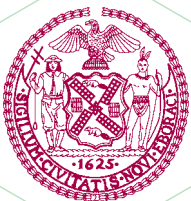




FoodWorks

A Vision to Improve NYC's Food System



The New York City Council
Christine C. Quinn, Speaker

This report would not be possible without the insights and contributions of hundreds of New Yorkers and organizations who work every day to improve our food system.



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Each morning before sunrise, a truck leaves Dagele Brothers Farm in Orange County, New York, and travels 60 miles south to the Hunts Point Market in the Bronx. There, the driver makes his first drop of the day at a warehouse operated by the Food Bank for New York City. (Each year Dagele Brothers provides 560,000 pounds of fresh produce to the Food Bank from four different New York State farms.) Food Bank trucks then make their way throughout the city, dropping off fresh produce to over 1,000 food pantries, soup kitchens, and other community organizations across the five boroughs – groups that serve 400,000 free meals to hungry New Yorkers every day.

Meanwhile, our Dagele Brothers driver has continued over the bridge from the Bronx and on to a food processor in Jamaica, Queens, which employs more than 200 New Yorkers making salads, wraps, and other healthy meals. (Just in this growing season,

Dagele Brothers has provided them with over 40,000 pounds of produce—everything from peppers to celery.) After these employees finish turning fresh produce into salads, the new products are then trucked to a network of more than 350 delis and grocery stores around the city.

Every day, New Yorkers make choices about what and where we eat. When we buy a salad, we might not think about all the people and places that were involved in its creation. But the simple act of eating that salad could be creating jobs on a farm in Orange County, at a distribution center in Hunts Point, and at a factory in Jamaica, Queens. It could also be supporting a growing operation that helps get food to hungry New Yorkers. And it could be a healthy choice to help reduce our risk of obesity, diabetes, and heart disease.

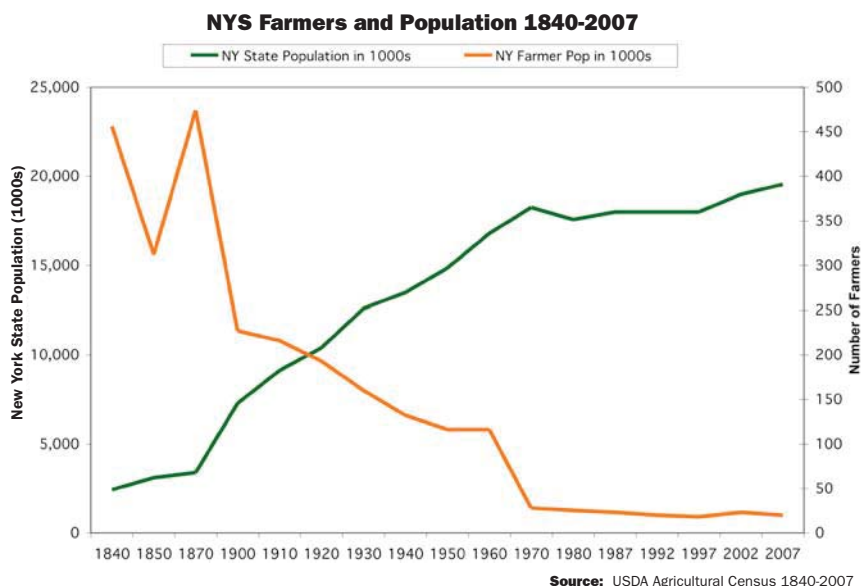
Businesses and government also make decisions about how they produce, process, and distribute food. Farmers make

choices about using fertilizers and pesticides. Restaurants make choices about where to buy ingredients and how to dispose of their food scraps and cooking grease. City government makes choices every day about what type of food it buys and from where. It makes choices about infrastructure improvements and investments in our food economy. And it enacts building, tax, and administrative policies that affect communities and businesses.

Individual choices like these have an impact on every phase of our food system, from farm to table and beyond. Each action has the potential to improve our health, our economy, and our environment. This FoodWorks plan explores some of the ways in which the many pieces of our complex food system are interconnected, sets goals to help us make better choices, and presents a blueprint for some initial steps, both large and small, that can make the system stronger and more sustainable for generations to come.

OUR FOOD SYSTEM: A HISTORY OF CHANGE

Food is one of our most basic needs. Throughout human history, the pursuit of food has driven our social, economic, and cultural development. The domestication of animals and the development of agriculture paved the way for the first settlements. Later it was the ability of farmers to move from subsistence to surplus production that allowed for specialization of labor and fueled the growth of civilizations around the world. Similarly, increased efficiency and consolidation of food production helped feed a rapidly growing population throughout the 20th Century. In the United States, the growth of large scale, centralized food production and distribution coincided with the Industrial Revolution and supported mass urbanization and economic growth. Advances in agriculture through pesticides, synthetic fertilizers, mechanization, and public subsidies increased the efficiency and productivity of American farmers. As a result, from the 1930s to 2002, the portion of Americans employed in farming decreased from 24 percent to 1.5 percent.¹ Whereas in 1940, each farmer produced enough food to feed 11 people, by the 1990s each produced enough to feed 100 people.² The development of quick freezing and other preservation techniques allowed food to maintain nutritional value for longer periods and reduced product loss for both producers and retailers. Government services like the Supplemental Nutrition Assistance Program, which started in 1939, offered a basic level of food access to all Americans, regardless of income. And after World War II, new high-



ways helped transport goods from coast to coast, further supporting centralized food production.

Food systems have changed throughout history to support the evolution and economic growth of societies. Today we are once again confronted with the need for additional change to the food system. Our national food system evolved to support a rapidly growing population, and it has allowed us to feed more people than ever before. Yet, that evolution had unintended consequences. Our current system is characterized by high energy usage and waste throughout all phases; an aging farming population; loss of farmland to development and degradation; and an obesity epidemic that threatens to reverse generations of public health progress. Because of these challenges, the very system that is meant to sustain and nourish us imposes costs to our health, our economy, and our environment. However, just as the policies and technologies of the past created the food system we experience now, new policies and

investments can encourage positive changes for the food system of future generations. This report outlines a plan for key legislative changes, public and private investments, infrastructure improvements, and partnerships to improve our food system.

MOVING FROM FOOD SYSTEM INSECURITY TO OPPORTUNITY

As New York City is expected to add nearly one million new residents in the next two decades,³ we must identify ways to move from an unsustainable food system to one that promotes health, environmental sustainability, and a thriving economy. In 1996, the Food and Agriculture Organization of the United Nations wrote that "food security" occurs when food systems operate so that "all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy lifestyle."⁴ By this definition, the

Egyptians use yeast to make bread	Horses are domesticated for transport, plowing, and drafting	Chinese use salt to preserve food	Invention of food preserved in cans feeds Napoleon's Army	John Deere & Leonard Andrus begin manufacturing steel plows & threshing	Mixed chemical fertilizers sold commercially	Refrigerated train cars introduced, increasing national markets for fruit and vegetables	NYC stops dumping garbage from a platform built over the East River	First U.S. aluminum recycling plant opens in Chicago, IL and Cleveland, OH	Food and Drug Act & Meat Inspection Act pass	Henry Ford introduces the Fordson, the first mass produced tractor	Clarence Birdseye, a Brooklynite, tests frozen food technology
4000 B.C.	3000 B.C.	2700 B.C.	1810	1837	1849	1870	1872	1904	1906	1917	1923
U.S. Industrial Revolution									World War I		



New York City food system is not fully secure. Additionally, our food system faces a number of issues that compromise its long-term sustainability. Agricultural production is energy intensive, greatly contributes to greenhouse gas (GHG) emissions, and is not economically viable for many farmers. Food processing and distribution require large non-renewable energy inputs and further impact our environment. There is significant waste throughout the system, both from discarded food and food packaging. Moreover, New York City is not fully capitalizing on its economic power to create good jobs and economic opportunity at each phase of the food system.

Our FoodWorks plan details the issues our food system faces today, how they are born of a national and global system, and what we can do to address them both nationally and locally. New York City can be a leader in food systems change, serving as a model of how targeted local action can support large scale improvements.

New York City Food Outlets

Food Outlet	Quantity
Restaurants	24,000
Supermarkets, Grocery Stores & Convenience Stores	5,445
Food Wholesalers	1,730
Public Schools	1,500
Emergency Feeding Programs	1,000
Food & Beverage Manufacturers	1,000
Green Carts	445
Farmers Markets	120
Community Supported Agriculture (CSAs)	100

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages and NYC Dept. of Health and Mental Hygiene

SEIZING ECONOMIC OPPORTUNITY

The New York City food market consists of over 8 million residents, \$30 billion in food spending and a budget for institutional meals second only to the United States military.⁵ With such vast purchasing power, New York City is uniquely positioned to stimulate the food economy, strengthen our regional food system, and drive local and regional business activity. To accomplish this, we must first address several points of economic vulnerability and loss in our food system. At the beginning of

the food chain, farming is threatened not only by environmental problems, but also by economic fragility. Global food demand and energy prices cause fluctuations in prices that hit consumers at the register. Additionally, many New Yorkers' demand for fresh, healthy food is not met. There have been some promising recent developments, but there are additional opportunities to more fully capitalize on existing resources in the food economy.

Supporting a Diverse Retail Sector

Demand for food at and away from home is met by tens of thousands of businesses — a vast network of farmers, wholesalers, distributors, processors, grocery stores, bodegas, street vendors, restaurants and other food service establishments. Despite the reach of these businesses, New York City has yet to effectively meet all consumer demand in these sectors and thus has the opportunity to generate business activity and create jobs. In terms of fresh food retail alone, New York City has the potential to capture an additional \$1 billion in grocery store sales each year that are not met by existing



Photo Credit: Zach K

King Kullen opens the first "supermarket"	Food Stamp program begins	National Victory Garden Program launched	Microwave oven is invented	First drive-thru restaurant in the U.S. opens	Federal-Aid Highway Act passes, helping trucking to expand	Fresh Kills in Staten Island becomes the largest landfill in the world	Congress passes the Organic Food Production Act	FDA approves FLAVRSAVR tomato, first whole food produced through biotechnology	First NYC CSA drop off established	Largest recall of ground beef in U.S. history	First Lady Obama plants White House organic garden
1930	1939	1941	1945	1948	1956	1986	1990	1994	1995	1997	2009
Great Depression			World War II								



stores.⁶ There is great demand for regional products, seen in the rapid growth of farmers markets and community supported agriculture (CSA) throughout the city. Today there are 120 farmers markets throughout the city⁷ and since 1995 CSAs have increased from 1 drop off point to approximately 100 in 2010.⁸ However, restaurants and retailers attempting to fill this demand through their offerings encounter difficulty sourcing regional products from wholesalers. This market has a surplus demand of nearly \$600 million annually that could be captured.⁹ Not only would meeting this demand help individual farmers, it would also strengthen our regional economy and state tax base, alleviating some of the financial burden on New York City.

Expanding Food Manufacturing

In addition to capturing more of our local food dollars through retail outlets like supermarkets and CSAs, New York City can utilize its economic power to support local manufacturers. Food processing is a valuable part of our city's economy, providing \$1.3 billion to the Gross City Product.¹⁰ Additionally, every 100 jobs in the City's food manufacturing sector

supports 76 jobs in other industries.¹¹ However, our food manufacturers need to be better linked to regional processors and markets.

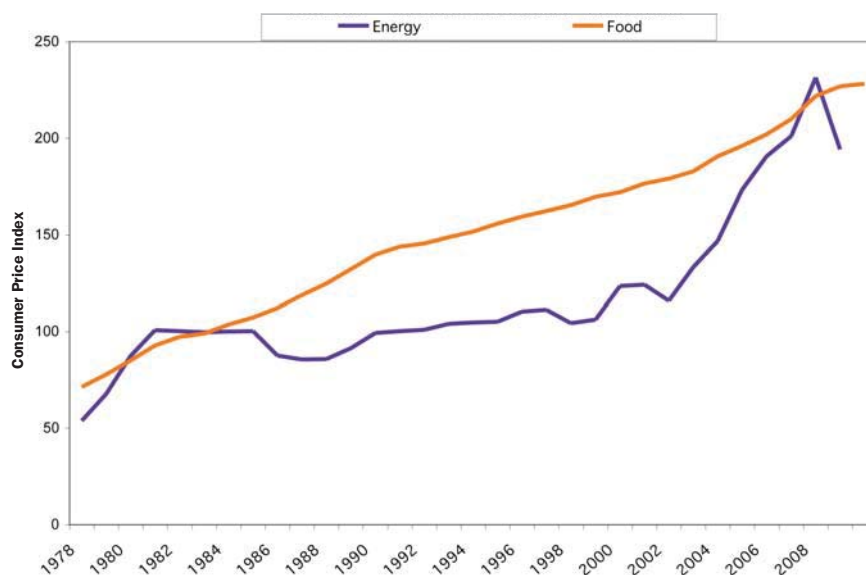
Supporting Regional Farmers

Strengthening the regional supply chain is an important strategy for shoring up our food system against other economic threats. In recent years, our food supply and prices have become more vulnerable to

energy prices, global trade demands, and conversion of cropland to energy uses. Agricultural products are one of America's fastest growing exports, particularly corn, soy, rice and food oils.¹² As other countries continue to develop and demand more of these U.S. products, the domestic supply will be subject to increased prices as seen in 2007 and 2008, impacting consumers at home.¹³ This problem is exacerbated when oil prices increase, which causes producers to spend more on inputs such as fertilizer and transportation.¹⁴ Because the costs of non-renewable energy are expected to rise, this trend will likely also persist if not mitigated by food system improvements locally and nationally.

Compounding these price vulnerabilities are the financial challenges faced by most farmers. Less than two percent of our population is employed in farming and of those, many are nearing retirement, with farmers six times more likely to be over the age of 65 than under the age of 35.¹⁵ Over the past generation, the industry has struggled to attract younger farmers because it is not economically sustainable. In

Food & Energy CPI New York - Northern New Jersey - Long Island



Source: Bureau of Labor Statistics. Consumer Price Index-All Urban Consumers. Energy and Food. New York-Northern New Jersey-Long Island. 2010



2007 only 63 percent of all farms earned a positive net farm income.¹⁶ Despite recent food price spikes, real food prices have increased modestly in the past 40 years due to innovations in food production. However, farmers receive a shrinking portion of our food dollar. In 1950, farmers received 41 percent of the food dollar, while in 2006, they received only 19 percent.¹⁷ Because most farmers in the U.S. already struggle to maintain profitability, added environmental and input costs cause prices of food to rise, putting added pressure on consumers. Because fresher, healthier items are more expensive on a per calorie basis, food price increases will con-



Photo Credit: Gabrielle Blavatsky

tribute to greater food insecurity and consumption of less healthy foods.¹⁸

IMPROVING ENVIRONMENTAL SUSTAINABILITY

Our food system faces several environmental issues: loss of farmland, water pollution, high energy usage, greenhouse gas emissions, and waste at every phase of the food chain. The gains in efficiency that were needed to feed a rapidly increasing population in past generations have contributed to problems that are now beginning to be internalized to the food system, affecting systemic security and raising the costs to farmers, processors, distributors, consumers, and tax payers.

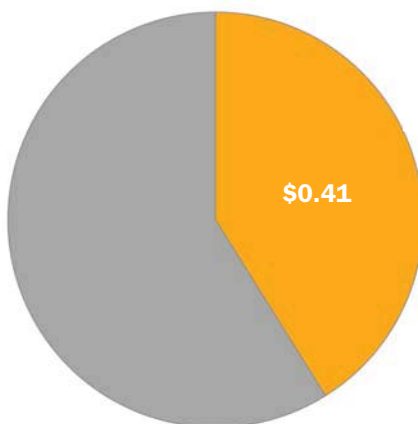
Protecting Farmland

Although a much smaller portion of our population is engaged in farming than ever before, most of our food still comes from American farmland. Protecting cropland and ensuring that farming is economically viable are therefore critical to long-term food security. Unfortunately, farmland is being rapidly lost to development and environmental degradation, which puts increasing pressure on the farmland that remains. Due to unsustainable agricultural practices, the U.S. is losing topsoil approximately ten times faster than it can be replaced.¹⁹ By some estimates, roughly one inch of

topsoil is lost every 34 years, which could take over 200 years to replenish.²⁰ To many New Yorkers, the loss of topsoil may seem a distant concern, even though healthy topsoil is required to grow much of our food. Yet some New Yorkers might remember when one of the worst storms of the Dust Bowl carried topsoil from the fields of the Great Plains all the way to New York City in 1934. This type of major ecological event may not be in our current forecast, but New Yorkers are still intricately tied to the health of farmland, which feeds us every day.

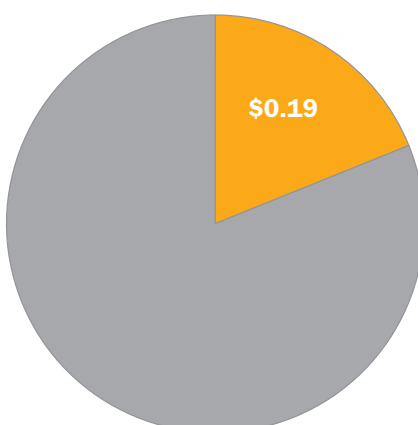
Additionally, we rely on the upstate watershed, home to several hundred farmers, for our water supply. The environmental threats typical of conventional agriculture, over consumption of water and chemical run-off, are therefore of particular concern to city residents. Well-managed regional agriculture offers a better alternative to both conventional agriculture and development, which increases impermeable surfaces and run-off. These threats to farmland are widespread issues that extend beyond the boundaries of the five boroughs. However, New York City has immense power to support farmers and good farming practices by ensuring that they have direct-to-consumer and institutional markets, and by continuing to pursue direct support programs for farmers in our watershed and training for New Yorkers interested in the field.

