Introduction

Credit: NYC Economic Development Corporation

Thirty years ago, a plan for New York's future would have seemed futile.

The city was focused entirely on solving immediate crises. Government flirted with bankruptcy. Businesses pulled up stakes. Homes were abandoned. Parks were neglected. Neighborhoods collapsed. Subways broke down. Crime spiraled out of control. New York seemed unsafe, undesirable, ungovernable, unsolvable.

Today, the city is stronger than ever.

Transit ridership is at a fifty-year high. Crime is at a forty-year low. We have our best bond rating ever, and the lowest unemployment. A record 44 million tourists came to visit last year. For the first time since World War II the average New Yorker is living longer than the average American. And our population is higher than it has ever been.

Moving to New York has always been an act of optimism. To come here you must have faith in a better future, and courage to seek it out; you must trust the city to give you a chance, and know that you'll take advantage when it does. You must believe in investing in your future with hard work and ingenuity. You must, in short, believe in accepting a challenge.

This Plan is offered in that spirit.

The challenges we face today are very different from those of the 1970s, but they are no less critical. Our population will grow to over nine million by 2030. Much of our physical infrastructure is a century old and showing its age. Even as we have revitalized the five boroughs, the quality of our air, water, and land still suffer. And today we face a new threat with potentially severe implications: global climate change.

This Plan seeks to repel these threats and to extend the gains we've made over the last thirty years. It seeks active solutions rather than reactive fixes. The 1970s taught us that investing in our future is not a luxury, but an imperative. With that in mind, this Plan seeks to secure for our children a city that is even greater than the one we love today.

The time for such forward thinking has arrived. Just five years ago, let alone thirty, confronting these challenges would have been impossible. In the wake of the September 11th attacks, we planned for the next day, not the next decade. But our economic rebound has been faster than anyone imagined. And so today, we have an opportunity to look further. And we have an obligation to do so, if we are to avoid a repeat of the decay and decline of the 1970s.

The moment for facing up to our responsibility for the city's long-term future is now. The city we pass on to our children will be determined in large part by whether we are willing to seize the moment, make the hard decisions, and see them through.

This is not a plan that supplants other City efforts, such as those we are making on crime, poverty, education, or social services. Here we have focused on the physical city, and its possibilities to unleash opportunity. We have examined the tangible barriers to improving our daily lives: housing that is too often out of reach, neighborhoods without enough playgrounds, water and power systems in need of upgrades congested roads and subways—challenges that if left unaddressed, will inevitably undermine our economy and our quality of life.

We can do better. Together, we can create a greener, greater New York.

New York City

Our Challenges

Under that mandate, we have identified three main challenges: **growth**, an **aging infrastructure**, and an **increasingly precarious environment**.

GROWTH

OpenNYC

New York's population swings have always been shaped by the tension between the allure of a slower paced life elsewhere and the energy and openness that has drawn new residents from across the United States and around the world.

Over the first half of the 20th century, our population swelled every decade, propelled by the consolidation of the five boroughs into a single city, the expansion of the subway, and surges of immigration. As a result of these forces, between 1900 and 1930, the population soared from 3.4 million to 6.9 million people.

By 1950, the number of New Yorkers reached 7.9 million. But after that, the suburban ideal came within the grasp of many post-war New Yorkers. The pull of new, single-family homes in Westchester, Long Island, and New Jersey was so strong that, despite continued domestic in-migration our population stagnated. In the 1970s rising crime and a plummeting quality of life caused the city to shrink by 800,000 people.

We have spent the past three decades painstakingly restoring our city's quality of life. As recently as 1993, 22% of New Yorkers cited safety and schools as reasons to leave New York. When asked those same questions again in 2006, only 8% of recent movers gave similar answers. And the opportunities that lured immigrants to our city from around the country and around the world continue to do so. Our city's resurgence has enabled New York to burst through its historic population high with 8.2 million people. We are also more diverse than ever; today nearly 60% of New Yorkers are either foreign-born or the children of immigrants.

Barring massive changes to immigration policy or the city's quality of life, by 2010, the Department of City Planning projects that New York will grow by another 200,000 people. By 2030, our population will surge

Growth in New York City

New York will continue growing through 2030, but not all the changes are obvious. While the city's population will reach a new record, only two boroughs (Staten Island and Queens) will surpass their historic highs.

Our fastest growing population will be residents over the age of 65, while our number of school-age children will remain essentially unchanged. Overall, our residents will average three years older, a result of the baby-boomer generation reaching retirement and lengthening life spans across the city. This means we must concentrate on increasing the number of senior centers and supportive housing as we look ahead.

But while the overall numbers are instructive, important differences exist between each borough.

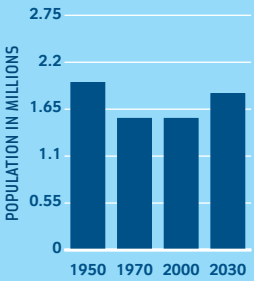
- INDUSTRIAL BUSINESS AREAS
- BOROUGH BUSINESS DISTRICTS
- CENTRAL BUSINESS DISTRICTS

Manhattan

Manhattan's population peaked in 1910, when its 2.33 million residents were piled into tiny apartments with extended relatives, creating densities in the range of 600 to 800 persons per acre. Today, even the most crowded high-rise blocks can claim densities at just one-half that level. As a result, while Manhattan may experience the second-highest growth rate of any borough through 2030, its 1.83 million residents in 2030 will fall far short of its record high. A significant portion of that growth will come from residents over 65, who will increase by nearly 60%.

