, Energy and New York Regional Director at Environmental Defense Fund

Jenny Dixon, Director, The Noguchi Museum

Margaret O'Donoghue Castillo, President-Elect, American Institute of Architects, New York State

Ingrid Ellen, Faculty Director, Furman Center for Real Estate and Urban Policy

Robert E. Englert, Director of Land Use, Planning & Infrastructure

William Floyd, Head of External Affairs, Google

Peter Goldmark, Independent Consultant

Henry Gutman, Chairman of the Board, Brooklyn Navy Yard; Simpson Thacher & Bartlett LLP

David R. Jones, President & CEO, Community Service Society of New York

Bomee Jung, Deputy Director, Enterprise Community Partners, City Planning Commission

Eric Klinenberg, Professor of Sociology, NYU

Gary LaBarbera, President of the NYC Building and Construction Trades Council

Peter J. Madonia, CEO, The Rockefeller Foundation

Melissa Mark-Viverito, Speaker, New York City Council

Cheryl McKissack Daniel, President & CEO, McKissack & McKissack

Michael Northrop, Program Director, Rockefeller Brothers Fund

Kate Orff, Founder & Design Director, SCAPE/Landscape Architecture

Adam Parris, Director of Jamaica Bay Science and Resilience Institute at Jamaica Bay, CUNY

Lee H. Perlman, Chief Financial Officer and Executive Vice President, Greater New York Hospital Association

Allison Sesso, Executive Director, Human Services Council of New York

Peggy Shepard, Executive Director, WE ACT for Environmental Justice

Kate Sinding, Senior Attorney and Deputy Director, New York Urban Program of Natural Resources Defense Council

Lisa Sorin, Executive Director, Westchester Square Business Improvement District

Amy Sugimori, Director of Policy and Legislation, Local 32BJ SEIU

Mark Treyger, City Council, Chair, Committee on Recovery and Resiliency

Thomas K. Wright, President, Regional Plan Association

Kathryn Wylde, President & CEO, Partnership for New York City

Elizabeth C. Yeampierre, Executive Director, UPROSE