Farmer's Share of the Food Dollar in 1950



Source: USDA. ERS. Price Spreads From Farm to Consumer. May 28, 2008

Farmer's Share of the Food Dollar in 2006



Source: USDA. ERS. Price Spreads From Farm to Consumer. May 28, 2008

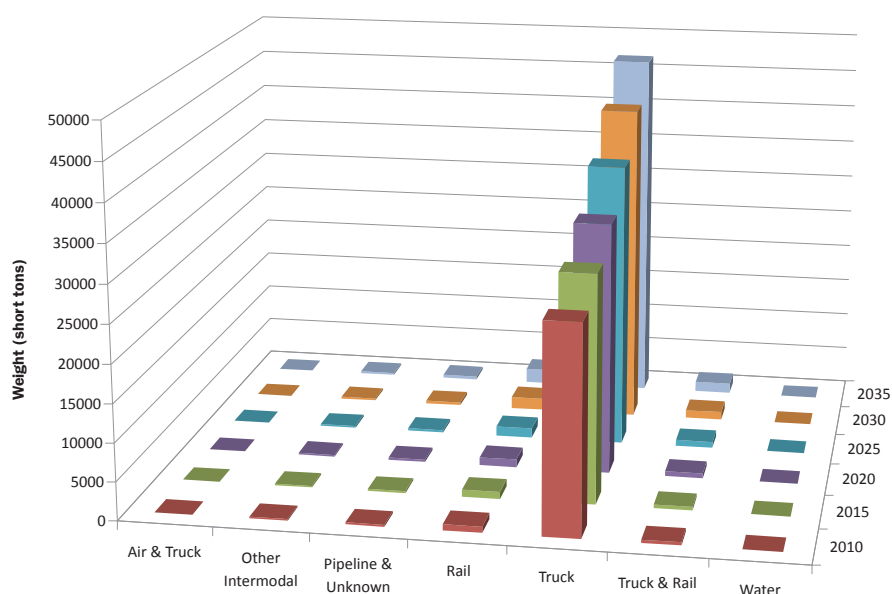
Reducing Energy Usage and GHG Emissions

In addition to the loss of farmland and watershed issues, our food system is characterized by high energy usage and greenhouse gas emissions. Fully 80 percent of the increase in energy flows in the United States between 1997 and 2002 were related to the food system, in large part due to increased consumption of processed foods.²¹ Overall, the food system accounts for approximately 14 to 19 percent of national energy usage,²² most of which comes from non-renewable fossil fuels.²³

This problem affects all phases of the food system. Agricultural production requires energy to run equipment and vehicles, and to produce fertilizers, pesticides and feed. Agriculture's contribution to all greenhouse emissions in the U.S. range from approximately 6 to 8 percent annually, with livestock contributing the most.²⁴ Food processing and distribution practices also consume considerable energy and contribute to greenhouse gas emissions. As consumers look for more convenience in their daily lives, our consumption of highly processed foods will continue to increase.²⁵ Energy usage in the processing sector has increased noticeably at a rate of approximately 8.3 percent annually and is expected to continue over the next two decades.²⁶ Significant opportunities exist for both households and businesses to reduce environmental impacts with new technologies and equipment.

Transportation of food also contributes to high energy usage in the food system. From the time food leaves the farm, it usually passes through several phases before reaching consumers. From 1997 to 2002, transportation of several major types of food products averaged an increase of 5 to 15 miles annually.²⁷ This rate increased from 2002 to 2007 to between 10 and 16 miles annually.²⁸ The demand for fossil fuels is expected to rise as both the

Food Transport in New York City Region* by Type



* For New York Combined Statistical Area

Source: U.S. Dept. of Transportation. Federal Highway Administration. Freight Analysis Framework. 2010

volume and distance of food transported increases. The vast majority of food coming into New York City arrives by truck, with these truck trips expected to increase through 2035, further stressing our infrastructure. And because transportation accounts for 4 percent of food costs and contributes to the cost of farm inputs, we may also see food prices increase in the future.²⁹ Several strategies exist for reducing the impact of food transport, such as increasing regional and local capacity and energy efficiency among producers, processors and distributors, and encouraging alternative modes of transportation.

Waste

Opportunities also exist for minimizing environmental impact and food system costs by reducing waste and recovering by-products to be used as resources. The national food system produces the equivalent of 3,900 calories per person per day.³⁰ However, consumers discard more than

27 percent of the food we prepare, which nationally costs approximately \$1 billion in disposal.³¹ Preventing just 10 percent of this food from being discarded would be enough to feed all of New York City.³² At the same time, much of the city's waste is disposed of in landfills or through incineration. Food decomposition in landfill can produce 4 to 8 percent of the food system's greenhouse gases in the form of methane.³³ However, increased recycling of food packaging, composting of organic matter, reuse of grease, and other recovery techniques can help the city reduce costs of disposal, lower greenhouse gas emissions, and identify resources for future use.

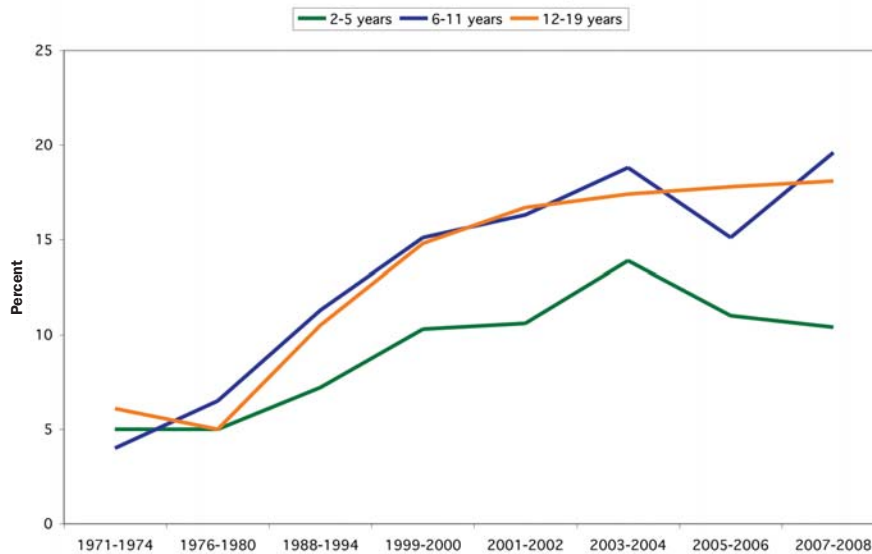
IMPROVING PUBLIC HEALTH

Addressing Both Hunger and Obesity

New York City is one of the greatest food destinations in the world, boasting over 24,000 restaurants³⁴

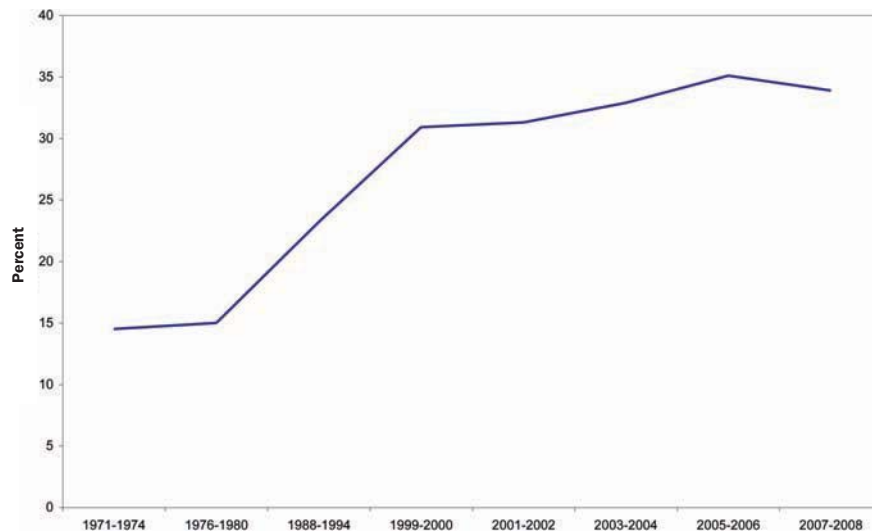


Child and Adolescent Obesity in the U.S.



Source: CDC, National Health and Nutrition Examination Survey (NHANES). June 2010.

Adult Obesity in the U.S.



Source: CDC, National Health and Nutrition Examination Survey (NHANES), NCHS Health E-Stat and NYC Community Health Survey, 2008

and scores of renowned chefs and food representing countries around the world. Additionally, the domestic and imported food supply provides each American with nearly twice the average caloric intake needed.³⁵ But in this seeming culture of plenty, there are still 1.4 million New Yorkers who live in households that cannot afford an adequate supply of nutritious food.³⁶ Hunger is therefore not

due to a lack of supply, but rather the inability of people to purchase enough food.

As the New York City population increases in the coming decades, adequately feeding all of our residents will continue to present a challenge. To do so will not only require enabling more New Yorkers to afford healthy food, but also enhancing public programs that pro-

vide a safety net to those who lack financial resources. The city has begun to pursue these policies, but additional improvements to public meal programs, benefits administration, and economic development efforts can be made.

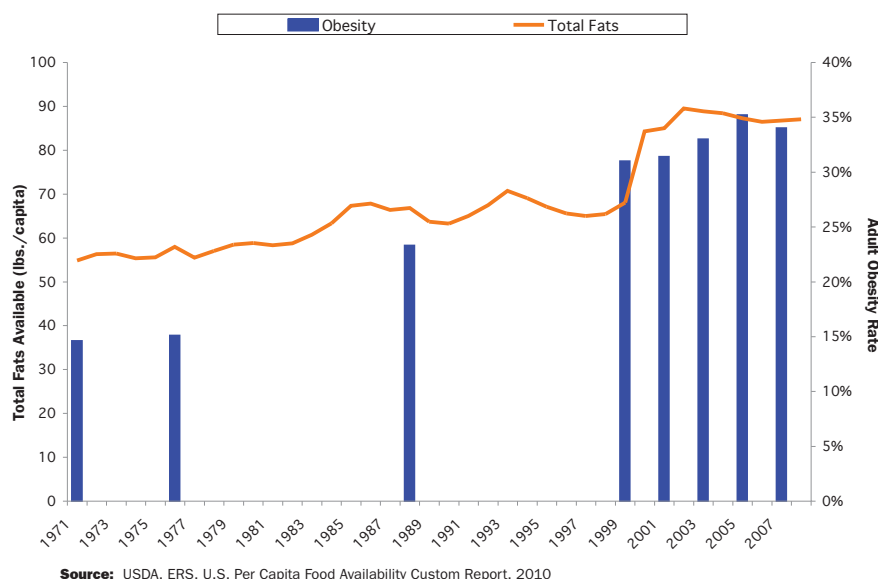
As paradoxical as it seems to the problem of food insecurity, three of the five leading causes of mortality in New York City can be linked to diet and are mostly preventable: heart disease, stroke, and diabetes.³⁷ Each of these is strongly rooted in the problem of obesity. Over the past 20 years, obesity among children and adults has doubled and is now considered epidemic.³⁸ The economic costs of these health problems are also considerable. Obesity-related medical expenditures in New York State are over \$6 billion, 81 percent of which are paid by Medicare and Medicaid.³⁹ Currently, Medicaid comprises 30 percent of all state revenues.⁴⁰ New York City alone spends an estimated \$2.65 billion on health care each year, at a cost of roughly \$315 per resident.⁴¹

Improving the Food Environment

The widespread rise in obesity has been attributed to changes in our food environment and eating habits. On average, we each consume 530 calories more each day than we did in 1970, with more than half of this increase in the form of added sugar, fats and oils.⁴² Over the past three decades, the kinds of meals we eat and where we eat them have also changed. We now eat more food away from home and consume more processed foods, which account for 82 to 92 percent of food sales in the United States.⁴³ Several factors likely contribute to our changing eating habits here and elsewhere across the nation: the higher price of healthy foods compared to unhealthy foods, shortages of healthy food retail in

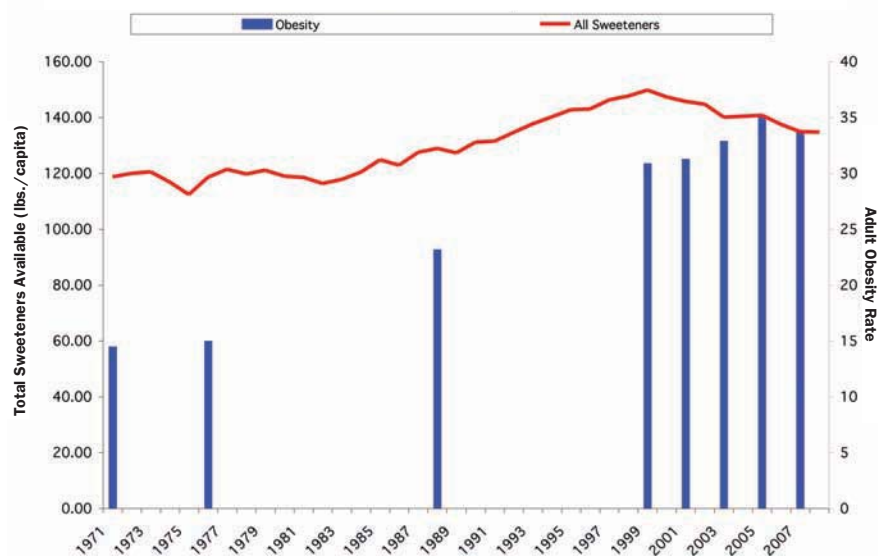


Fats Available Per Capita and Adult Obesity in the U.S.



Source: USDA, ERS, U.S. Per Capita Food Availability Custom Report, 2010

Caloric Sweeteners Available Per Capita and Adult Obesity in the U.S.



Source: USDA, ERS, U.S. Per Capita Food Availability Custom Report, 2010

neighborhoods, an abundance of unhealthy food options, and a lack of knowledge or time to improve cooking and eating habits.

Many neighborhoods in the city are not healthy food environments. They are characterized by a relatively low concentration of fresh food retail and a higher concentration of fast food establishments, which has been

linked to the prevalence of obesity in neighborhoods.⁴⁴ In fact, nearly 3 million residents in New York City lack adequate fresh food retail in their neighborhood.⁴⁵ However, these factors can be influenced through public policies like zoning, financial incentives, health regulations, infrastructure changes, and the types of meal programs and benefits offered to New Yorkers in need.

Even if affordability and proximity to healthier food options are not at issue, there are other factors that affect our food choices. Pressures on our time from work, transportation, and child care, especially for working parents, compete with our ability to cook nutritious meals.⁴⁶ Americans spend 1.23 hours each day eating and drinking and only about a half hour each day on food preparation.⁴⁷ Additionally, with the increase in consumption of processed foods and food away from home, keeping track of our caloric intake has become more difficult. In many ways, New Yorkers spend little time thinking about food and how it's prepared, which has resulted in a loss of food knowledge and reliance on unhealthy, more processed foods. Fortunately, unlike other public health problems, the solutions to food insecurity and obesity are known and achievable. By improving utilization of public programs, supporting a healthier food environment in the city, and making good food more affordable, we can achieve better health outcomes for all New Yorkers, regardless of their income.

Although many of these problems are national and global in nature, there are immediate steps that can be taken within New York City to strengthen our food system. The city can facilitate urban-rural linkages, support a market for regional products, and use its institutional purchasing power to support small and local producers. Moreover, by helping green the city's landscape, assisting companies with adopting new technologies, and exploring better distribution networks, we can begin to address the high energy usage and greenhouse gas emissions characteristic of our food system.

THE FOODWORKS PLAN

Through the key investments and policy changes recommended in this report, we can build a better food system for our growing city – one that provides healthy, affordable food for all New Yorkers in our growing population, while supporting our local and regional economy and mitigating environmental impacts. In short, our food system will be better able to respond to the needs of New Yorkers today and in the years to come.

Although the New York City food system is part of a national and international system that will also require large scale changes, there are significant opportunities on the local level to restructure the food system to create positive outcomes. Historically, the actions of individual consumers, businesses, and municipalities have often led the way for positive changes

nationally. For example, over 20 years ago New York City was the first large American city to institute a city-wide curbside recycling program as a regular, municipal function, and was the first to include high-rise apartment buildings in any such program. Now all major cities across the U.S. are doing the same - just one example of how local government action can create a groundswell of national change. Today, the New York City Council ("City Council") and numerous other stakeholders are already beginning to invest in new initiatives and ideas to improve health outcomes, build up our food infrastructure, and strengthen our food economy. To further these efforts, this report proposes a series of initiatives and policy changes at each phase of New York City's food system, from agricultural production all the way through post-consumption.

10

Each section of the plan that follows outlines:

- A number of **goals** that can be achieved through improvements along each phase of the food system (for example, increasing regional food production and creating a healthier food environment);
- Specific **strategies** that can be employed to meet each goal (for example, strengthening regional supply channels); and
- A series of **proposals** or tangible initiatives that we will work to implement in the coming months and years (for example, expanding and supporting farmers markets).

Together, these elements form our blueprint for long-term food system change.

AGRICULTURAL PRODUCTION

Our plan begins where our food begins – on farms, in community gardens, and atop roofs across the five boroughs and throughout the region. To meet the needs of our growing population and achieve a more secure food system for the future, we must support our regional farmers and reconnect New Yorkers to their food. Our plan is to facilitate urban-rural linkages to help farmers bring their food to city markets. To do this, we will support alternative retail outlets like farmers markets and community supported agriculture (CSAs). However, we must also build a permanent wholesale farmers market to help mid-sized farmers sell to restaurants, government institutions, and grocers. Additionally, we will use the city's economic power as a purchaser of food to support our regional farmers by working legisla-

tively to develop new procurement guidelines that encourage purchasing from regional farmers.

To further mitigate farmland loss, we will continue to fund sustainability practices for farmers in the upstate watersheds and encourage new farmers. Yet despite all of these efforts, we still need federal subsidies to prioritize small producers and those growing fruits and vegetables. Beyond these local actions, we therefore urge the state and federal governments to do their part by increasing subsidies for small produce growers and improving the State Farmland Protection Fund.

Although much of our food originates on rural farms, agricultural production also occurs right here in the five boroughs. Our community gardens and urban farms are vital community assets. Not only do they provide children and adults vital open space, but



they also afford us the opportunity to learn about how food is grown, while improving attitudes toward fruit and vegetable consumption. To encourage more local growers, we will make sure that our community gardens are preserved, that new gardeners are connected to space, and that all qualifying urban farms are counted in the Census of Agriculture. The city can also be more hospitable to urban agriculture by making our regulatory environment easier to navigate and disseminating new technologies and knowledge.

By supporting our regional farmers and urban growers, we can ensure that agricultural production remains an economically viable part of our food system, improves the health and eating habits of residents, preserves and creates more valuable open space, and better protects our environment.

PROCESSING

Our plan continues with food processing. Much of the food we consume goes through some form of processing before reaching our plates. In New York City, we boast a strong food processing sector. However, many of these businesses struggle to stay profitable and maintain what are often energy intensive operations. Our goals are to support these processors, connect them to regional agricultural producers, and help them to reduce their environmental impact.