YEAR	POPULATION	% CHANGE	MEDIAN AGE	% UNDER 18	% OVER 65
1950	1.96 MIL	-	37	19.7	8.7
1970	1.54 MIL	-21.5	35	21.7	14.0
2000	1.54 MIL	-0.1	36	17.2	12.2
2030	1.83 MIL	18.8	40	15.2	16.1

Population (1950–2030)

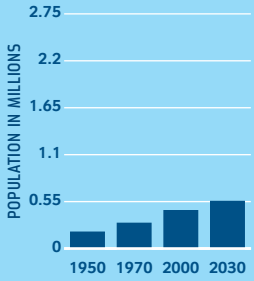


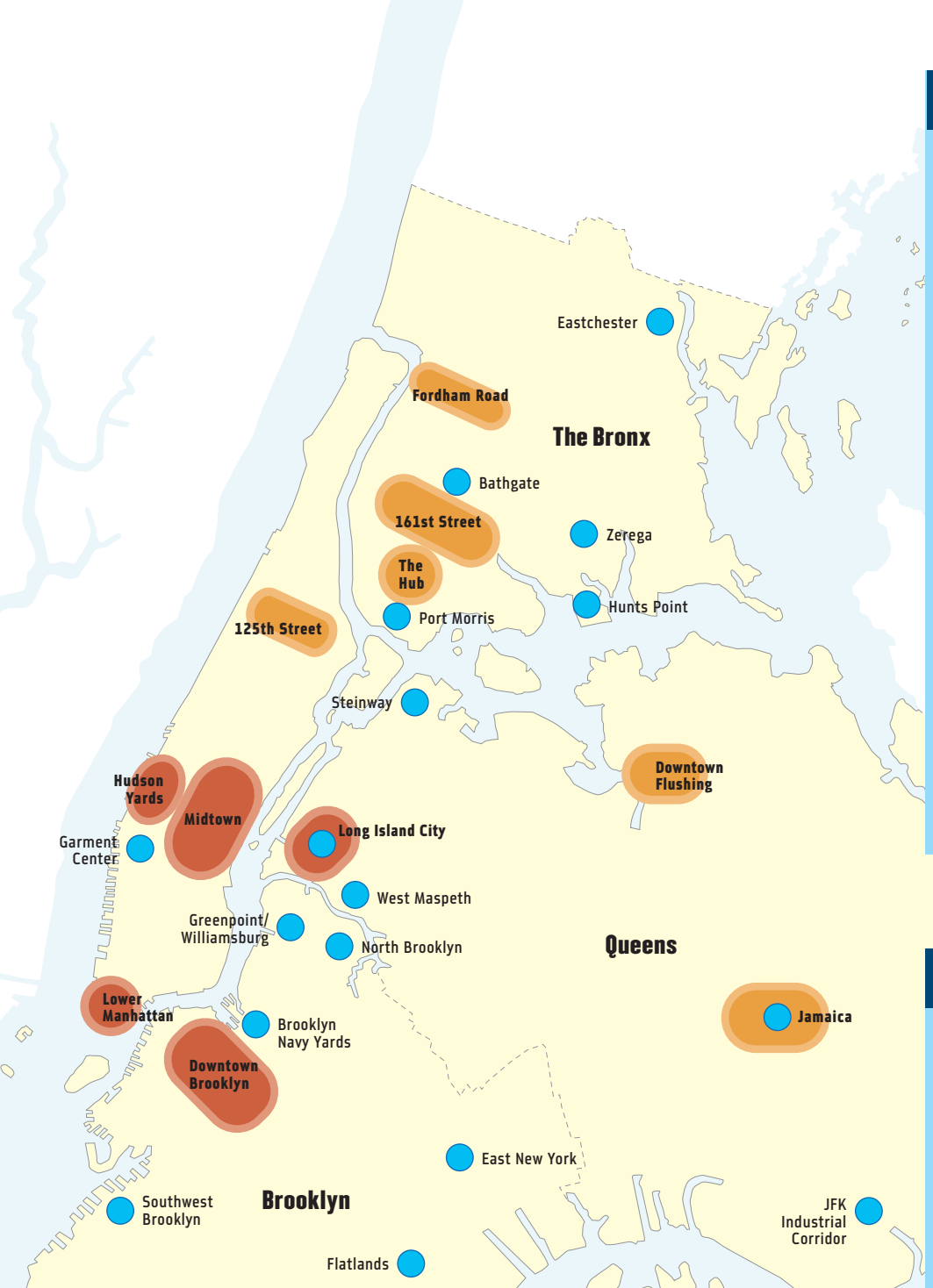
Staten Island

With abundant open space and relatively low density, Staten Island has the smallest population of any borough. But it is the only borough that has experienced growth each decade between 1950 and 2000. This trend will continue, although at a slower pace than between 1970 and 2010. By 2030, the population will reach a historic peak of 552,000 people a 24.4% increase over 2000. As residents stay longer and settle, the population will age dramatically. In 1970, Staten Island was the city's youngest borough; by 2030, it will be the oldest. These older residents will push the borough's median age to nearly 40 years in 2030, a 12–year increase from 1970.

YEAR	POPULATION	% CHANGE	MEDIAN AGE	% UNDER 18	% OVER 65
1950	191,555	-	32	27.9	8.1
1970	295,443	54.2	28	34.4	8.7
2000	443,728	50.2	36	25.4	11.6
2030	551,906	24.4	40	22.0	18.7

Population (1950–2030)

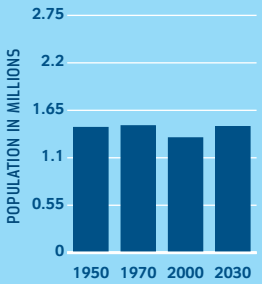




The Bronx

While the population of the Bronx peaked in 1970, the following decade saw disinvestment in housing, rising crime, and the growing appeal of the suburbs. These conditions precipitated a crisis that resulted in the loss of more than 300,000 people. While New York has largely rebounded from the desolation of that decade, the Bronx was most deeply affected. But by 2030, the borough is projected to pull almost even with its 1970 historical high of 1.47 million. Higher-than-average birth rates will compensate for the out-migration to other boroughs and the suburbs. Larger families will also help the Bronx remain New York's youngest borough, with a median age of 33 years.