To achieve these positive changes, we will help these businesses find affordable manufacturing space, whether they're start-ups or established firms. Additionally, we will hold a business-to-business conference with private sector partners to help make the connections that might otherwise be difficult. Lastly, to help businesses reduce their costs and become more energy efficient, we will help link them to valuable

resources through workshops and an online center. Through these key investments and policy changes, our food manufacturing industry can thrive, generating more economic activity for our city while ensuring a greener future for all New Yorkers.

DISTRIBUTION

Food reaches New Yorkers by a variety of means and from places all over the world. Some comes directly from farmers a mere hour or two away from consumers, while other food passes through an elaborate national distribution network. Our plan to improve distribution addresses the issues associated with the transport of food into and throughout the city, regardless of its origin. Through careful study of this intricate network within the city, we will better understand local distribution and identify means for diversifying our transportation modes, reducing truck trips and miles, and decreasing the environmental impact associated with getting food to consumers. To do this, we must find optimal routes, adopt new technologies, and help distributors navigate our city more quickly and easily. Additionally, improving our food distribution system will require a forward-thinking redevelopment of the Hunts Point Distribution Center. We envision a new produce market with vastly expanded capacity, reduced energy usage and GHG emissions, increased rail service, and greater opportunity for processors, retailers and other relevant uses.

CONSUMPTION

The food system we envision for tomorrow addresses the twin problems of hunger and obesity and makes sure that all New Yorkers, regardless of income, have access to fresh, healthy and affordable food. This will require restoring a healthier food environment where all residents live near a grocery store, and expanding other healthy food outlets like green

carts, farmers markets, CSAs, and food co-operatives. Additionally, we will discourage unhealthy food consumption by targeting fast food and helping bodegas improve their infrastructure so they can more easily offer fresh products. We'll invest in workforce development for food retail careers and create guides that direct New Yorkers to healthy food in their neighborhoods.

We can make the meals that the City serves to children, seniors, and other New Yorkers healthier and more nutritious by making sure agencies have the tools they need to cook healthy foods. To combat hunger, we'll continue to push for improvements to federal programs like food stamps and Supplemental Nutrition Program for Women, Infants, and Children (WIC), and for a stronger Child Nutrition Act. At the same time, we will work locally to make sure everyone eligible for these benefits can receive them.

POST-CONSUMPTION

Improving environmental sustainability in the food system will require recapturing our waste as resources to be reinvested, rather than paying to incinerate or landfill them. By encouraging household composting and exploring citywide composting technologies, we can begin to recapture more food system waste and reduce our municipal burden. We can work to expand recycling of restaurant grease and packaging materials in every sector. Additionally, we must begin to reduce waste upstream by discouraging bottled water consumption and making better choices about the types of packaging on food we procure through city meal programs.

By addressing the system as a whole, we can begin to make connections throughout these phases, establish partnerships across sectors, and create more powerful, far-reaching changes.



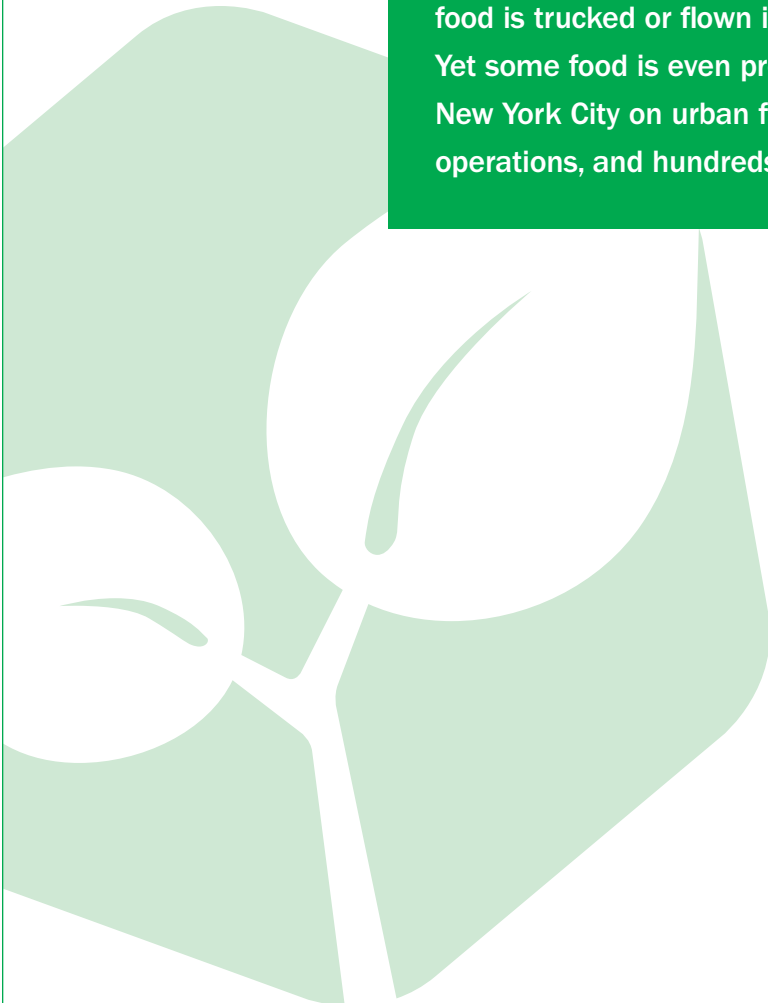
Agricultural Production





Agricultural Production

Agricultural production involves growing crops and raising animals for food. A wide array of people and organizations produce food for New Yorkers. New York State boasts 36,000 farms and over 7 million acres of farmland, a quarter of our state's land. While rural farms throughout the state are a part of our food production, much of New York City's food is trucked or flown in from across the country and globe. Yet some food is even produced within the five boroughs of New York City on urban farms, rooftop gardens, beekeeping operations, and hundreds of community gardens.





AGRICULTURAL PRODUCTION

For most New Yorkers, our connection to food begins in a restaurant or grocery store, far removed from the farm. Agricultural production has traditionally been considered a rural or national concern among local policy makers. Recently, however, many New Yorkers have begun to think about where our food comes from, the implications of how our food is produced, and what our food dollar buys. Even though most of it occurs outside of our urban boundaries and is affected by national and international factors, cities have a major stake in the way food is produced. Through our role as purchasers of food, we can effect considerable positive change in agricultural production within our own region. Much of our food in New York City will continue to come from places outside the region, but progress toward a thriving agricultural production economy in our region can be achieved. Producers in the region can maintain and develop a competitive advantage in a variety of products, such as apples, pears, cabbage, grapes, cucumbers, dairy and squash. In fact, New York is already a large producer of many of these products. New York State produces a remarkable \$4.4 billion each year in agricultural products, ranking 3rd nationally for dairy products, 2nd nationally in apple production, and 5th nationally for vegetable production.⁴⁸ Helping regional producers distribute their products to New York City restaurants, retailers, wholesalers, individual consumers, and agencies will be a critical strategy for building production capacity.

In addition to supporting regional producers, our food system can be strengthened in other ways by supporting urban agriculture. New Yorkers across the five boroughs are showing increased interest in and

commitment to growing their own food, whether in their backyards, on school lots, or on rooftops. This interest in urban agriculture offers significant opportunity to green our urban landscape, foster nutrition and food education, and help reconnect New Yorkers to their food.

Agricultural production in our region and across the nation faces several critical issues: loss of farmland, increasingly concentrated operations, economic vulnerability, and environmental degradation. Although farmland loss is a national problem, New York State has lost farms and farmland acreage at a much faster pace. In 1950, New York State had 124,977 farms on 30.6 million acres.⁴⁹ By 2007, only 36,352 farms remained on approximately 7.1 million acres.⁵⁰ This represents a 70.1 percent drop in the number of farms and a 76.8 percent loss in farmland acres. In contrast, over the same period, the U.S. lost just 20.5 percent of farmland acres.⁵¹

Farmers in our state do not earn the same per acre for their products as do farmers nationally. Currently, New York farms sell an average of \$121,551 overall, approximately \$1,623 per acre whereas nationally, farmers sell an average of \$134,807 annually, or approximately \$3,102 per acre.⁵² In their struggle to make ends meet and remain profitable, many farmers are forced to sell their land for development. Additionally, the average age of farmers in our state is 56 years and has been rising as fewer young people enter the industry, instead opting for more lucrative careers.⁵³ As the number of farms in our region has decreased, there is increased environmental and economic pressure on the farmland that remains. In particular, intensive farming can threaten the health of topsoil and water supply due to run-off. Because residents of the city rely on the upstate watershed for our drinking water, ensuring the farms in the watershed are able to invest in sustainable practices is of particular concern to New Yorkers.

New York State Top Agricultural Products

Product	National Rank	Sales Value
Cabbage	2nd	\$67,300,000
Apples	2nd	\$185,000,000
Corn Silage	3rd	\$227,000,000
Milk	3rd	\$1,910,000,000
Sweet Corn	4th	\$699,00,000
Onions	6th	\$49,000,000
Grain	19th	\$117,000,000
Hay	22nd	\$282,000,000
Poultry	27th	\$54,800,000
Meat	34th	\$190,000,000

Source: NYS Dept. of Agriculture and Markets, Ag Facts, 2009, and Environmental Working Group

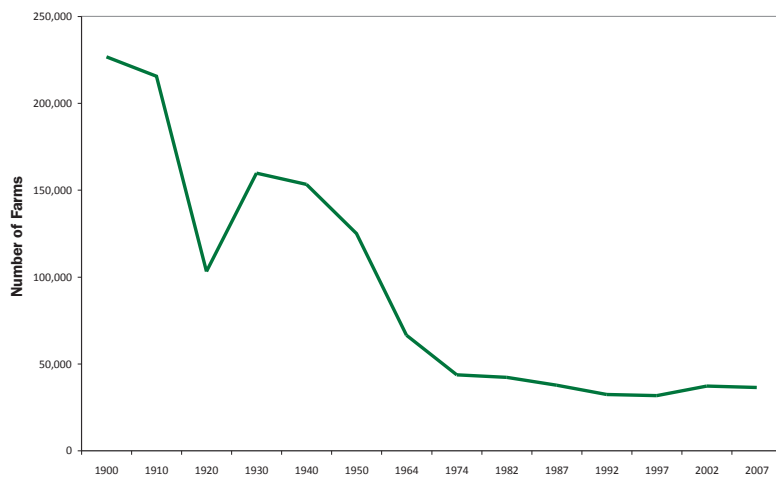


These problems in agricultural production were born of national needs and policies. Historically, increased mechanization and centralization of agricultural production have enabled us to feed millions of new Americans over several generations. As in the rest of the country, production in New York has become more concentrated, with the average size of the remaining farms increasing by approximately 75 percent since

1930.⁵⁴ This makes it increasingly difficult for smaller producers to enter and thrive in the market. Federal subsidies have further supported centralized, large-scale commodity operations, but have not focused as much of these resources in our region or on smaller producers. As outlined later in this report, New York City must continue to focus on supporting federal policy changes to support our region's farmers.

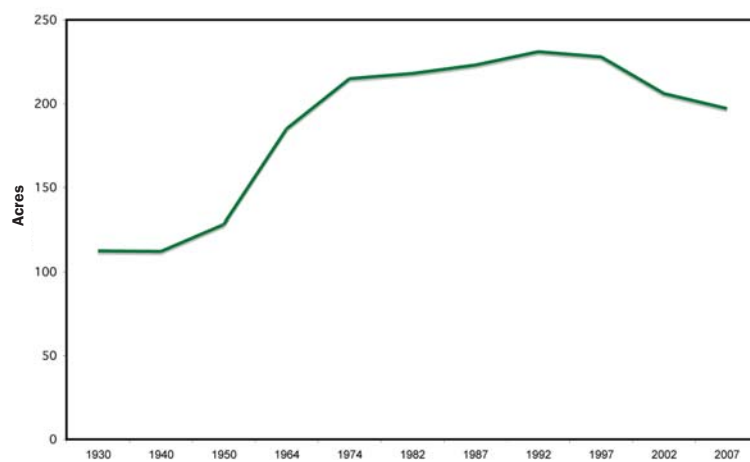
Through state and local support and continued commitment from private sector and non-profit organizations, we can develop a regional food system that complements and strengthens our national food system. As New York City begins to implement key policy changes to facilitate this shift at home, other cities around the country are also beginning to focus on their regional food economies. This national shift over time will support further development of regional competitive advantage in different products. For example, although New York State is now a major producer of apples and produces enough to support our demand, we still import apples from Washington and apple juice from China.⁵⁵ These kinds of practices are not sustainable and can create environmental and economic inefficiencies in our food system.⁵⁶ By making a conscious effort to support our regional farmers through developing infrastructure, programming and procurement change, we can ensure they are competitive at home and nationally.

Farms in New York State



Source: USDA NYS Agricultural Census. 1900-2007

Average Size of New York State Farms



Source: : USDA NYS Agricultural Census. 1900-2007

The City Council and other stakeholders have begun to invest in several programs to help support our farmers. Yet there are other things we can do locally to help strengthen agricultural production. This includes facilitating supply channels between producers and the urban market, using the city's economic power to support regional producers, and ensuring that our community gardens and urban farms have the ability to thrive. The following series of goals and proposals aim to preserve and increase regional and urban food production.



AGRICULTURAL PRODUCTION

GOAL 1: *Preserve and increase regional food production.*

Strategy: *Strengthen regional food supply channels.*

Proposals:

- Reorient federal farm subsidies to support healthy, sustainable food production.
- Improve the New York State Farmland Protection Fund.
- Encourage new farmers.
- Build a permanent wholesale farmers market.
- Expand and support farmers markets.
- Expand the electronic benefits transfer (EBT) program and acceptance of the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) benefits at farmers markets.
- Expand and support community supported agriculture (CSA).

STRATEGY: *Leverage the city's economic power to support regional producers.*

Proposals:

- Track and encourage regional food procurement.
- Support farmers in the upstate watersheds.

GOAL 2: *Increase urban food production.*

STRATEGY: *Better use existing space for urban food production.*

Proposals:

- Protect community gardens.
- Ensure urban farms are counted in the Census of Agriculture.
- Create a searchable database of city-owned property.
- Identify city-owned properties with roofs suitable for urban agriculture.
- Waive the Floor to Area Ratio (FAR) requirements and height restrictions for certain rooftop greenhouses.
- Change the state green roofs tax credit to encourage food-producing green roofs.
- Change water rates to encourage green roofs.
- Streamline the green roof permit application process.

STRATEGY: *Restore food and horticultural knowledge.*

Proposals:

- Ensure garden education is available citywide.
- Support urban agriculture technology development.

prices compared to products at retail stores.⁵⁷ However, farms that have been extremely successful at farmers markets throughout the city are frequently not large enough to sell wholesale to retail stores, food service establishments, institutions or processors. A small but persistent handful of farmers sell wholesale at the Hunts Point Market, but do not currently have a permanent home. Meanwhile, many farmers in our region continue to face difficulty aggregating and transporting their products throughout the urban market. **To address this issue, the city will pursue the following two strategies to support regional production: 1) strengthen regional food supply channels and 2) leverage the city's economic power.**

STRATEGY:

Strengthen regional food supply channels.

There has been enormous growth in direct-to-consumer supply channels, such as farmer's markets and CSAs, throughout the city. These venues are important because they enable farmers to capture more of food sale prices than they can through traditional sale channels.⁵⁸ They also have helped meet growing demand for regional products. For some farmers, retail farmers markets and CSAs will continue to offer the best venue for selling their products, and the City Council will continue to support these direct-to-consumer supply channels. However, for mid-sized and larger farmers who struggle to penetrate the urban market, the city must establish new supply channels to institutions and commercial outlets, and enhance existing supply channels like the wholesale farmers market. Over the past few years, there have been several companies that have successfully begun to grow food, process them into new products, and sell them to mainstream retailers and institutions throughout the city.

GOAL 1

Preserve and increase regional food production.

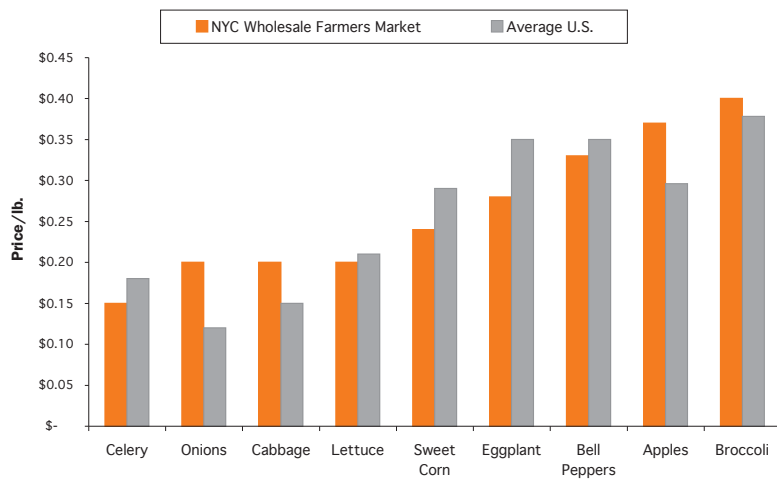
Many northeast regional agricultural producers are at a competitive disadvantage compared to large producers in other areas of the country because they lack the ability to tap into mainstream distribution

channels. It is not as cost effective for many wholesalers, distributors, and retailers to do business with small-scale operators, even though on an individual basis many regional farmers offer quality products and are price competitive. In the direct-to-consumer market here in New York City, farmers selling at local outdoor markets offer products that consumers consider to be higher quality and at competitive



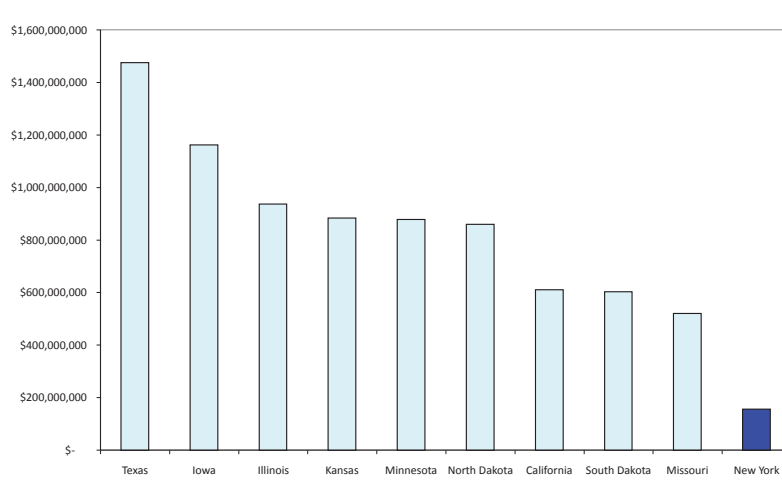


Wholesale Farmers Market vs Average U.S. Prices 2009



Source: GrowNYC, USDA, ERS, Vegetables and Melons Yearbook Data 2010, State of Georgia Legal Commodity Weights.

U.S. Federal Farm Subsidies 2009



Source: NYS Dept. of Agriculture and Markets, Ag Facts, 2009, and Environmental Working Group

The New York State Department of Agriculture and Markets has actively marketed state products to city agencies, wholesalers and distributors. In partnership with the State Department of Agricultural and Markets, the New York City Department of Education is already procuring dairy and some produce from the region. However, private companies have also responded independently to the growing consumer demand for regional products. For example, Fresh Di-

rect in Long Island City has greatly expanded and marketed its new line of local products to customers. Whole Foods has also implemented a corporate policy of purchasing regional products for its retail stores. While these mainstream outlets are considered to offer good products, they generally cater to consumers with bigger food budgets. The success and growth of farms selling to these outlets demonstrate not only strong consumer demand for these kinds of products, but also the way

that regional supply channels can be developed and expanded to serve lower income New Yorkers. Many regional farmers are price competitive with other mainstream suppliers and will likely become increasingly so as demand rises, as they are able to increase production, and as it becomes easier to bring their products to the urban market.

The following proposals outline our plan to facilitate regional supply channels.

Proposals:

- **Reorient federal farm subsidies to support healthy, sustainable food production.**

New York State continues to lose farmland and farmers because the industry is not economically viable. National policies have exacerbated this problem for small farmers in our state and northeast region by devoting resources to large, centralized farms rather than supporting small, non-commodity farms with the same level of funding. National farm subsidies increased from \$8.1 billion in 1995 to \$15.4 billion in 2009.⁵⁹ Half of the subsidies paid last year were for commodity crops, a large portion of which went to corn.⁶⁰ Overall, New York State ranked 29th in the country for total farm subsidies in 2009, receiving only 1 percent of all federal farm support.⁶¹ Even shifting an additional 1 percent of national subsidies would be the equivalent of what 211,000 New York City residents spend on fruits and vegetables in a given year.⁶² The most recent Farm Bill in 2008 represented some progress, increasing the proportion of fresh fruit and vegetable producers receiving subsidies. As the next Farm Bill approaches, New York stakeholders must again advocate for federal support for fresh, healthy, sustainable operations in the region.



- **Improve the New York State Farmland Protection Fund.**

In 1992, New York State began the Farmland Protection Program to prevent farmers from selling their land for development. The program receives funds through the Clean Water and Air Bond Act and the Environmental Protection Fund. These funds are dispersed to localities for the purchase of development rights and to create farmland protection plans.

All of our neighboring states have similar farmland protection plans. Connecticut and Massachusetts have two of the oldest programs in the country, dating

to the 1970s. In comparison, New York State's program began in 1992, but did not provide funding for easements until 1996.⁶³ While New York and all of its contiguous states have lost farm acreage over the past 10 years, New York and Vermont are the only states to have also experienced a decline in the number of farms.⁶⁴ Additionally, the states with the highest cumulative expenditures on farmland protection, New Jersey, Pennsylvania, and Massachusetts, have also seen the highest percentage change increase in the number of farms over the past 10 years.⁶⁵

So far, the New York State program has allowed 53 counties and 64 towns to

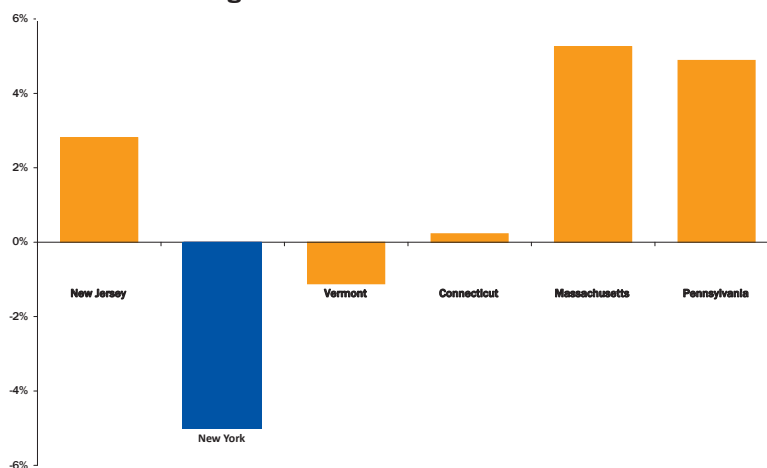
create farmland protection plans and has assisted with the purchase of 170 conservation easements that cover 32,867 acres.⁶⁶ These easements help farmers preserve working farms and avoid succumbing to pressure to sell their land for commercial or residential uses. In spite of these successes, over the past several fiscal years there have been significant delays in pending contracts for these easements between the New York State Department of Agriculture and towns.

Currently, there are 113 contracts pending, almost 48 percent of which have been outstanding for at least 3 years.⁶⁷ Moreover, there is \$110.1 million in funding for this program that has been appropriated but not dispersed.⁶⁸ The backlog is not due to lack of demand; many applicants have been turned away since the program's founding due to lack of funds. Rather, this backlog represents an administrative delay in the program. New York State must prioritize farmland protection and identify the administrative causes of the program's backlog to disperse the funds that have already been appropriated.

- **Encourage new farmers.**

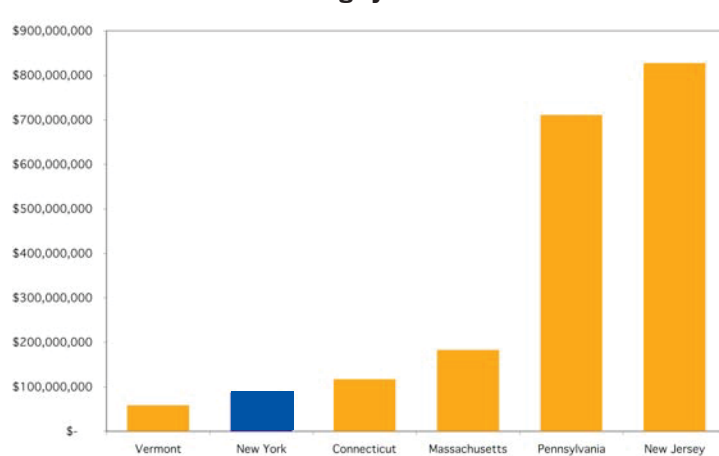
To ensure that our regional production system remains viable in the future, we must engage a new generation of young farmers. Right now, the average farmer is within ten years of retirement age. Attracting new farmers to take their place will require not only making sure farming is economically viable, but also active outreach and education to younger New Yorkers interested in the field. Organizations such as the Greenhorns, Hawthorne Valley Farm, and the Stone Barns Center for Food and Agriculture, together with the U.S. Department of Agriculture's beginning farmer loan program, help organize young farmers, hold educational events, and provide resources to help nurture this new generation of producers. These kinds of programs must be continued and supported.

Percent Change in Number of Northeast Farms 1997-2007



Source: USDA, Agricultural Census, State and County Profiles, 1997 and 2007

Farmland Protection Funding by Northeast State 1997-2007



Source: American Farmland Trust, Farmland Information Center, June 2010



Additionally, the City Council is partnering with GrowNYC and the New York State Department of Agriculture and Markets on the New Farmer Development Project. This program has already supported the training of 16 new farmers who farm outside of the city and many of whom sell their products at local farmers markets.⁶⁹ Not only is this program supporting new farmers, but it is also strengthening local communities within the city by bringing fresh, healthy foods to underserved neighborhoods. This next generation of farmers will continue to require this type of technical assistance, as well as help with finding land and resources to launch their businesses.

- **Build a permanent wholesale farmers market.**

The desire for local and regional food has been a growing market trend for several years but the supply channels throughout the region have not enabled producers to keep up with this demand in the city. In particular, sales of local foods increased 25 percent nationally from 2002 to 2007.⁷⁰ A 2005 report estimated the demand for local foods in the city was as much as \$860 million annually.⁷¹ This far outpaced supply at that time, which was estimated to be under \$200 million.⁷² Restaurants, food manufacturers and grocery stores have recognized this demand and are increasingly incorporating local options into their offerings. However, connections between regional agricultural producers and local processors, retailers and food service establishments have only begun to take shape. Facilitating these relationships and supply channels as an alternative to the national, centralized, large-scale system will be necessary to better meet consumer demand and strengthen our regional economy.

As the demand for food from regional farmers has increased,

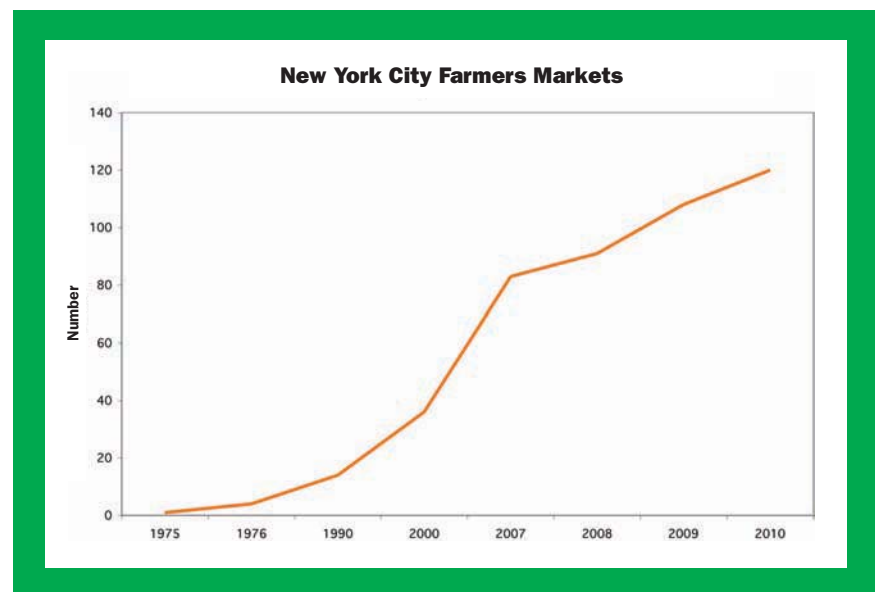
producers increasingly take advantage of direct-to-consumer outlets like farmers markets and community supported agriculture. However, for larger purchasers and larger producers, there is a missing link in the supply chain: a large wholesale market. Many commercial business owners have indicated they would like to purchase more regional foods but that they were not able to find the products and the amounts they needed.⁷³ Having to source from individual producers is too cumbersome for many buyers. A wholesale market at Hunts Point would fulfill this need and provide a reliable outlet for mid-sized producers.

Currently, there are about a dozen farmers who sell at Hunts Point in a temporary market operated by GrowNYC. Despite their best efforts to keep the market open, the lack of a permanent home has compromised its ability to thrive. Instead of a designated, marketable space, these farmers are relegated to the parking lot of the fish market without the basic amenities needed by any business. Much in the way that other cities have embraced regional producers by building wholesale farmers markets as a part of their terminal markets, New York City should ensure these producers have

a permanent home. Rungis, outside of Paris, currently has 80 to 100 farmers selling in their market throughout the growing season⁷⁴ and the Ontario Terminal market in Toronto sells products from hundreds of regional farmers each year.⁷⁵ A similar type of dedicated space here would also allow regional producers to sell at Hunts Point and would allow the city and region to better promote the products to restaurants, agency food service programs, and other large institutions. It would also be a boon to the regional economy and an important regional hub to lay the foundation for strengthening urban-rural linkages in the future. Adding value-added and other processing capability nearby would create new business opportunities, good jobs, and a new venue for distributing regional products.

- **Expand and support farmers markets.**

Direct-to-consumer sales of agricultural products have increased by \$399 million (49 percent) from 2002 to 2007, and by \$660 million (120 percent) from 1997 to 2007.⁷⁶ Since 1994, the number of farmer's markets recorded in the United States has more than tripled from 1,755 to 6,132.⁷⁷ In New York City, there are



Source: NYS Dept. of Agriculture and Markets



currently 120 farmers markets.⁷⁸ These markets serve several purposes. Not only do they provide a critical outlet to farmers and provide residents better access to healthy food, but they make our neighborhoods more vibrant and economically stronger. The Union Square market in Manhattan has been in existence for over 30 years. Many residents credit its popularity with prompting Union Square's rebirth as a major economic hub, attracting thousands of shoppers daily. For these reasons, the city should ensure farmers markets have adequate, high traffic, and stable space in which to operate. Additionally, the city should leverage its resources and voice to support markets of all sizes throughout the city to maximize their reach.

- **Expand the electronic benefits transfer (EBT) program and acceptance of the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) benefits at farmers markets.**

Another strategy to support farmers markets throughout the city is ensuring that they have a broad customer base. Doing so has enabled markets to open in neighborhoods where residents do not have adequate ac-

cess to fresh, healthy and affordable food. Since 2005, the City Council has partnered with several market operators to bring EBT to farmers markets throughout the city. One of these programs began with only 3 markets in 2005, but expanded to 23 markets by 2009, with sales increasing by 24,000 percent over that time.⁷⁹ Not only does this program increase financial access among several communities that lack access to good quality fresh produce, it also provides an expanded market to small farmers in the region. These sales put money directly into the farmer's pockets, allowing many of them to stay in business and even increase their productivity. This year, the City Council expanded this valuable program even more from 23 markets to 40 markets throughout the city.

- **Expand and support community supported agriculture (CSA).**

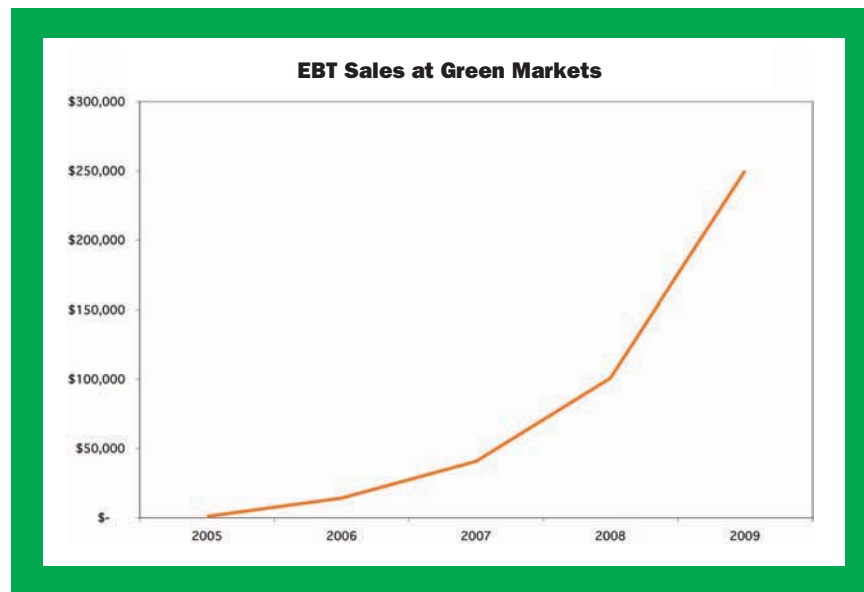
CSAs have grown nationally from just 2 in 1986 to an estimated 2,500 in 2010.⁸⁰ In the city, there are now over 100 CSA drop off points.⁸¹ Organizations like Just Food and the New York City Coalition Against Hunger have been critical in helping communities start new CSAs in the city. Drop off of fresh, seasonal products occurs at churches, community organizations

and offices across the five boroughs. Residents demand these products throughout the northeast growing season to such an extent that some CSAs have waiting lists and are forced to turn customers away. The city should capitalize on this growing popularity for fresh, healthy, regional food. Working with local organizations and businesses, we can expand CSAs citywide. The City Council can lead by example by enrolling employees of City Hall in a CSA and then encouraging organizations and large companies throughout the five boroughs to start workplace CSAs for their employees. Additionally, the City Council is exploring with the New York City Department for the Aging (DFTA) opportunities to expand CSAs to the city's senior centers. The City Council will also work with the New York City Housing Authority (NYCHA) to explore ways to increase access to CSAs by working with the residents who serve on the Green Committees in NYCHA developments.

STRATEGY:

Leverage the city's economic power to support regional producers.

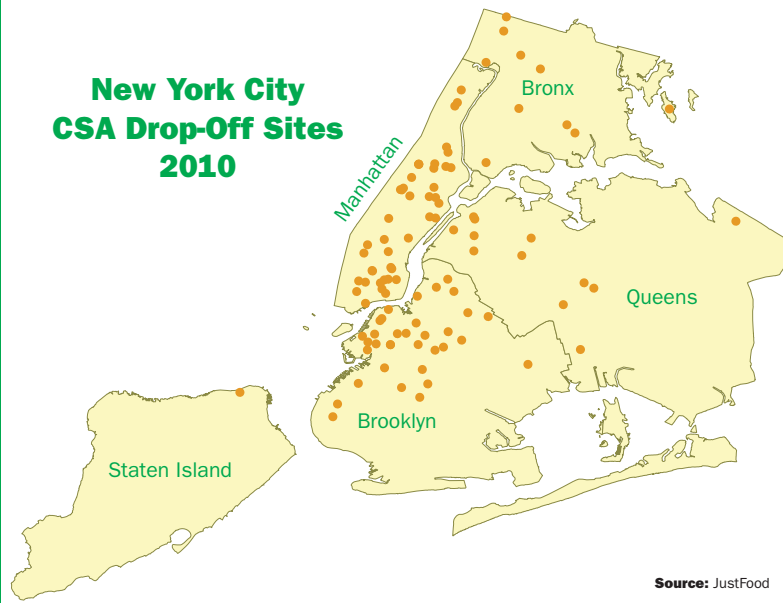
The city has immense purchasing power through its various food programs, whether through senior centers, day care centers, after school programs, summer meals, or student breakfasts and lunches. Each year, the city's agencies spend over \$175 million on food for these programs.⁸² The NYC Department of Education alone is the second largest institutional purchaser of food in the country, next to the US Department of Defense.⁸³ Researchers estimated in 2005 that as much as \$12 to \$15 million, or 10 percent, of Department of Education procured food could be produced in the region.⁸⁴ Additionally, between 2006 and 2009, the Department of Education successfully purchased almost \$4.5 million of regional food without additional cost.⁸⁵



Source: GrowNYC. EBT Progress Report 2008 and 2009



New York City CSA Drop-Off Sites 2010



Source: JustFood

New York, jurisdiction over school food procurement lies with the U.S. Department of Agriculture (USDA), the New York State Department of Education, the New York State Legislature, and to some extent with local education departments, while other city agencies follow state law and local regulations in their procurement practices. Through advocating for both state and local policy change, the City Council intends to further encourage regional food procurement to support and expand our regional farming operations.