Population (1950–2030)

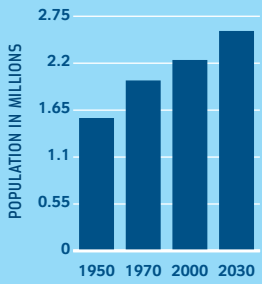


YEAR	POPULATION	% CHANGE	MEDIAN AGE	% UNDER 18	% OVER 65
1950	1.45 MIL	-	34	25.6	7.3
1970	1.47 MIL	1.4	30	31.6	11.6
2000	1.33 MIL	-9.4	31	29.9	10.1
2030	1.46 MIL	9.3	33	27.2	11.8

Queens

Over the past 30 years, Queens has captured an ever-increasing share of the city's population. Although Queens comprised just 19.7% of the population in 1950, this number is projected to climb to over 28% by 2030, when 2.57 million of the city's 9.12 million residents will reside in Queens. The consistent growth in Queens will result in a new peak population for the borough by 2030. This growth is fueled by a mix of immigrants from more than 100 countries. As a result, the median age in Queens from 2000 to 2030 is expected to increase by just over three years.

Population (1950–2030)

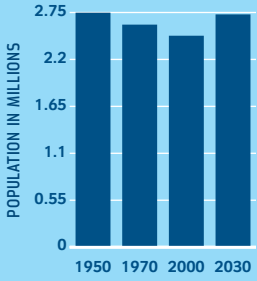


YEAR	POPULATION	% CHANGE	MEDIAN AGE	% UNDER 18	% OVER 65
1950	1.55 MIL	-	34	25.5	7.1
1970	1.99 MIL	28.1	36	26.1	12.4
2000	2.23 MIL	12.2	35	22.8	12.7
2030	2.57 MIL	15.1	38	20.5	14.5

Brooklyn

Brooklyn will near its 1950 population peak of 2.74 million, growing 10.3% to reach 2.72 million people. Prior to its merger with Manhattan, Brooklyn was the third largest city in America and continued to grow until 1950. But the Long Island suburbs, the construction of the Verrazano Narrows Bridge to Staten Island, and the devastation of the 1970's drained the borough's population. Now resurgent, Brooklyn will likely remain the city's largest borough in 2030.

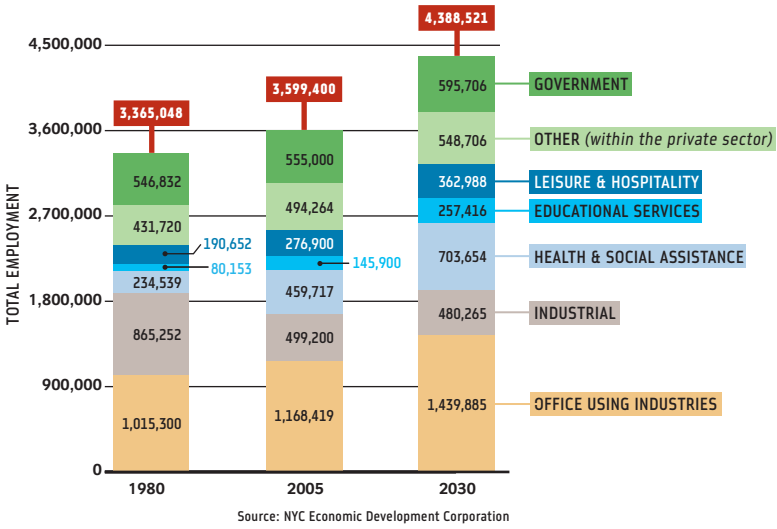
Population (1950–2030)



YEAR	POPULATION	% CHANGE	MEDIAN AGE	% UNDER 18	% OVER 65
1950	2.74 MIL	-	33	26.2	7.4
1970	2.60 MIL	-5.0	30	31.3	11.1
2000	2.47 MIL	-5.3	33	26.8	11.5
2030	2.72 MIL	10.3	37	23.0	15.1

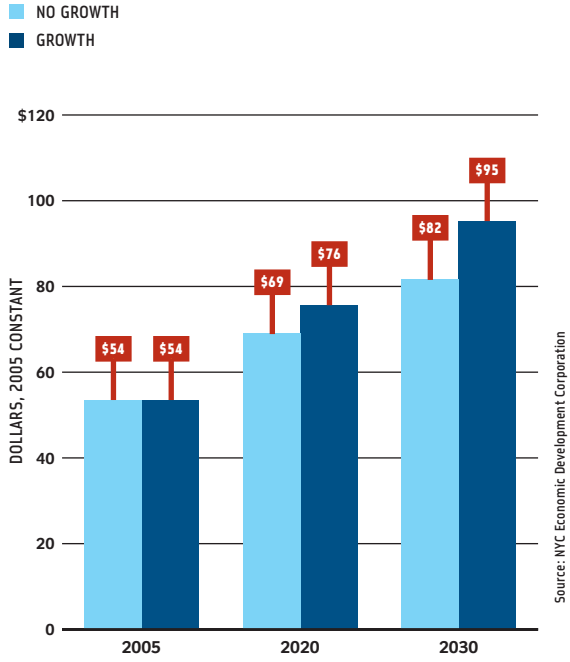
Source: NYC Department of City Planning; and NYC Economic Development Corporation

New York City Projected Employment



Source: NYC Economic Development Corporation

New York City Projected Revenues From Population and Job Growth



Source: NYC Economic Development Corporation

City revenue includes State and Federal grants. Revenue sources per job or person assumed to grow at 1.7% annually (growth rate of average compensation under Social Security Intermediate scenario).

past nine million, the equivalent of adding the entire population of Boston and Miami combined to the five boroughs.

This growth offers great opportunities. Our employment force will grow by 750,000 jobs, with the largest gains among health care and education. New office jobs will generate needs for 60 million square feet of commercial space, which can be filled by the re-emergence of Lower Manhattan and new central business districts in Hudson Yards, Long Island City and Downtown Brooklyn. To protect our industrial economy, which employs nearly half a million people, we have created 18 Industrial Business Areas. *(See chart above: New York City Projected Employment)*

Our third-fastest growing industry will be fueled by the additional visitors we expect. Tourism has nearly doubled in New York since 1991, when 23 million people visited the City; in 2006, the city received 44 million visitors. Even if hotel and airport capacity begins to constrain this growth, we predict we will still exceed 65 million visitors by 2030.