Proposals:

- **Track and encourage regional food procurement.**

One way in which the city can support regional farming is to encourage local agencies to procure regionally produced food for its meal programs. The New York City Department of Education (DOE) has begun to purchase some produce from New York State and surrounding states, and much of the milk served in meal programs comes from regional dairies. However, this procurement has, thus far, occurred on an ad hoc basis. As their food distributor contracts come due for renewal, the DOE should consider including requirements to track food sourcing from their newly contracted distributors. **As a first step, the City Council is introducing legislation requiring city agencies to report the sources of the food served in their meal programs.**

Although the DOE has already begun to proactively procure regional food, there are no guidelines to encourage other city agencies to do the same.

Therefore, the City Council will introduce legislation to require that guidelines be developed for agencies to encourage procurement of food that is grown, harvested or produced in New York State. Many city agencies may not know that state law already allows them to prioritize certain state products over food from other areas. These guidelines will



Photo Credit: Mina Pekovic

This expenditure is the equivalent of what 37 New York farms sell in a year and the additional expenditure potential would be equal to what 98 farms sell in a year.⁸⁶ This presents an incredible opportunity to positively impact the food system by consciously choosing where, how, and what we procure for the city's food programs.

Recognizing this opportunity, Congress included a provision in the 2008 Farm Bill to explicitly allow schools, for the first time, to extend a preference to regional farmers in their procurement process. However, the federal legislation does not mandate the preference and leaves implementation to the state and local agencies. In



assist city agencies in maximizing the purchase of New York State food. Additionally, because New York City's regional food system extends beyond the jurisdictional boundaries of the State, **the City Council will introduce a resolution calling on the State to enact legislation that would allow the City to preference the purchase of food that is produced in other states within the region.** These practices, combined with other initiatives in this report to build capacity among regional producers, will facilitate stronger regional supply channels and help farmers bring their products into larger institutional outlets.

- **Support farmers in the upstate watersheds.**

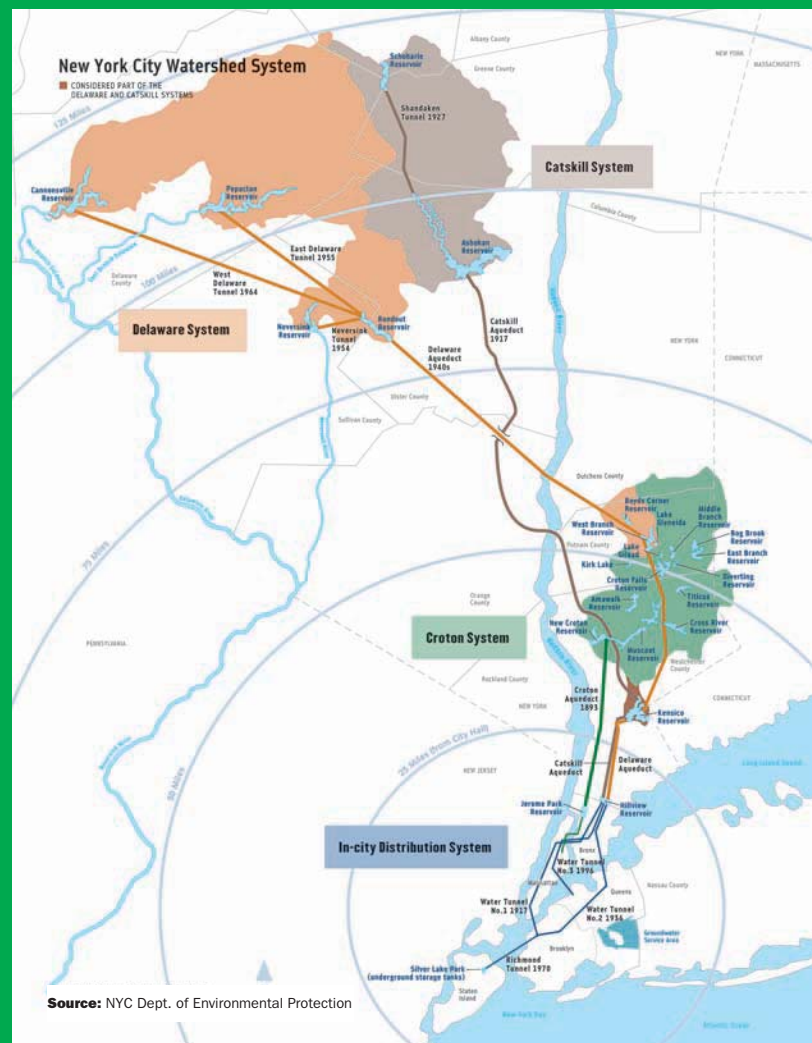
New York City's drinking water is supplied by the Catskill-Delaware watershed, approximately 125 miles north of the city, and the Croton watershed, within approximately 75 miles of the city. These watershed areas cover 2,000 square miles and together supply over 1 billion gallons of water to city residents every day.⁸⁷ Despite anticipated population growth in the city, we will continue to have an ample water supply. The concern, however, is that the purity of this water is protected. Currently, our water arrives through two major aqueducts and does not pass through filtration plants. It is one of only five similar large urban systems nationally. The City has plans to build a filtration plant for the Croton watershed, which represents approximately 10 percent of our water supply, but not for the remaining water supply.⁸⁸

To maintain this system, New York City is subject to a 10-year Filtration Avoidance Determination (FAD), a waiver issued by the federal government. To preserve our water supply and avoid spending billions on a filtration plant for the Catskill-Delaware watershed, the city is required by this agreement to engage in several conservation activities in the watershed areas. These include purchasing land to avoid their develop-

ment and providing funding for farmers to engage in best management practices and whole farm planning in the watershed. There are approximately 350 farms located within the New York City watershed.⁸⁹ The economic viability and management of their operations are of critical concern to New Yorkers. Loss of this farmland to development or environmental degradation presents a major threat to our water supply.

The City has partnered with the Watershed Agricultural Council, an entity formed after the FAD, to carry out these preservation activities. In the 2008-2009 fiscal year, the City provided \$11.5 million for these activities.⁹⁰ Approximately \$4.43 million of this funding was used in ag-

ricultural programs to assist farmers in the watershed with implementing better environmental practices on their land to prevent harmful run-off into the water supply, while also helping them to maintain financial sustainability.⁹¹ This vital program has served over 65,000 farmed acres in our watershed.⁹² The City Council has been and will continue to be a major impetus for financial support for these critical farmers, making sure this program is adequately funded. In maintaining this support, we not only protect the integrity of our water supply, but also ensure a nearby supply of fresh products and economically viable farms to further strengthen our regional food economy.



Northeastern U.S. Agricultural Land

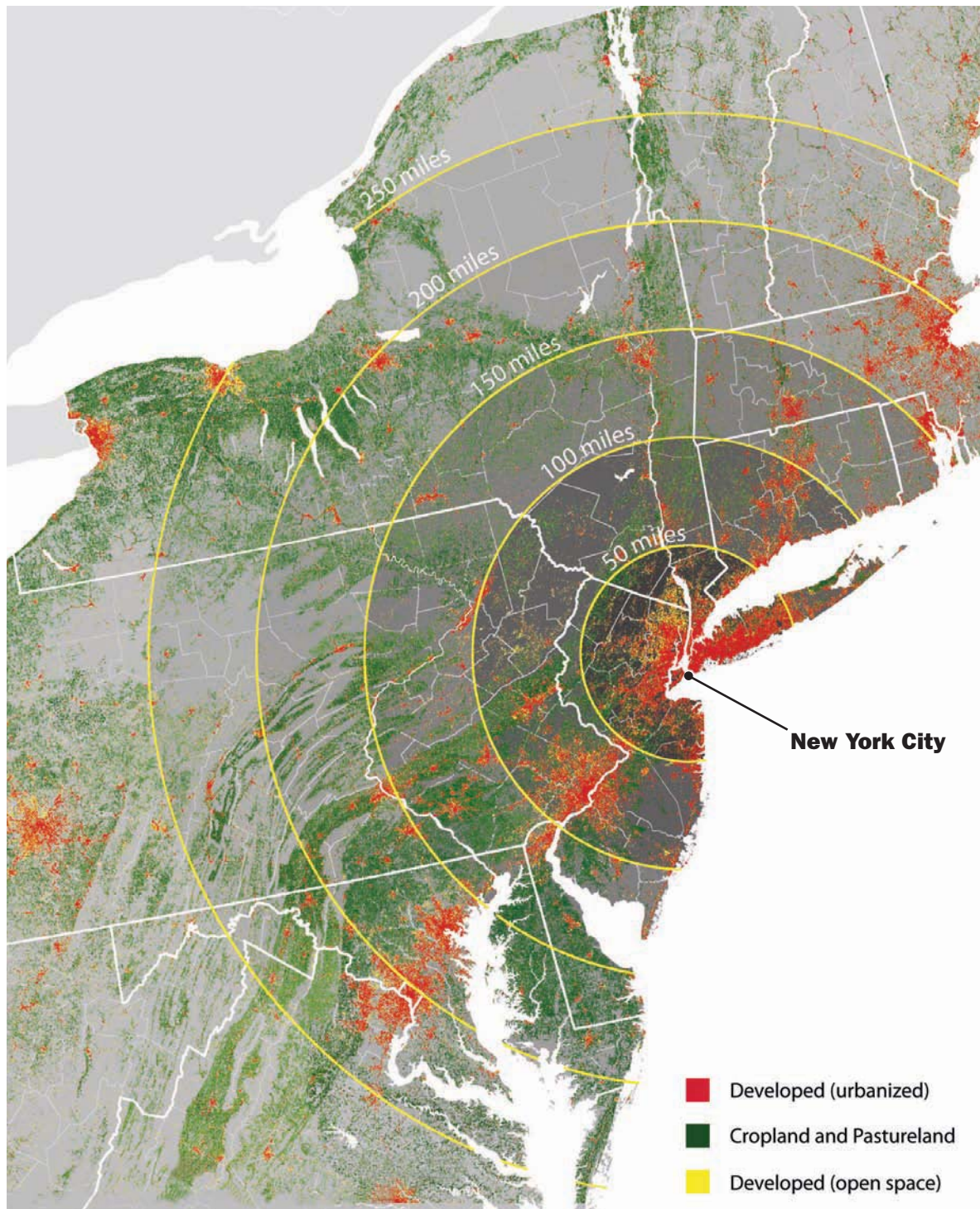


Image Courtesy of the Urban Design Lab



Source: New York Public Library



Farm on 55th Drive, Queens, NY circa 1920s

GOAL 2

Increase urban food production.

Long before the five boroughs were unified, much of New York City's landmass was used for farming and the waterways were home to a rich supply of aquatic life. Since that time, our city has undergone countless transformations to become the dense, soaring urban capital we see today. Property ownership is out of reach for the vast majority of New Yorkers and open space is a precious – and sparse – resource. Even so, the most recent federal agricultural census reports as many as 20 farms in the five boroughs.⁹³ Additionally, the city is home to hundreds of community gardens that grow food. While these efforts are not sufficient to feed nearly nine million residents, they provide opportunities to learn about growing food, healthy eating, and our environment. They also provide a small but important source of food for some New Yorkers. Additionally, in New York City over a dozen programs, such as Green Thumb through the New York City Department of Parks and Recreation, the New York and Brooklyn Botanical

Gardens, Just Food, and Green Guerrillas, offer education and support to help residents start and expand food growing within the five boroughs.

Some organizations have even begun experimenting with commercial food growing enterprises in the city. While these enterprises have yet to develop into a robust part of the city's urban agricultural activities or a major source of food, they can inspire urban agriculture innovation. There are a number of ways the city can support all of these different types of activities. These urban gardeners and farmers need stable spaces to grow food, as well as technical assistance. Although space is extremely expensive in New York City, agencies can better promote the underutilized spaces that do exist. Yet even once growers find space, they may lack the knowledge required to navigate the city's regulatory process or to ensure the space they have is productive.

To address these issues, the City Council will pursue two strategies: 1) better utilizing existing space for urban food production and 2) supporting horticultural education and technology around the city.

STRATEGY:

Better use existing space for urban food production.

New York City is the largest and densest metropolitan area in the country. Yet residents and organizations throughout the city have discovered creative ways to produce food within this environment using rooftops, vacant parcels and raised beds. Some new technologies are even able to grow food inside buildings.⁹⁴ However, gardeners still face challenges protecting the gardens they have from development, finding new space for gardens, and navigating the city's approval processes. Other cities also face these issues and have begun to implement policy changes to facilitate urban agriculture. For example, the Mayor of San Francisco issued an executive order requiring all city agencies to report on city-owned land available and appropriate for growing food.⁹⁵ Additionally, Detroit is now trying to position itself as a leader in urban agriculture.⁹⁶ One thing Detroit has at its disposal that is not easily identified in New York City is inexpensive, available space. However, as demonstrated by urban agriculture already underway in the city, much





can be done with the little space we do have. There are numerous ways in which the city can facilitate these efforts. Specifically, the City Council will pursue the following key initiatives to better utilize existing space for urban food production.

Proposals:

- **Protect community gardens.**

There are 600 community gardens throughout the five boroughs that have deep roots in the city's history. As many families left the city and urban decay settled in to some neighborhoods, dedicated New Yorkers reclaimed vacant lots by planting gardens. Many of these gardens still remain and have become a vital part of their communities' identity. Not only do they provide healthy food and educational opportunities for children, but they also offer residents an oasis in otherwise densely built neighborhoods. Yet, despite these benefits, community gardens have not yet achieved long-term protection as part of the city's landscape for future generations. Recently, the Mayor's administration promulgated rules to preserve approximately 300



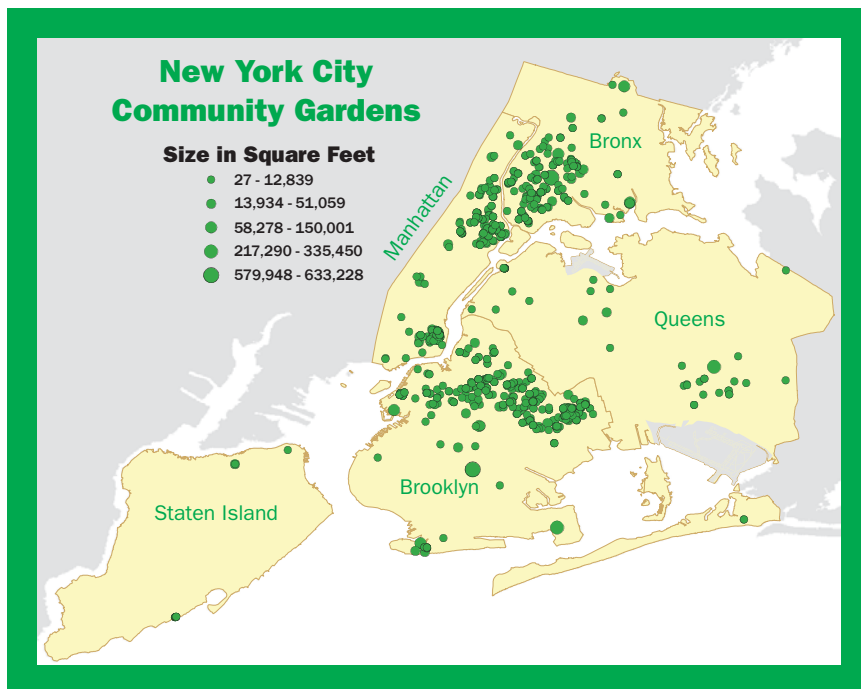
Photo Credit: Ambient Traffic

of these community gardens, most of which are under the jurisdiction of the City's Department of Parks and Recreation.⁹⁷ The City Council partnered with community gardeners to ensure these rules are the strongest possible. Thanks to our efforts, the rules now state that these gardens are to be preserved and protected

from development. While this is an important policy change, the rules are subject to change at the discretion of the next Mayor and thus do not afford long-term protection to these gardens. Therefore, the City Council will pursue policies to achieve long-term garden conservation, along with the addition of new gardens.

- **Ensure urban farms are counted in the Census of Agriculture.**

Another way to support local urban farming is to ensure that they are recognized by the USDA's Census of Agriculture. This annual census counts all farms by county if they produce at least \$1,000 worth of product each year. Many of the city's moderately sized and larger community gardens would qualify as farms by this federal definition. However, these gardens are not yet officially recognized as urban farms because gardeners do not track and report the financial value of the food they grow. Currently, only 20 farms in New York City are counted by the Census of Agriculture.⁹⁸ By educat-



Source: Data courtesy of Mara Gittleman



ing and assisting more of our growers to participate in this census, we could increase that number dramatically. As a result, the city would not only be recognized as a leader in urban farming, but we would also be better able to utilize federal resources to support farming. The City Council will partner with organizations citywide on an outreach and education campaign to make sure as many of our farmers are counted as possible.

- **Create a searchable database of city-owned property.**

With widespread and growing interest in gardening and urban farming, identifying and publicizing available space for cultivation will be critical to increasing urban food production. To help support this activity, the City will create a database of all city-owned and leased properties, including vacant land. Currently, this information is available in various forms, but is not collected in one, consumer-friendly place. The City publishes a book, called the Gazetteer, that catalogues city-owned and leased properties and which agencies control them. However, the book includes only limited information on city-owned properties, and is only available for purchase in hard copy and thus not easily accessible to most New Yorkers. The City also produces a software program called PLUTO that includes more detailed information about all properties in the five boroughs, including city-owned property. However, this is also only available for purchase. Lastly, there is an application called City Map online that includes city-owned properties, but it is not searchable by property feature.

The City Council will introduce legislation that requires the Administration to create a new searchable database of all city-owned and leased properties. The database will not only provide useful information to stakeholders seeking urban agriculture land, but could also service

as a critical resource to organizations seeking new space for other food uses (such as food processing or retail space). It will also ensure that underutilized space can be better identified and put to good use.

- **Identify city-owned properties with roofs suitable for urban agriculture.**

The Administration is conducting a study of city-owned buildings to determine the potential for rooftop solar panels. While this is a valuable study, the Administration should at the same time determine which roofs would be good candidates for vegetative green roofs. Given that many of the same factors being evaluated for solar roofs would yield information needed for determining viability of green roofs – such as total roof square footage, sunlight exposure, and load bearing capacity – expanding this study now would be an efficient way of exploring where vegetative roofs could be sited.

- **Waive the Floor to Area Ratio (FAR) requirements and height restrictions for certain rooftop greenhouses.**

Urban food production, whether in the form of community gardens, urban

farms or commercial enterprises, does not have to be located on the ground level – many have adapted to our built environment by using rooftops as a growing surface. Several new rooftop locations have attracted public attention and are attempting to pioneer a new approach to urban agriculture in the city.⁹⁹ Unfortunately, new greenhouses encounter a barrier to development because some buildings are at or exceed their floor-to-area ratio (FAR) allowance, preventing an addition to the building. For example, buildings in Chelsea, Greenpoint, downtown Brooklyn, and Jamaica have faced this problem. These restrictions serve several important purposes. They moderate the density of development in neighborhoods, allowing for a safer, more pleasant built environment while ensuring that the local infrastructure is not excessively burdened. But greenhouses used for growing food also provide a public benefit, and the City Council will pursue two policy changes to facilitate their development. First, we will pass legislation to exempt greenhouses from building height restrictions. Second, we will call on the New York City Departments of Buildings (DOB) and City Planning (DCP) to develop a waiver program for greenhouses seeking space on buildings that have met or exceeded their FAR.



Photo Credit: Kristen Taylor





Photo Credit: William Alatraste



These two initiatives will encourage not only the growth of urban agriculture, but also the development of urban agriculture technologies as organizations develop and adapt to rooftop sites.

- **Change the state green roofs tax credit to encourage food-producing green roofs.**

In 2008, New York State passed legislation to encourage environmental sustainability by providing a tax credit for green roofs. While an important advancement at the time, the credit defines green roofs narrowly. When the original legislation was written, the city did not have any high-profile rooftop food gardens, and green roofs were not generally discussed as a means of growing food. Considering the movement toward urban agriculture and the growing interest in rooftop gardens, the City Council will pass a resolution calling on the state to expand the definition of green roofs to include those that grow edible plants. We will also partner with state officials to pass legislation on the state level to change the tax credit definition.

- **Change water rates to encourage green roofs.**

Under the current water rate structure, approved by the New York City Water Board, costs for the process-

ing of wastewater are billed at 159 percent of drinking water costs.¹⁰⁰ This calculation means that wastewater is billed by consumption and therefore does not impose a cost on stormwater. However, stormwater imposes significant costs on the city. The city's wastewater treatment system combines stormwater and wastewater. During times of low flow, all stormwater is treated by the city's sewage treatment plants, which is costly. Additionally, during large rainstorms, the system cannot process all of the waste in the sewer system and instead sends some of that waste directly into our waterways without treatment, polluting our waterways and waterfronts with raw sewage.

The City Council calls on the Water Board to change the wastewater billing to include a charge on stormwater based on a lot's impermeable surface. This charge will incentivize building owners to develop green roofs. As a result, we would hope to see more green roofs developed that also include urban agriculture. The Water Board took the first step in Fiscal Year 2011 by charging city licensed parking lots with no water service a fee of five cents per square foot. The Water Board should take the next step and charge all building owners based on impermeable square feet.

- **Streamline the green roof permit application process.**

Although encouraging green roofs is a stated goal of both the City Council and the Administration, many organizations in the city have difficulty navigating our complex permitting and inspections process. The DOB is responsible for the important task of ensuring public safety by inspecting and regulating our buildings. They are also therefore responsible for processing green roof permit applications. As with any new technology, balancing the goals of enforcing our building code and encouraging innovation can be difficult. Realizing this, the City Council partnered with various stakeholders to green our building code. Through this effort, an inter-agency group within the Administration was established to review new technologies, illustrating a policy innovation to facilitate energy conservation in buildings.

Because many organizations are finding the building and inspections process for green roofs challenging, the City Council recommends that the Mayor's Office of Long-Term Planning and Sustainability work with the Department of Buildings, the Fire Department and other city agencies to review the current process and develop best practices to facilitate rooftop agriculture.

STRATEGY: **Restore food and horticultural knowledge.**

Producing food in New York City relies not only on the physical environment, but also on the technical knowledge of our residents. In 1840, there were 20,286 New Yorkers working in the agricultural sector in the five boroughs.¹⁰¹ Even as recently as World War II, more than 20 million families in the U.S. were growing food in their back yards in "victory gardens." These



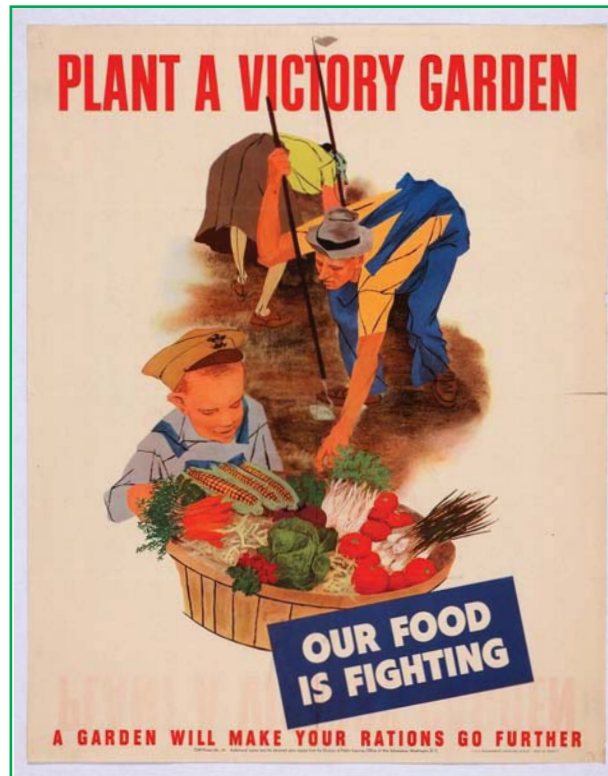
small plots supplied 40 percent of the produce consumed in America during the war.¹⁰² But with increasing urbanization and industrialization, much of this knowledge about food production has become specialized and unavailable to residents of the city today.

Programs like Garden to Café, Added Value, and botanical garden workshops are trying to recapture this knowledge. Research has demonstrated that these programs reconnect people to their food and encourage healthier eating habits.¹⁰³ To coordinate these efforts and help disseminate knowledge about creating school gardens or home gardens, the City Council will invest in garden education centers throughout the city.

Proposals:

- **Ensure garden education is available citywide.**

Several organizations and programs across the five boroughs provide garden education to residents. These include several botanical gardens, the New York Horticulture Society, the New York City Department of Parks and Recreation's Green Thumb Program, and countless others. The workshops currently offered target home gardeners and teachers who utilize gardens to complement their in-class curriculum. To date, there are as many as 300 school gardens in operation.¹⁰⁴ Despite the popularity of school gardens and community gardens, there is still additional demand for educational services. Additionally, many teachers are unaware of the opportunities that exist for incorporating garden education into the



Source: Division of Public Inquiries. Office of War Information.

classroom. Some strides have been made to better coordinate these programs and publicize them to teachers. The City has appointed a new citywide garden coordinator to assist teachers in finding gardens and educational programs. Additionally, the New York City Department of Education has hired a staff member to collect the various curriculum aids for teachers and to help facilitate the development of new gardens.

Several organizations also provide assistance to home, institutional, and community gardeners. These can include workshops on rainwater capture, composting, and other skills needed to make an urban garden thrive. However, these programs lack resources and coordination. They also are financially out of reach for some New Yorkers. The City Council will work with organizations throughout the city to support and expand garden education services for residents and community gardeners.

- **Support urban agriculture technology development.**

Because of New York City's dense environment and industrial history, agriculture and gardening can be challenging enterprises. Not only is finding space difficult, but implementing the appropriate growing systems – whether greenhouses, hoop houses, rain water harvesting, vertical indoor systems, or any of the countless other technologies available – can be overly complex as well. However, there are engineers, architects, and seasoned growers in our city that have been leading the way to the development and execution of new technologies. These technologies can be found on the ground, on roofs, inside, outside, and

all over the five boroughs. Moreover, there is a growing community of innovators across the country who are sharing best practices.

This expertise and interest in urban agriculture nationally presents a unique opportunity here in New York City. We are fortunate to boast a great number of well-known academic institutions, a rich talent pool in urban design and planning, and a highly motivated and active community of growers. By connecting these resources and using them to solve urban agriculture problems in such a large, dense city as ours, we can position ourselves as leaders in urban technology development. The City Council will partner with academic institutions, such as Columbia University and the New School, to identify strategies for encouraging innovation and dissemination of new technologies. Not only would this support the efforts of growers here, but if we can begin to formalize and commercialize these technologies, we can also lay the foundation for potential economic activity in the future.



Processing





Processing

Much of the food we consume goes through some form of processing. Food processing transforms ingredients like harvested crops or animal products into new products for consumption. This can be as simple as washing and packaging fresh produce or as complex as making breakfast cereal. Few processors source ingredients directly from farms, instead purchasing ingredients through a broker, intermediary, or from another processor. In New York City, food processing is an important sector of our economy and presents a great opportunity for growth.





PROCESSING

Food processing in New York City represents a \$5 billion industry that adds approximately \$1.3 billion to the Gross City Product.¹⁰⁵ There are nearly 1,000 food processing and manufacturing establishments employing over 14,000 workers in New York City.¹⁰⁶ Many of these processors make foods such as baked goods, tortillas, chocolates, or roasted coffee.¹⁰⁷ Companies range in size from individual entrepreneurs to large-scale operations that export their goods around the country and world, bringing much needed revenue into the city. Despite these strengths, there are barriers to entry for start-ups, and larger businesses find it increasingly difficult to remain in the city or invest in infrastructure due to high costs.

Like other businesses in the city, food manufacturers struggle to access capital, pay for equipment, and find affordable manufacturing and retail space within which to grow their business. Despite these challenges, food manufacturing remains a stable economic sector, while other manufacturing sectors have been declining in the city for decades. Although

PROCESSING

GOAL 3: Generate growth and employment in the food manufacturing sector.

STRATEGY: Make affordable space available.

Proposals:

- Build a commercial kitchen incubator for start-ups.
- Develop new industrial space for food manufacturing businesses.
- Revitalize New York City's market system through the New Yorkers 4 Markets initiative.

STRATEGY: Provide technical assistance to food manufacturers.

Proposals:

- Create an online resource center for food manufacturers.
- Establish a workshops series to assist food manufacturers.

GOAL 4: Increase regional products processed in and for New York City.

STRATEGY: Facilitate urban-rural linkages.

Proposal:

- Hold a regional food business-to-business (B2B) conference.

GOAL 5: Reduce the environmental impact associated with food processing in New York City.

STRATEGY: Help businesses reduce energy consumption.

Proposal:

- Help food manufacturers access energy efficiency programs.



Photo Credit: William Alatraste

food manufacturing is a source of good jobs and revenue, it has not been a specific part of the city's economic development efforts. The City Council will pursue several strategies to aggressively grow the food manufacturing sector. The initiatives that follow will ensure food manufacturers have the space, financial resources, business relationships, distribution channels, and knowledge to thrive in New York City.

GOAL 3

Generate growth and employment in the food manufacturing sector.

The city must take several key actions to support and protect food manu-



Photo Credit: UptownFlavor.com



facturers and generate growth in the sector. These strategies will include linking companies to affordable industrial and retail space, and ensuring that they can access the resources already available to them. The New York City Economic Development Corporation (EDC) has partnered with several lenders to develop a capital access program that is open to different types of businesses, but many food manufacturing companies may not know how to apply. Additionally, because food manufacturers require expensive equipment and energy, they often need assistance covering these costs. The New York City Industrial Development Agency offers programs that provide companies with access to triple tax-exempt bond financing or tax benefits to acquire or create capital assets, such as purchasing real estate, constructing or renovating facilities, and acquiring new equipment. Additionally, there are several programs in New York to help companies with energy efficiency, thus reducing their operating costs. Companies could benefit from targeted marketing of these programs. **To generate growth and employment in the food manufacturing sector, the City Council will pursue two strategies: 1) making affordable space available and 2) providing technical assistance to food manufacturers.**

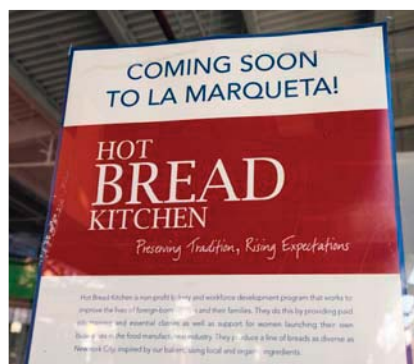


Photo Credit: William Alatraste

STRATEGY: **Make affordable space available.**

The cost of manufacturing space in many industrial neighborhoods has increased significantly over the past 10 years, with space that was approximately \$6 to \$9 per square foot in 2000 now renting for closer to \$12 to \$18 per square foot.¹⁰⁸ This makes New York City a less competitive market for these manufacturers, especially new and smaller operations, prompting manufacturers to leave the city. We have begun to address this issue by investing in a food incubator, but there are other supports that could be provided, especially for companies beyond the start-up phase.

Through the Brooklyn Navy Yard, the Greenpoint Manufacturing and Design Center, Industrial Business Zones (IBZs) and other programs, the city has attempted to retain some manufacturing in the five boroughs as this industry provides good, living-wage jobs for thousands of

New Yorkers. Yet maintaining these operations remains difficult due to a shrinking supply of industrial space and increasing prices compared to areas like New Jersey or upstate New York. One major strategy for keeping and growing the food manufacturing sector must be to ensure an affordable supply of space, from the fledgling enterprise to the well-established business.

Proposals:

- **Build a commercial kitchen incubator for start-ups.**

Between the moment when an entrepreneur first tests a recipe and the time he or she is ready to rent and equip his or her own space, their business comes to a difficult cross-roads. There might be enough revenue to stay in business, but not enough to afford a commercial kitchen and market their products. To fill this gap and help these businesses grow, the City Council has invested in a commercial kitchen incubator at the La Marqueta building in East Harlem, which will be opening later this year. This building has a long history as a public food market, but has fallen largely into disuse over the past 20 years. Building an incubator in part of this building will not only help grow individual businesses, but it will also attract new tenants to the rest of the building. Moreover, clients of the incubator may be able to utilize the front of the market or other components of the La Marqueta site as future retail space for their products.

- **Develop new industrial space for food manufacturing businesses.**

Food processors in the city have difficulty finding affordable space at every stage of their business, from their initial start up through their growth into larger operations. Even if the city is able to assist new start-ups in the incubator, more established firms still face an im-





portant decision. Once they are ready to find their own, larger manufacturing space, do they remain in New York City or do they move to a more affordable area? Unfortunately, some manufacturers have answered this question by leaving New York City. In an attempt to keep more of these companies in the five boroughs, the City Council has partnered with private sector brokers, not-for-profits, and the EDC to develop food manufacturing space.

First, we surveyed food manufacturers and identified dozens who are seeking space and began to assist these food manufacturers with finding space, either publicly or privately owned. Second, the City Council created a Small Manufacturing Investment Fund of \$10 million to assist in the development of new manufacturing space, some of which can be utilized for developing food processing space. Over the coming year, we will be partnering with EDC to identify buildings that can be renovated and subdivided into leasable space for small manufacturers. Lastly, as the city redevelops the Hunts Point produce market, any opportunities for developing underutilized or vacant space for

processing should be explored. Given its proximity to wholesalers, local wholesale farmers, and major highways, Hunts Point presents a promising opportunity to create a hub for local food manufacturers, especially those interested in sourcing regional ingredients and making fresh convenience foods.

- **Revitalize New York City's market system through the New Yorkers 4 Markets initiative.**

Just as food manufactures require production space, many are also looking for retail spaces to bring their products to market. The City currently owns several public food market buildings that could be better utilized for both production and retail space to support local food businesses. However, they are not yet fully occupied and require renovation. The City Council has already begun an initiative, NYers 4 Markets, to revitalize these markets through outreach efforts and significant investment in their renovation.

The city built several food markets under Mayor Fiorello LaGuardia with the intent to draw street cart vendors

into contained, shared retail spaces throughout the city. They provided vendors with affordable space and cleared streets that residents complained were becoming overly cluttered with push carts. However, these markets served another important function: they opened a pipeline for these individual vendors to become more established businesses. Today only four of the original retail markets remain: La Marqueta in East Harlem, Arthur Avenue in the Bronx, Moore Street Market in Brooklyn, and Essex Street Market in the Lower East Side. Visiting each of these markets reveals very different states of repair and occupancy. While Essex Street Market has undergone significant changes and is now a popular shopping venue, Moore Street Market and La Marqueta have not enjoyed the same level of attention and success. And despite a grassroots effort to celebrate the area's history as a major food destination through the New Amsterdam Market, the South Street Seaport area, once home to the city's famous Fulton Fish Market, still doesn't have a new permanent market.

These sites, rather than generating jobs and revenue for the city, have sat underutilized for years. This is a lost opportunity not only for the city, but also for food processors and retailers who seek small, affordable space to make and sell their products. Just as Mayor LaGuardia originally envisioned, these markets could be the launching pad for dozens of small businesses. The City Council is committed to raising the profile of these markets and investing in their revitalization.

Last year, we invested \$1.5 million in the La Marqueta building by creating the kitchen incubator, to be operated by the not-for-profit Hot Bread Kitchen. Already, this has allowed EDC to attract three new tenants to the retail space and begin planning for future development of the rest of the site. We have also been actively involved in efforts to help raise the profile of these markets by conducting



Photo Credit: Manyhighways



Source: Project for Public Spaces

outreach through our New Yorkers 4 Markets campaign, collecting over one thousand signatures from residents who support the revitalization of these critical assets. This type of outreach is imperative for helping to build a customer base for these public markets. Additionally, we have provided significant financial investment in the Moore Street Market. As a result, this market will be undergoing renovation to revitalize the retail space and attract new vendors.

STRATEGY: Provide technical assistance to food manufacturers.