This growth will also result in enormous revenues. The expansion of our tax base will impact our economy accordingly. The additional jobs, tourists, and residents could generate an additional $13 billion annually—money that can be used to help fund some of the initiatives described in the following pages and to provide the services that our residents, businesses, workers, and visitors deserve. *(See chart above: New York City Projected Revenues From Population and Job Growth)*

But the expansion ahead will be fundamentally different than growth over the last 25 years.

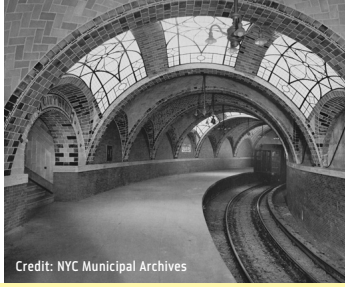
To revive our city, we funneled money into maintenance and restoration, investing in neighborhoods, cleaning and replanting parks, sweeping away the litter that had piled up in our streets and securing our subways. We reclaimed the parts of our city that had been rendered undesirable or unsafe. In short, we have spent the past two decades renewing our capacity.

But now we have built ourselves back. From now on, our growth will be unprecedented, and we are already starting to feel the pressure. Cleaner, more reliable subways have attracted record numbers of riders, causing crowding on many of our lines. It's not only transit. Growing road congestion costs our region $13 billion every year, according to a recent study. By 2030, virtually every road, subway and rail line will be pushed beyond its capacity limits.

Workers are moving farther and farther out of the city to find affordable housing, pushing our commutes to among the longest in the nation. Neighborhoods are at risk of expanding without providing for the parks and open space that help create healthy communities, not just collections of housing units.

New York City Infrastructure Timeline


Credit: The New York Times Photo Archives


Credit: NYC Municipal Archives

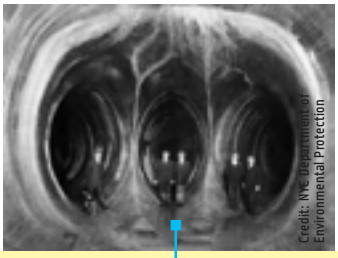
1840 — 1850 — 1860 — 1870 — 1880 — 1890 — 1900

1842 Croton Water Supply System opens, the city's first comprehensive water system

1882 Thomas Edison switches on the world's first commercial electric light system in Lower Manhattan

1883 The Brooklyn Bridge becomes the first bridge across the East River

1904 The first subway line begins service in New York City


Credit: NYC Department of Environmental Protection


Credit: NYC Department of Environmental Protection


Credit: Getty Images

1910 — 1920 — 1930 — 1940 — 1950 — 1960 — 1970

1917 The city's first water tunnel is completed

1920s Utility companies begin putting New York's electrical grid underground; parts are still in service today

1928 Catskill Water Supply System opens

1932 The city's last major subway expansion opens; parts of the original signaling system are still used today

1936 The city's second water tunnel is completed

1944 The Delaware Water Water Supply System opens; it is the city's last major water supply expansion

1964 The Verrazano-Narrows Bridge becomes the last significant bridge built in New York City

1970 Work on the city's third water tunnel begins; the second of four stages will be done by 2012

INFRASTRUCTURE

maintaiNYC

This growth will place new pressure on an infrastructure system that is already aging beyond reliable limits. New Yorkers pioneered many of the systems that make modern life possible—whether it was Thomas Edison switching on the world's first commercial electric light system in Lower Manhattan, planners plotting out the first modern water network in the 1840s, or thousands of workers, engineers and architects building the largest bridges. But our early innovation means that our systems are now among the oldest in America. *(See chart above: New York City Infrastructure Timeline)*

We are a city that runs on electricity, yet some of our power grid dates from the 1920s, and our power plants rely on outmoded, heavily-polluting technology. Our subway system and highway networks are extensive, and heavily-used, yet nearly 3,000 miles of our roads, bridges, and tunnels, and the majority of our subway stations are in need of repair. Our two water tunnels, which provide water to every New York City household, haven't been inspected in more than 70 years. We do not have the redundancy in our system to inspect or make the repairs we need.

We have seen the consequences of inadequate investment in basic services: during the fiscal crises of the 1970s, our streets were pocked with more than one million potholes. By 1982, subway ridership fell to levels not seen since 1917, the result of delayed service and deteriorating cars. Many of the city's bridges faced collapse. The Williamsburg Bridge was taken out of service when engineers discovered that the outer lanes were on the verge of breaking off into the East River. A truck famously plunged through Manhattan's West Side Highway.

We were reminded again during the recent power outage in Queens why reliable infrastructure matters. That's why even as our expansion needs assume a new urgency, we must find ways to maintain and modernize the networks underpinning the city.

ENVIRONMENT

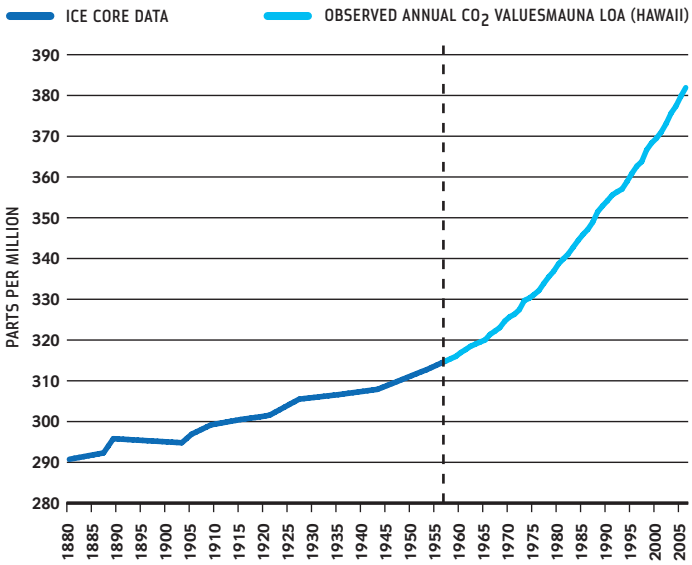
greeNYC

As our population grows and our infrastructure ages, our environment will continue to be at risk.

We have made tremendous gains over the past 25 years in tackling local environmental issues; waters that were unsafe even to touch have become places to boat, fish or swim. Air that could once be seen has become clear.