Just as with any type of business, accessing or even identifying available resources can be difficult for food manufacturers. There are numerous types of business assistance available, from the city's Small Business Services Department to the Capital Access Loan Guarantee Program administered by the Economic Development Corporation, Citibank, and Accion.¹⁰⁹ Many businesses are unaware of these programs, or even that the city may have available space for rent or purchase.

To make this information more readily available, the City Council will pursue the following two initiatives.

Proposals:

- **Create an online resource center for food manufacturers.**

EDC and the city's Department of Small Business Services (SBS) have individual web pages devoted to various industries that explain what programs and benefits are available to help businesses in each industry grow. However, none of these specifically target the needs of food manufacturers. To better market the space, capital, technical assistance and other benefits available, the City Council will partner with SBS Business Express to create a one-stop resource page for food manufacturers.

- **Establish a workshops series to assist food manufacturers.**

To support food manufacturers in accessing available resources, we recommend that EDC conduct outreach to food manufacturing businesses and hold informational workshops. A similar

effort has worked in reaching other industries and should be replicated for food manufacturers. For example, EDC has organized well-attended workshops for the biotech sector to educate researchers and companies about grant programs, innovation contests, and leasing opportunities. Additionally, through the Food Retail Expansion to Support Health (FRESH) program, EDC outreach to the supermarket industry has contributed to three supermarket expansions. Similar outreach and workshops should be focused on food manufacturers to assist them in accessing capital, business planning assistance, necessary health permits, leasing and other important opportunities.

GOAL 4

Increase regional products processed in and for New York City.

Our city's rich cultural diversity has resulted in an abundance of specialty and ethnic foods across the five boroughs. As Americans' palates have become more diverse, the demand for these products has increased, boosting our local manufacturers. Now consumers are demanding regional foods, "value-added" products, and fresh convenience foods.¹¹⁰ The growing popularity of farmers markets and community supported agriculture (CSA) has also brought an increased demand for regional products that are processed, or "value-added" products like yogurts, cheeses, jams, mixed salad greens, and baked goods. Finding a steady supply of regional ingredients presents a challenge for some processors and food service establishments. Likewise, for some institutions obtaining lightly processed foods, such as washed and packaged greens, is a barrier to purchasing regional food. It is much easier and less staff intensive to obtain pre-washed and cut produce than to receive raw product that requires additional preparation before use. These kinds of interim processing activities are an important



missing link in the regional food system. **Therefore, one strategy for increasing regional products consumed in New York City is to facilitate urban-rural linkages among businesses and institutions.**

STRATEGY:

Facilitate urban-rural linkages.

New York State is home to 35,600 family farms¹¹¹ and New York City boasts approximately 1,000 food manufacturers,¹¹² over 7,000 food retailers,¹¹³ and tens of thousands of restaurants. Throughout the year, these businesses perform the impressive task of bringing food to over 8 million residents and 45 million visitors.¹¹⁴ Doing so requires relationships across every phase of the system. For small- and mid-sized producers, however, getting their products to processors and to sales outlets or institutions in the form demanded can present a challenge. Specifically, the lack of processors linked to our regional growers has prevented city institutions from procuring more regional products. By helping to facilitate these urban-rural linkages, New York City can help spark economic activity without significant capital investment.

Proposal:

- **Hold a regional food business-to-business (B2B) conference.**

Although many wholesalers, retailers, and processors are trying to meet the demand for regional products, finding suppliers can be difficult. Even once a regional agricultural product is identified, there are additional challenges getting it to the city so it can be processed or sold. Farmers who participate in direct-to-consumer venues may not be able to access other channels like traditional retail or larger food service establishments and public institutions. One effective way that government can support industry growth and encourage new markets is to better connect producers, processors, and buyers in order to strengthen and create new markets. As a first step, the City Council will organize a

business-to-business conference, which will target both regional producers and local businesses to facilitate networking and distribution. The conference will also feature workshops by city agencies, including the Department for the Aging, the Economic Development Corporation, and the Department of Education. Various workshops will feature information about becoming a vendor for city food programs, a difficult market to access for many regional and local producers and distributors, and about financial programs, finding space, and accessing other business assistance services in the city. By connecting businesses at every step of the food system, we will help existing firms grow and add new jobs, while creating opportunities for new and emerging entrepreneurs.

GOAL 5

Reduce the environmental impact associated with food processing in New York City.

Although the food processing industry has benefited from our increased demand for convenience foods, there are also environmental implications. As consumers seek faster, easier ways to prepare meals, much of the work traditionally done in our kitchens has been outsourced. Grocery stores now feature products like pre-washed vegetables, frozen meals, shredded cheeses, and individually packaged snacks to help us reduce our time in preparing meals. The result, however, has been an increase in energy consumption by food processors and an increase in food packaging. To help support our local processors while still reducing negative environmental impacts, we must better link them to programs that will help reduce their energy consumption. We also must reduce packaging upstream and ensure that food packaging is recyclable. **Our central strategy for reducing the environmental impact among food processors will be to help them reduce their energy consumption.**

STRATEGY:

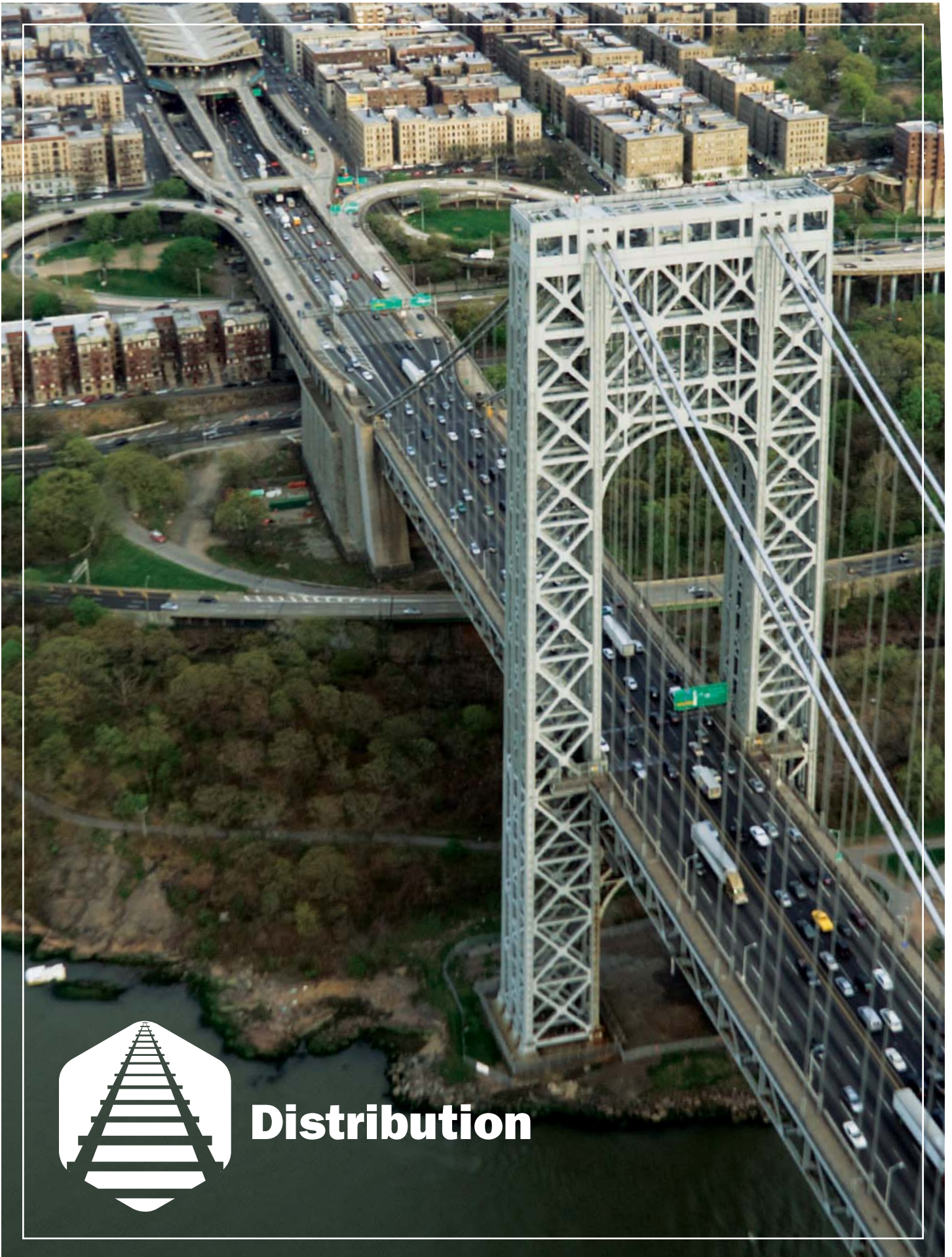
Help businesses reduce energy consumption.

Not only does high energy consumption by food processors represent an environmental challenge, it is also a high cost burden for businesses. In New York City, in particular, energy costs are 56.4 percent higher than in other cities.¹¹⁵ This not only threatens businesses' bottom line, but it can also result in higher food costs. Recognizing the impact these energy prices have now and are likely to have as the cost of energy increases over time, there have been several efforts in New York to increase businesses' energy efficiency. However, we must ensure that New York City companies are aware of these programs and can utilize them.

Proposal:

- **Help food manufacturers access energy efficiency programs.**

The New York State Energy Research and Development Authority (NYSERDA) oversees several programs that help assist businesses to reduce their energy costs and become more energy efficient. Several programs exist to help with energy audits and energy reduction planning, such as FlexTech.¹¹⁶ Additionally, the New Construction Program¹¹⁷ and the Existing Facilities Program¹¹⁸ provide benefits for companies to upgrade to more energy efficient equipment during construction of new facilities or for renovation of existing facilities. For companies located specifically within the five boroughs, there is a program to help transition to clean fuel vehicles for distribution called the New York City Private Fleet Program.¹¹⁹ Together, these programs represent a vital resource for companies that manufacture and distribute food citywide and will be aggressively marketed to New York City businesses. These efforts will include better publicizing these programs through workshops for food manufacturers in a business-to-business conference to be held next year, and as part of a new resource page through Business Express.





Distribution

Food distribution refers not only to the way food travels, but also to the establishments that distribute food for sale or donation. These outlets include national chain supermarkets, grocery stores, bodegas, food cooperatives, street vendors, farmers markets, community supported agriculture (CSAs), soup kitchens, and food pantries. Getting food into and throughout the city relies on transportation infrastructure such as roads, bridges, ports, vehicles, and rail lines. It also requires related inputs like warehousing, technology, and food handling processes. Food distribution in New York City is a complex network involving thousands of participants and several modes of transportation. Most of the food distributed in the city enters via truck with a small portion arriving by boat, air, and rail.



DISTRIBUTION

Over the past decade, the time our food spends in transit and the distance it travels have increased measurably.¹²⁰ This trend has compounded the problems of energy usage and greenhouse gas (GHG) emissions already typical of our current food system. Yet these trends cannot continue given global climate change and the increasing cost of energy – the food system must adapt to these new realities. Sourcing more food locally is a critical piece of the puzzle, but we must also make key changes to the way in which food is distributed throughout the country, region, and city.

Decades ago, the U.S. began to move away from rail as a primary means of transport toward an increased reliance on our highways and airways. But while these modes may be faster, they are also more energy intensive. For years, city planners and environmentalists have been encouraging a return to the use of trains and public transit as a more environmentally sustainable way for transporting the general public. However, shifting to alternative transport for food is more complicated. It must meet the needs of the businesses that buy and sell food. Since products like berries, spinach, peaches, and citrus are highly perishable and prone to bruising, refrigerated trucks with heavy food packaging (which are typically faster, more reliable, and better at protecting cargo) have remained the most popular means for long distance transport. However, there is a national movement to find an efficient, effective means for increasing rail transport, with companies like Railex, which guarantees five day service from coast to coast, to compete with trucking companies.¹²¹

Improving food distribution in New York City is also an important quality of life issue for residents. In many neighborhoods, like Hunts Point in the Bronx, children and adults suffer from high rates of asthma, which is exacerbated by poor air quality. Additionally, resi-

dents suffer from increased congestion on roadways, degraded infrastructure, and noise due to truck traffic throughout the city. Because much of this is due to food transport, the city must also do its part to facilitate alternative modes of transport and new technologies. We'll likely never reach full rail transport, but even moving some food transport to rail and other modes and improving current trucking technologies can have significant impact on improving air quality, reducing congestion, and reducing our GHG emissions. The New York City Department of Transportation has begun some of this work, but the issue will require additional partners locally and regionally.

GOAL 6

Improve food distribution in New York City through infrastructure enhancements, technological advances, alternative transportation, and integrated planning.

Our current distribution system relies greatly on food trucked long distances into the city. Nearly 30

percent of the truck traffic over the George Washington Bridge on any given day is carrying food.¹²² These trucks, often refrigerated, consume great amounts of fuel, contribute to greenhouse gas (GHG) emissions, and degrade our infrastructure due to their frequent, heavy trips on our bridges and roadways. The system overall is energy intensive and a considerable contributor to our carbon footprint.

Although the distance traveled is not the only factor in the environmental impact of food distribution, it is a key area for improvement. Just as facilitating urban-rural linkages in the New York City region will help farmers and local businesses, it can also help lower our energy costs and reduce GHG emissions. However, the extent to which these reductions are achievable depends on the per unit impact of the type of transportation involved, the energy efficiency of the vehicles used, and the distance traveled. Some research has demonstrated that local distribution networks can be more energy efficient and have a lower carbon footprint than national distribution networks.¹²³ However, no

DISTRIBUTION

GOAL 6: Improve food distribution in New York City through infrastructure enhancements, technological advances, alternative transportation, and integrated planning.

STRATEGY: Expand on the current vision for the Hunts Point Food Distribution Center to maximize its potential.

Proposals:

- Redevelop the Hunts Point Produce Market.
- Increase rail service through the Hunts Point Distribution Center.
- Transform the Hunts Point Distribution Center into a hub for citywide food system improvement strategies.

STRATEGY: Diversify and improve food transport.

Proposal:

- Identify optimal distribution routes and modes for food distribution within the region and city.



such targeted assessment has been conducted for our region.

The distribution challenges faced within our city are tied to many outside factors, and fully addressing these issues will require us to partner with state and federal stakeholders and the business community. Regional planning is needed to consider optimal transportation routes, as well as infrastructure and warehousing needs. Additionally, addressing the most vital piece of our food system infrastructure, the Hunts Point Distribution Center, will require cross-sector and interagency collaboration. **The City Council's strategies for pursuing an improved food distribution system are: 1) creating a new vision for the Hunts Point Food Distribution Center and 2) diversifying and improving food transport.**

STRATEGY:

Expand on the current vision for the Hunts Point Food Distribution Center to maximize its potential.

A significant amount of our food travels through a small number of large distribution centers in the city – most significantly Hunts Point in the Bronx,

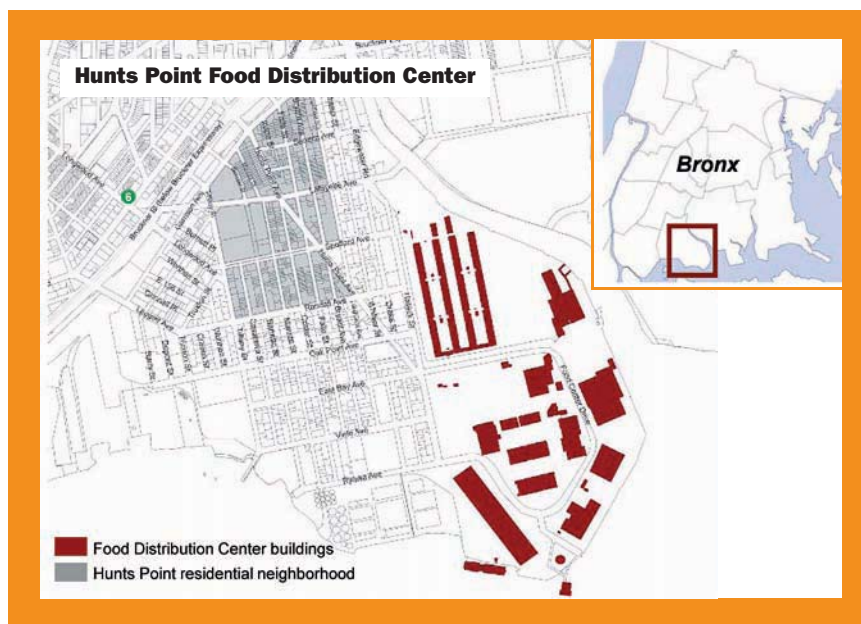


Source: NYC Economic Development Corporation

the world's largest food distribution center.¹²⁴ Its meat, fish, and produce markets house over 200 businesses that employ over 12,400 people.¹²⁵ It is the lynchpin of the New York City distribution system that feeds 9 percent of the U.S. population.¹²⁶

Since the Hunts Point markets were originally built in the late 1960s, they have served the New York City and regional market well. But as with any older piece of infrastructure, their age and limited capacity are showing. The produce market is 50 percent over capacity, causing businesses to use overflow storage in diesel trucks. These trucks run constantly, using fuel and releasing CO₂ into the surrounding environment. Traffic congestion, aging infrastructure, and the capacity issues at the produce market have come at a cost to its competitive advantage. These problems, along with new competition from large national businesses and the new produce market in Philadelphia, threaten the future growth of the market.

Like other terminal markets in major cities around the world, such as Rungis outside of Paris, the Hunts Point Market could be an integrated, forward-thinking generator of eco-



Source: NYC Economic Development Corporation



Source: NYC Economic Development Corporation



Produce Market Buildings and Parking Lot

conomic activity. Because of capacity, infrastructural, and governmental issues, Hunts Point will require an expanded and coordinated vision and investment to maximize its potential for the city and region. EDC published a Hunts Point Vision plan in 2004 after a year-long task force.¹²⁷ This task force considered issues facing the Hunts Point peninsula, which includes both the residential area and the food distribution center. A series of short-term proposals emerged to address the tension between the different needs among residents and businesses. These included addressing traffic safety, local land use issues between the residential and industrial areas, and nearby residents' need for employment opportunities.

While a good effort to improve the relationship between local residents and the distribution center, this plan does not include a vision for capitalizing on Hunts Point to achieve citywide health, economic, and environmental goals. Rather than limiting their focus

to expanding one part of the facility at Hunts Point, the city should reassess what more could be achieved through an expanded vision for the entire complex. In addition to the development of a permanent wholesale farmers market discussed earlier in this report, three key components should be included and are outlined below.