The Clean Air Act was enacted in 1970, but much of the New York metropolitan area has not reached Federal air quality standards for ozone and soot, and we suffer from one of the worst asthma rates in the United States. The Clean Water Act was passed in 1972, yet 52% of the city's tributaries—the creeks and man-made canals that hug the shoreline and pass through neighborhoods—are still not safe even for boating. Although we have cleaned hundreds of brownfields across the city, there are still as many as 7,600 acres where a history of contamination hinders development and threatens safety.

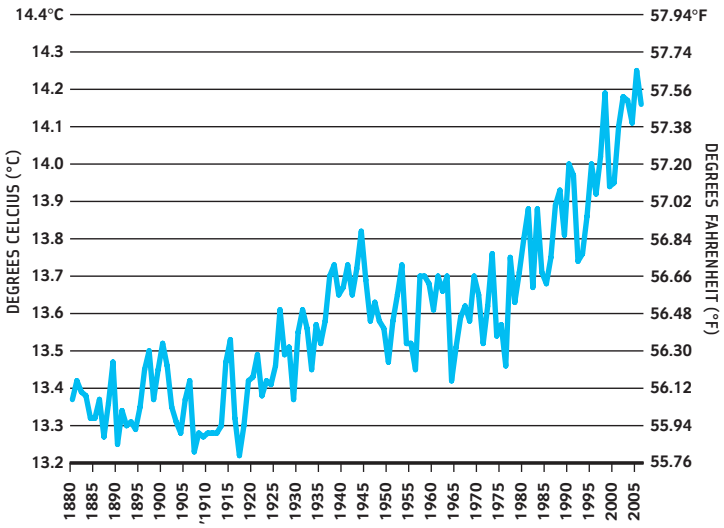
Global Atmospheric Concentrations



Source: *Historical CO_2 Record from the Vostok Ice Core:* Laboratoire de Glaciologie et de Geophysique de l'Environnement, Arctic and Antarctic Research Institute.

Historical CO_2 Record from the Siple Station Ice Core: Physics Institute, University of Bern, Switzerland,

Global Average Temperature



Source: Columbia University Center for Climate Systems research based on National Center for Environmental Prediction Reanalysis II

** 5-year averages are plotted*

Climate Change

Cutting across all of these issues is one increasingly urgent challenge: climate change

In February, the Intergovernmental Panel on Climate Change released a report confirming that humans have accelerated the effects of climate change. As a result, the argument has shifted: we are no longer debating the existence of global warming, but what to do about it. *(See chart above: Global Average Temperature)*

It is an issue that spans the entire planet, but we are already feeling the effects. As a coastal city, New York is especially vulnerable. Already, our winters have gotten warmer, the water surrounding our city has started to rise, and storms along the Atlantic seaboard have intensified.

And so we took a close look at the potential impacts of climate change on New York City, and our own responsibility to address it.

A global challenge with local consequences

Global warming and climate change are caused by increasing concentrations of greenhouse gases in our atmosphere. Carbon dioxide (CO_2), the most common greenhouse gas, is emitted from motorized vehicles, power plants, and boilers, that burn fossil fuel. It gathers in the atmosphere and acts like panels in a greenhouse, letting the sun's rays through, then trapping the heat close to the earth's surface. *(See chart above: Global Atmospheric CO_2 Concentrations)*

The evidence that climate change is happening is irrefutable. Today there is 30% more CO_2 in the atmosphere than there was at the beginning of the Industrial Revolution. During the same period, global temperatures have risen by nearly two degrees Fahrenheit.

But we don't need global averages to understand how climate change is already affecting our health and future security.

By 2030, local temperatures could rise by two degrees; and our city is affected by rising temperatures more than the rest of the region because urban infrastructure absorbs and retains heat. This phenomenon, known as the "urban heat island effect," means that New York City is often four to seven degrees Fahrenheit warmer than the surrounding suburbs. But it is not only our summers that are getting hotter. In the winter of 2006 to 2007, there was no snow in Central Park until January 12th—the latest snowfall since 1878. *(See chart on facing page: Annual Average Temperature in Central Park, Manhattan)*

We also face the threat of sea level change and intensifying storms. At the Battery in Lower Manhattan, the water in our harbor has risen by more than a foot in the last hundred years, and could climb by five inches or more by 2030. *(See chart on facing page: Annual Average Sea Level at the Battery, Manhattan)*

With almost 600 miles of coastline and over half a million New Yorkers living within our current flood plain, this change is especially dangerous to New York. At our current sea level, we already face the probability of a "hundred-year flood" once every 80 years; this could increase to once in 43 years by the 2020s, and up to once in 19 years by the 2050s. According to one estimate a Category 2 Hurricane would inflict more damage on New York than any other American city except Miami.

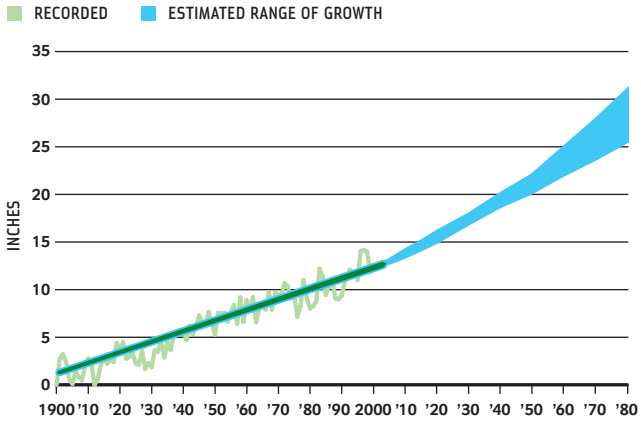
Preventing global warming

Scientists believe that only massive reductions in worldwide greenhouse gas emissions, on the order of 60% to 80% by the middle of the 21st century, will stop the process of global warming.

No city can solve this challenge alone. But New York has a unique ability to help shape a solution. *(See charts on facing page: New York City's Greenhouse Gas Emissions)*

The sheer size of our city means that our contribution to global emissions is significant. In 2005, New York City was responsible for 58.3 million metric tons of carbon dioxide equivalent (CO_2e)—roughly 1% of the total carbon emissions of the United States, or an amount roughly equal to that produced by

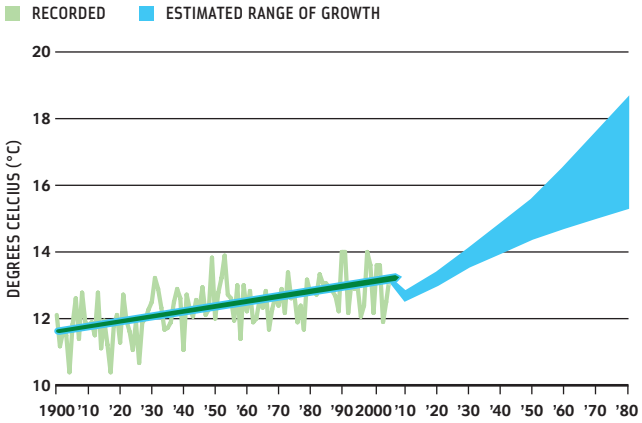
Annual Average Sea Level at the Battery, Manhattan*



Source: Rosenzweig, C., R. Horton, V. Gornitz, and D. C. Major, 2006. Climate Scenarios for the New York City Watershed Region, Technical Report, Columbia University Center for Climate Systems Research

** 1900 sea level used as base*

Annual Average Temperature in Central Park, Manhattan



Source: Rosenzweig, C., R. Horton, V. Gornitz, and D.C. Major, 2006. Climate Scenarios for the New York City Watershed Region, Technical Report, Columbia University Center for Climate Systems Research

Ireland or Switzerland. This figure has been growing at nearly 1% per year, the combined impact of both population and economic growth, and the proliferation of electronics and air conditioning. By 2030, without action, our carbon emissions will grow to over 74 million metric tons

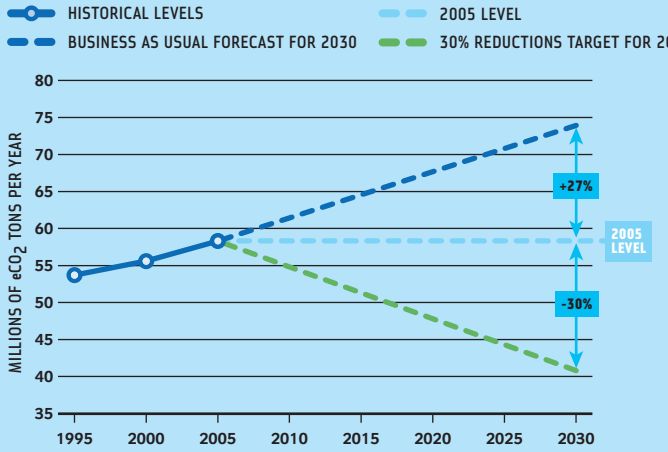
Our carbon comes from many sources, but is mainly affected by three factors. One is the efficiency of the buildings we live in, which determines how much heating fuel, natural gas, and electricity we consume. Another is the way we generate electricity, because inefficient power plants produce far more carbon dioxide than state-of-the-art ones. And a third is transportation, including the amount of driving we do and the truck trips required to haul the freight we need.

But our density, apartment buildings, and reliance on mass transit means we are also one of the most carbon-efficient cities in the United States; New Yorkers produce 71% less CO_2e per capita than the average American. Therefore, choosing to live in New York results in a reduction of greenhouse gases.

Slowing the pace of climate change will require concerted action across the world. But we also cannot afford to wait until others take the lead. Nor should we. New York has always pioneered answers to some of the most pressing problems of the modern age. It is incumbent on us to do so again, and rise to the definitive challenge of the 21st century.

New York City's Greenhouse Gas Emissions

Citywide Emissions



Source: NYC Mayor's Office of Long-Term Planning and Sustainability

Emissions Breakdown

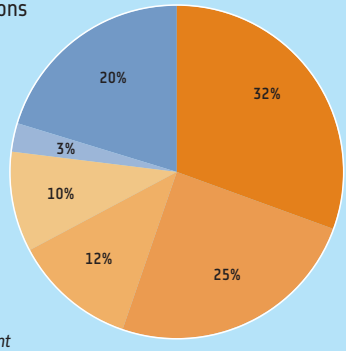
Total = 5.83 million metric tons

BUILDINGS: 79%

- RESIDENTIAL
- COMMERCIAL
- INSTITUTIONAL
- INDUSTRIAL

TRANSPORTATION: 23%

- CARS AND TRUCKS
- TRANSIT



Source: NYC Mayor's Office of Long-Term Planning and Sustainability

** Figures total to 102% due to carbon absorbtion by waste and independent rounding*

This effort began more than a year ago as an attempt to develop a strategy for managing the city's growing needs within a limited amount of land. It quickly became clear that this narrow focus was insufficient. The scale, intricacy, and interdependency of the physical challenges we face required a more holistic approach; choices in one area had unavoidable impacts in another. Each problem in isolation had many possible solutions. But to develop a plan that was not only comprehensive, but also coherent, we realized that we had to think more broadly.

If you seek to solve traffic congestion by building more roads or by expanding mass transit, you make a choice that changes the city. If you care about reducing carbon emissions, that suggests some energy solutions rather than others. If your concern is not only the amount of housing that is produced, but how it impacts neighborhoods and who can afford it, then your recommendations will vary.

That is why in searching for answers, we have wrestled not only with the physical constraints New York will face over two decades, but also with the fundamental values implicit in those policy choices. We have taken as a basic value that economic opportunity can and must come out of growth; that diversity of all kinds can and must be preserved; that a healthy environment is not a luxury good, but a fundamental right essential to creating a city that is fair, healthy, and sustainable.

We have also considered that the world is a different place today than it was half a century ago. Our competition today is no longer only cities like Chicago and Los Angeles—it's also London and Shanghai. Cities around the world are pushing themselves to become more convenient and livable, without sacrificing excitement or energy. In order to compete in the 21st century economy, we must not only keep up with the innovations of others, but surpass them.

We have not done this work alone. The Mayor's Sustainability Advisory Board, composed of some of the city's leading environmental, business, community, and legislative leaders, has helped us at every step. We have worked with scientists and professors at the Earth Institute at Columbia University; New York University; the City University of New York; and elsewhere to understand the policy history, the economics, and the science behind the issues addressed here. And, over three months from December through March, we reached out further.

What kind of city should we become? We posed that question to New York. Over the past three months, we have received thousands of ideas sent by email through our website; we've heard from over a thousand citizens, community leaders and advocates who came to our meetings to express their opinions; we have met with over 100 advocates, 11 community organizations and delivered presentations around the city. The input we received suggested new ideas for consideration, shaped our thinking, reordered our priorities.

In all our conversations, one core emerged: the strengths of the city are in concentration, efficiency, density, diversity; in its people, but above all in its unending sense of possibility. We must reinforce these strengths.

What has emerged, we believe, is the most sweeping plan to strengthen New York's urban environment in the city's modern history. Focusing on the five key dimensions of the city's environment — land, air, water, energy, and transportation — we have developed a plan that can become a model for cities in the 21st century.

The plan outlined here shows how using our land more efficiently can enable the city to absorb tremendous growth while creating affordable, sustainable housing and open spaces in every neighborhood. It details initiatives to improve the quality of our air across the city, so that every New Yorker can depend on breathing the cleanest air of any big city in America; it specifies the actions we need to take to protect the purity of our water and ensure its reliable supply throughout the city; it proposes a new approach to energy planning in New York, that won't only meet the city's reliability needs, but improve our air quality and save us billions of dollars every year. Finally, it proposes to transform our transportation network on a scale not seen since the expansion of the subway system in the early 20th century — and fund it.

Each strategy builds on another. For example, encouraging transit-oriented growth is not only a housing strategy; it will also reduce our dependence on automobiles, which in turn alleviates congestion and improves our air quality.

We have also discovered that every smart choice equals one ultimate impact: a reduction in global warming emissions. This is the real fight to preserve and sustain our city, in the most literal sense.

The answers are neither easy nor painless. They will require not only substantial resources but deep reservoirs of will.

In some cases, the key difficulties are administrative; we must achieve a new level of collaboration between city agencies and among our partners in the region. In others, the challenges are legislative. This plan calls for changes at the city, state, and federal levels—for transportation funding, for energy reform, for a national or state greenhouse gas policy.

Finally, there is the need to pay for what we want. Previous generations of New Yorkers have ignored the reality of financing and have suffered as a result. We cannot make that mistake again. For each of our proposals in this plan, we have described how it will be funded, which in some cases is through the city budget, in other cases through new funding sources. An underlying assumption has been that we should be willing to invest in things that we truly need, and which will pay New Yorkers back many times.

The growth that prompted this effort in the first place will also enable us to pay for many of the answers. By guiding and shaping this growth, we believe it can be harnessed to make a city of 9.1 million people easier, more beautiful, healthier, and more fair than our city of 8.2 million today.

In December, we posed another question to New York: **Will you still love New York in 2030?**

Above all, this report seeks to ensure that the answer to that question is an unequivocal **yes.**

Land

- **Create homes for almost a million more New Yorkers, while making housing more affordable and sustainable**
- **Ensure that all New Yorkers live within a 10–minute walk of a park**
- **Clean up all contaminated land in New York City**

As virtually every part of our city grows, one piece remains fixed: the supply of land. That's why we must use our space more efficiently, to accommodate growth while preserving, and enhancing, the city's quality of life.

Housing

To meet the needs of a growing population, we'll need 265,000 more housing units by 2030. We have the capacity to accommodate this growth, but without action our city's housing stock won't be as affordable or sustainable as it should be.

That's why we will **expand our supply potential by 300,000 to 500,000 units** to drive down the price of land, while directing growth toward areas served by public transportation. This **transit-oriented development** will be supported by public actions to create new opportunities for housing, such as **ambitious rezonings** in consultation with local communities, **maximizing the efficiency of government-owned sites,** and exploring opportunities with communities to **create new land** by decking over highways and railyards.

We must also pair these actions with targeted affordability strategies like **creative financing,** expanding the use of **inclusionary zoning,** and developing **homeownership programs** for low-income New Yorkers.

By expanding these efforts into the future, we can ensure that new housing production matches our vision of New York as a city of opportunity for all.

Open Space

Although we've added more than 300 acres of parks in the last five years and set in motion much more, two million New Yorkers, including hundreds of thousands of children, live more than 10 minutes from a park.

That's why we will invest in **new recreational facilities** across every borough, **opening hundreds of schoolyards** as local playgrounds, **reclaiming underdeveloped sites** that were designated as parks but never finished, and **expanding usable hours at existing fields** by installing additional lights and turf fields.

We will improve our streets and sidewalks by adding **new greenstreets** and **public plazas in every community** as part of our strategy to create a more inviting public realm.

Brownfields

Our need for land means that we must foster the reuse of sites where previous uses have left behind a legacy of contamination.

That's why we will make existing brownfield cleanup programs faster, more efficient, and more responsive to New York's unique development challenges. We will develop **city-specific remediation guidelines, pilot new time-saving strategies** for testing, and create a **new City brownfields office** to accelerate redevelopment.

We will advocate for **eligibility criteria expansions** for existing State programs, while creating **a new City program** to oversee the remaining sites. We will ask for the State to **release community development grants** and **incentivize developers to partner with local communities so neighborhoods gain** a stronger voice in shaping the direction of their neighborhoods.

But we can't clean up all the contaminated land in the city if we don't know where it is. That's why we will launch a process to **identify contaminated sites.**

To encourage more widespread testing, we will **create a revolving cleanup fund,** funded through a partnership with the private sector.

Our approach to brownfields will be more comprehensive and inclusive than ever before, as we work to ensure that the remnants of our past contribute to a more sustainable future.

Water

- **Develop critical backup systems for our aging water network to ensure long-term reliability**
- **Open 90% of our waterways for recreation by reducing water pollution and preserving our natural areas**

We have two primary water challenges: to ensure the water we drink is pure and reliable, and to ensure that the waterways surrounding our city are clean and available for use by New Yorkers.

Water Network

We have the luxury of an abundant water supply, but our supply system faces challenges. Critical elements such as aqueducts and water tunnels cannot be taken out of service. Development encroaches on the city's watersheds, so our reservoirs will require continued vigilance.

We must ensure the quality of our water at its source by **building a new filtration plant for the Croton System** and continuing our aggressive **watershed protection program** for the Catskill and Delaware systems.

We will create redundancy for the aqueducts that carry the water to the city through a combination of **water conservation measures,** maximizing the use of our existing supplies through **new infrastructure like the New Croton Aqueduct,** and **evaluating new potential water sources,** like groundwater.

Finally, we must be able to repair and modernize our in-city distribution, which means **finishing Water Tunnel No. 3.**

Water Quality

We are one of the world's great waterfront cities, with nearly 600 miles of coastline. Waterfront revitalization has been a guiding principle of the last five years, across all five boroughs.

Now it is time to accelerate the reclamation of the waterways themselves, particularly our most polluted tributaries. We will **upgrade our wastewater treatment infrastructure,** while we implement proven strategies such as **greening our streets, planting trees** and **expanding our Bluebelt network.** We will also **explore other natural solutions** for cleaning our water bodies through a range of pilot programs that will be coordinated by a **new Interagency Best Management Practices Task Force. We will also begin to assess the protection our wetlands receive—our first step toward a broader policy.**

Through these initiatives, we can restore our city's natural ecology and the recreational use of our waterways.

Transportation

- **Reach a full "state of good repair" on New York City's roads, subways, and rails for the first time in history**
- **Improve travel times by adding transit capacity for millions more residents, visitors, and workers**

New York's success has always been driven by the efficiency and scale of our transportation network. But for the last 50 years, New York has underinvested.

Despite dramatic progress, we have not yet acheived a full state of good repair across our transit and road networks. More significantly, virtually all subway routes, river crossings, and commuter rail lines will be pushed beyond their capacity in the coming decades—making transportation our greatest potential barrier to growth.

We are proposing **a sweeping transportation plan** that will enable us to meet our needs through 2030 and beyond. That includes strategies to **improve our transit network,** through **major infrastructure expansions, improved bus service, an expanded ferry system** and the **completion of our bike master plan.** We must also **reduce growing gridlock** on our roads through **better road management** and **congestion pricing,** a proven strategy that charges drivers a daily fee to use the city's densest business district.

We know what must be done. But essential transit expansions have been stalled, in some cases for decades. Today, not a single major expansion project is fully funded — and overall, there is a $30 billion funding gap.

That's why we will seek to create **a new regional financing entity, the SMART Financing Authority,** that will rely on three funding streams: the revenues from congestion pricing and an **unprecedented commitment from New York City** that we will **ask New York State to match.** This authority would **fill the existing funding gap for critical transit expansions and provide one-time grants to achieve a state of good repair,** enabling our region to achieve a new standard of mobility.

Energy

- **Provide cleaner, more reliable power for every New Yorker by upgrading our energy infrastructure**

New Yorkers face rising energy costs, air pollution, and greenhouse gas emissions from a lack of coordinated planning, aging infrastructure, and growth.

This will require a two-pronged strategy to increase our clean supply and lower our consumption despite our growth—something that no city or state has done before.

We will **encourage the addition of new, clean power plants through guaranteed contracts, promote repowerings** of our most inefficient plants, and **build a market for renewable energies** to become a bigger source of energy. This new supply will also enable us to **retire our oldest, most polluting power plants,** cleaning our air and reducing greenhouse gas emissions.

To reduce demand, we will **target our largest energy consumers** — institutional buildings, commercial and industrial buildings, and multi-family residential buildings — and accelerate efficiency upgrades **through a system of incentives, mandates, and challenges. Demand reductions will help all New Yorkers by lowering energy prices.**

Together, these strategies will produce a reliable, affordable, and environmentally sustainable energy network. But there is currently no entity capable of achieving this goal. That's why we will work with the State to create **a New York City Energy Planning Board.**

By managing demand and increasing supply, **New York City's overall power and heating bill will plunge by $2 billion to $4 billion;** the **average New York household will save an estimated $230 every year** by 2015.

The result will be not only a healthier environment, but also a stronger economy.

Air Quality

- **Achieve the cleanest air quality of any big city in America**

Despite recent improvements, New York City still falls short in meeting federal air quality standards. This is most apparent in the persistently high rates of asthma that plague too many neighborhoods.

We will continue pressuring the State and Federal governments to require reductions in harmful emissions, while aggressively targeting the local sources we can control. Transportation is responsible for more than 50% of our local air pollution; that's why we will encourage New Yorkers to shift to mass transit. In addition we will mandate, promote, or incentivize **fuel efficiency, cleaner fuels, cleaner or upgraded engines, and the installation of anti-idling technology.**

We must also address our other major sources of emissions: buildings and power plants. That means switching to **cleaner fuels for heating** and **retiring polluting plants.**

Our open space initiatives such as **tree plantings** will move us the rest of the way toward achieving the cleanest air of any big city in America.

To track our progress and target our solutions we will also **launch one of the largest local air quality studies in the United States.**

Climate change

- **Reduce our global warming emissions by 30%**

Collectively these initiatives address the greatest challenge of all: global warming. Scientists have predicted that unless greenhouse gas emissions are substantially stemmed by the middle of the century, the impacts of climate change will be irreversible. Coastal cities like New York are especially vulnerable.

Almost every action we take—from turning on the lights to stepping into a car—has an impact on the amount of carbon dioxide (CO_2) released into the atmosphere.

As a result, **our climate change strategy is the sum of all of the initiatives in this plan.** All of PLANYC's strategies—from reducing the number of cars to building cleaner power plants to addressing the inefficiencies of our buildings—will help us to reduce emissions.

And we will also make a difference in the fight against global warming simply by making our city stronger: **By absorbing 900,000 new residents—**instead of having them live elsewhere in the United States—**we can prevent an additional 15.6 million metric tons of greenhouse gases from being released into the atmosphere.**

We will also embark on a long-term effort to develop **a comprehensive climate change adaptation strategy,** to prepare New York for the climate shifts that are already unavoidable.