Proposals:

- **Redevelop the Hunts Point Produce Market.**

As public health research has demonstrated, consumption of fruits and vegetables is integral to maintaining health. Through the Health Bucks program, Food Retail Expansion to Support Health (FRESH) initiative, Green Carts program, nutrition education programs, and numerous other efforts, city agencies and organizations have been working diligently to increase consumption of fresh produce. Ensuring New Yorkers have a stable supply of fresh produce must also be

a part of the equation. The Hunts Point produce market supplies fully 60 percent of the city's produce.¹²⁸ Yet it is well over capacity and in desperate need of new space. The city must invest in redeveloping this vital market not only to ensure a growing supply of fresh produce into the city but also to create new business activity for its vendors. The estimated \$320-350 million redevelopment plan for the market could increase capacity by as much as 33 percent,¹²⁹ eliminating the need for storage in large trailers that constantly consume diesel fuel and impact air quality with heavy emissions. Working through the produce market co-operative, EDC, and other city, state and federal partners, the produce market can be an example to other markets throughout the country and world.

- **Increase rail service through the Hunts Point Distribution Center.**

The vast majority of food transported through Hunts Point Produce Market – 97 percent – is transported by



truck.¹³⁰ Traditionally, truck transport has offered customers a faster way of bringing fresh products across the country than is possible via rail. However, trucks consume more energy per unit transported and contribute to GHG emissions, road degradation, and traffic congestion. Because of these reasons, the city should pursue a policy of increasing rail usage for food distribution. Although rail is not likely to replace most truck trips into the city in the near future, even limited increases in rail service could have meaningful impacts. Whereas nearly 10 percent of food is transported to the Rungis market in France by rail,¹³¹ only approximately 3 percent arrives at the Hunts Point Produce Market by rail.¹³² Increasing rail service through Hunts Point to 6 percent would eliminate 58 million truck miles every year.¹³³ This is the equivalent of a single truck making 2,412 trips around the globe. Eliminating those trucks would prevent 76,000 tons of CO₂ being emitted each year.¹³⁴ Just to counter that CO₂ contribution, the city would have to plant 29,000 acres of trees, or an area roughly 30 times the size of Central Park.¹³⁵ As a first step toward increasing rail usage, the city will ensure that the plans to redevelop the produce market include new rail terminals that allow for increased usage in the future. To this end, the city is pursuing federal transportation grants to help fund these improvements. Additionally, achieving a long-term increase in rail service will require increased turnover of rail boxcars and increased usage of rail over truck shipments by wholesalers.

- **Transform the Hunts Point Distribution Center into a hub for citywide food system improvement strategies.**

Hunts Point is one of the only examples in our food system infrastructure that cuts across all sectors—private, public, and not-for-profit—and all food system phases, from produc-

tion to post-consumption. This makes its issues complex, but also its promise immense. The Hunts Point Distribution Center could be a hub for the City's food system improvements and a symbol of our citywide goals. As we consider things like reducing citywide congestion and our carbon footprint, expanding food processing and food jobs, addressing food deserts and obesity, creating better urban-rural linkages and reducing our solid waste stream, Hunts Point should be part of these conversations. A strategic plan for Hunts Point should include exploration of ways to get more regional product into our markets, diversify our food transport, get fresh and healthy foods into bodegas and grocery stores, and support more local jobs. The City Council calls on the Mayor's Office and EDC to incorporate these goals into their plans for Hunts Point and to explore ways in which Hunts Point can be used to support our long-term efforts to improve environmental, health, and economic outcomes across the city.

STRATEGY:

Diversify and improve food transport.

Although Hunts Point is the lynchpin of the city's distribution system, it is by no means the only place where distribution of food can be improved. Fully 30 percent of truck traffic coming over the George Washington Bridge is due to food transport,¹³⁶ and not all of these truck trips end up at Hunts Point. Many larger retailers and food service suppliers, like Sysco and Sodexo, have warehouses outside of the city and move their goods through their own delivery systems. Each day, hundreds of trucks from all over the country and region travel into New York City to make deliveries to restaurants, bodegas, supermarkets, colleges, hotels, and other food outlets. Given the contribution of these trucks to congestion, energy consumption, and GHG emissions,

mapping their movements and researching distribution alternatives will be an important step in improving food transportation for the future.

Proposal:

- **Identify optimal distribution routes and modes for food distribution within the region and city.**

Food businesses in the city and region face several distribution challenges – traffic congestion, lack of loading zones, frequent citations and fines, and an aging Hunts Point market. Residents also feel the impact of these distribution challenges, but through problems like poor air quality, traffic congestion, higher food prices, and degraded infrastructure. The city should work with its state, federal, community, and business partners to identify specific targets for improving food transport throughout the region and within the city and develop key changes to ensure that we reach them. Bringing increased rail access into Hunts Point is one such change, but even with new infrastructure in place it must still be made cost-effective for businesses. By mapping key parts of the food distribution system in the city and getting community and business owners' input, the city can begin to make critical investments and policy changes to reduce congestion, diversify transportation modes, and improve environmental and community impacts of the distribution system.



Photo Credit: Russell Seibert



Consumption





Consumption

Consumption is the phase of the food system that defines what and where New Yorkers eat and has an impact on the health outcomes associated with those choices. Our “food environment” where we live and work has a large impact on what we consume. Additionally, the affordability of food greatly impacts our choices. Over one million New Yorkers are food insecure, meaning they rely, at least in part, on government assistance for their food. The city also provides nearly one million institutional meals every day, in schools, senior centers, and other locations. There is also a growing trend toward consumption of meals at restaurants and take-out establishments. Currently, about half of our food is consumed away from home.





CONSUMPTION

The past several decades have seen two troubling, but resolvable food system issues related to consumption: increasing obesity and persistent food insecurity. Seemingly discordant problems, these two major health problems are rooted in the same food system issues: access to fresh, healthy, and affordable food. For many New Yorkers, access is limited by financial, geographic, and knowledge barriers. These issues are evidenced in many neighborhoods across the city by an unhealthy food environment, low consumption of fruits and vegetables, higher consumption of unhealthy foods, food insecurity, and pressure on public nutrition assistance programs. The poor health outcomes that result are not just costly to individuals and their families, but to all New Yorkers. These issues are partly

born of broad national factors, but through targeted, local action, some progress toward better consumption patterns can be made.

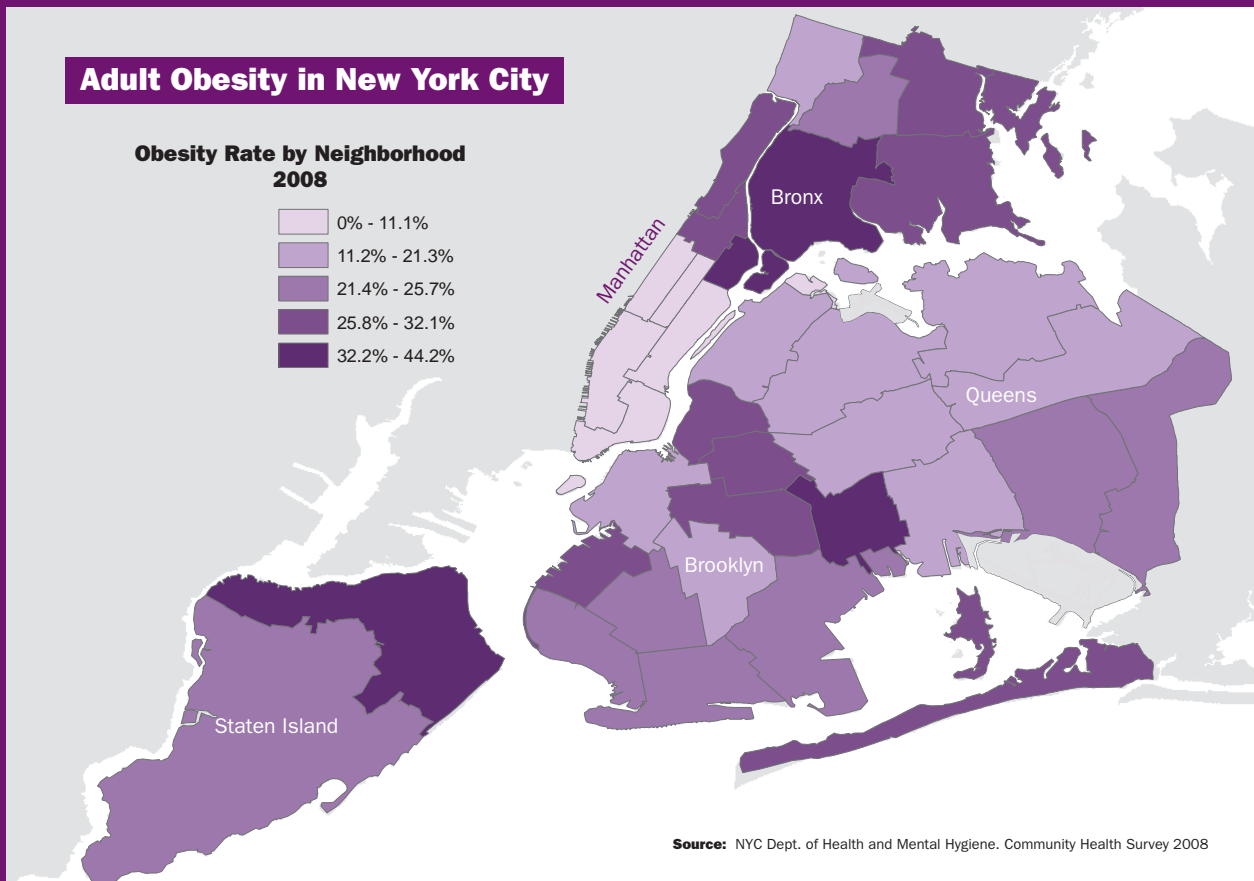
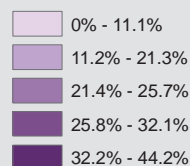
Over the past 20 years, obesity in New York City has doubled.¹³⁷ The trend among children and young adults is particularly troubling, with 25 percent of Head Start children and 28 percent of high school students either overweight or obese.¹³⁸ This rise in obesity can be traced to changes in our food environment and consumption habits. New Yorkers are consuming more calories each day than we did a generation ago, largely because it has become easier and cheaper to consume higher calorie and unhealthy foods. From 1980 to 2000, the price of healthier foods has increased much more than the price of unhealthy foods.¹³⁹ The price of fruits and vegetables increased nearly six times

more over this period than the price of soft drinks.¹⁴⁰ In general, the cost per calorie for healthier foods is higher than for unhealthy foods. For example, the price per calorie of zucchini and lettuce is 100 times greater than the price per calorie of sugar or butter.¹⁴¹

This price disparity in our food system encourages consumption of foods that are high in calories and low in nutrients, contributing to the prevalence of diet-related disease. Consequently, families with smaller budgets will use their food dollars to buy lower quality foods because they seem, at least in the short run, more cost effective. Compounding this issue of price disparity is the relatively unhealthy balance of food outlets in neighborhoods across the five boroughs. In some neighborhoods, there is a serious lack of grocery stores offering fresh, healthy

Adult Obesity in New York City

Obesity Rate by Neighborhood
2008



Source: NYC Dept. of Health and Mental Hygiene. Community Health Survey 2008

CONSUMPTION

GOAL 7: *Create a healthier food environment.*

STRATEGY: *Expand fresh food retail in under-served areas of the city.*

Proposals:

- Aggressively market the FRESH Program.
- Support efforts to expand food co-operatives.
- Improve bodega infrastructure.
- Improve the Green Cart program by expanding the electronic benefits transfer (EBT) service.

STRATEGY: *Better support food outlets that provide fresh and healthy foods.*

Proposals:

- Pilot a food retail workforce development program.
- Create neighborhood healthy food guides.

STRATEGY: *Discourage unhealthy food consumption.*

Proposal:

- Discourage consumption of fast food.

GOAL 8: *Strengthen the safety net of hunger and nutrition programs.*

STRATEGY: *Improve federal food programs and remove local barriers to enrollment.*

Proposals:

- Strengthen the federal Child Nutrition Act to improve school meals.
- Improve the Supplemental Nutrition Assistance Program (SNAP).

- Increase federal benefit amounts to reflect higher costs of living.
- End finger imaging for SNAP applicants.
- Continue SNAP outreach through agency data matches and grocery stores.
- Improve the WIC program.
- Enact federal legislative changes to the WIC program.
- Help WIC vendors by translating the vendor book into multiple languages.
- Mandate breakfast in the classroom for high-need schools.
- Improve the summer meal program.
- Establish a process to make sure summer meal sites are identified earlier and outreach has begun in advance of summer recess.
- Identify and expand on high-utilization sites.
- Produce a list of nearby summer meal sites for parents receiving SNAP or TANF with children.

GOAL 9: *Improve the nutrition of institutional meals.*

STRATEGY: *Expand the capacity of city agencies to cook whole foods for nutritious meals.*

Proposals:

- Agency kitchen capital investment and staff training.
- Expand salad bars in schools.

GOAL 10: *Increase quantity and quality of opportunities for food, nutrition and cooking knowledge.*

Proposal:

- Maximize SNAP-Education funding.

food, but bodegas and fast food establishments are in abundant supply. This type of environment greatly affects New Yorkers' food choices and encourages poor health outcomes.

For over one million New Yorkers, what they eat has less to do with what type of food is available than what financial resources they have to buy food. Not only do they struggle to afford healthy food, but they are unable to buy enough food for themselves and their families.

Food insecurity, or this absence of resources to purchase food, impacts 1.62 times more households with children than households without children.¹⁴² Food insecurity is the first domino in a line of other health and economic problems. Pregnant women without adequate nutrition are more likely to have babies with low birth weight and developmental delays. Children who lack adequate food are more prone to health problems from frequent colds and anemia, to developmental and

behavioral disturbances.¹⁴³ This in turn causes more frequent absences from school and an inability to concentrate, which impacts educational performance.¹⁴⁴ However, the problem is not isolated to individual children or families. It affects our entire city as hindered learning becomes hindered productivity and as chronic health problems among some residents cause higher health care costs for everyone. In short, these health issues are shared by everyone and are not sustainable.

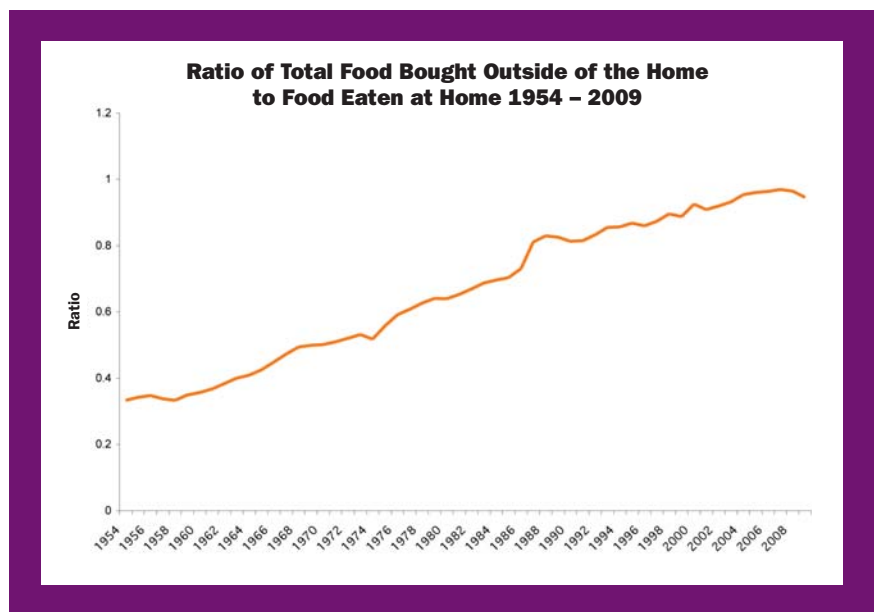


Although consumption patterns greatly affect the health outcomes we observe in New York City, addressing them also offers economic opportunities. By promoting usage of government assistance programs, local businesses reap the benefits of increased spending on food. Additionally, unmet demand for fresh food in many neighborhoods is an opportunity to expand retail business and create hundreds of new jobs. The goals below describe our plan to create a healthier food environment, make healthy food more affordable and accessible to all New Yorkers, and combat food insecurity while also stimulating the economy through demand for good food.

GOAL 7

Create a healthier food environment.

Over the past two generations, Americans have experienced dramatic changes in our food environment. These changes have affected our relationship with food and our health outcomes. Compounding the price disparity between healthy and unhealthy foods is the fact that we are now cooking fewer meals at home, relying on food service establishments for more of our meals. Both our caloric intake away from home and the amount of money we spend on food away from home have dramatically increased over the past 30 years. In the 1970s, New Yorkers spent 27.8 percent of their food budget away from home and consumed 18 percent of their calories outside the home.¹⁴⁵ By 2003, 45.6 percent of our food budget purchased meals away from home and in 2008, 35 percent of our calories were consumed eating out.¹⁴⁶ Although eating out does not necessarily mean healthy choices are not available, restaurant and take-out meals tend to be higher in calories than meals we prepare at home.¹⁴⁷



Source: USDA. ERS. Food CPI and Expenditures. Food at Home and Food Away from Home. 1954-2009

While many New Yorkers may not be able to transition entirely to home-cooked meals, having the knowledge to make healthier choices is an important step toward combating obesity and diet-related disease.

Unfortunately for many New Yorkers, their food environment does not support consumption of nutritious foods or healthy outcomes. Approximately 3 million people across the city do not have adequate access to fresh food retail.¹⁴⁸ This severe shortage is exemplified in residents' low consumption of fresh fruits and vegetables. In several neighborhoods – South Bronx, Pelham/Throggs Neck, East New York, Jamaica – 20 to 25 percent of people report eating no fruits or vegetables in a given day even though recommended intake is 5 to 7 servings.¹⁴⁹ Not surprisingly, in these same neighborhoods we also see a shortage of grocery stores and a higher prevalence of diet-related diseases. Through programs to support local food businesses like supermarkets, bodegas, food co-operatives, and Green Carts, the city can restore a healthier balance of options in neighborhoods. In doing so, New Yorkers will enjoy increased availability of fresh foods to support

better weight and health outcomes. **To achieve our goal of creating a healthier food environment, the City Council will pursue three strategies: 1) expanding fresh food retail, 2) supporting existing healthy food outlets, and 3) discouraging unhealthy food consumption.**

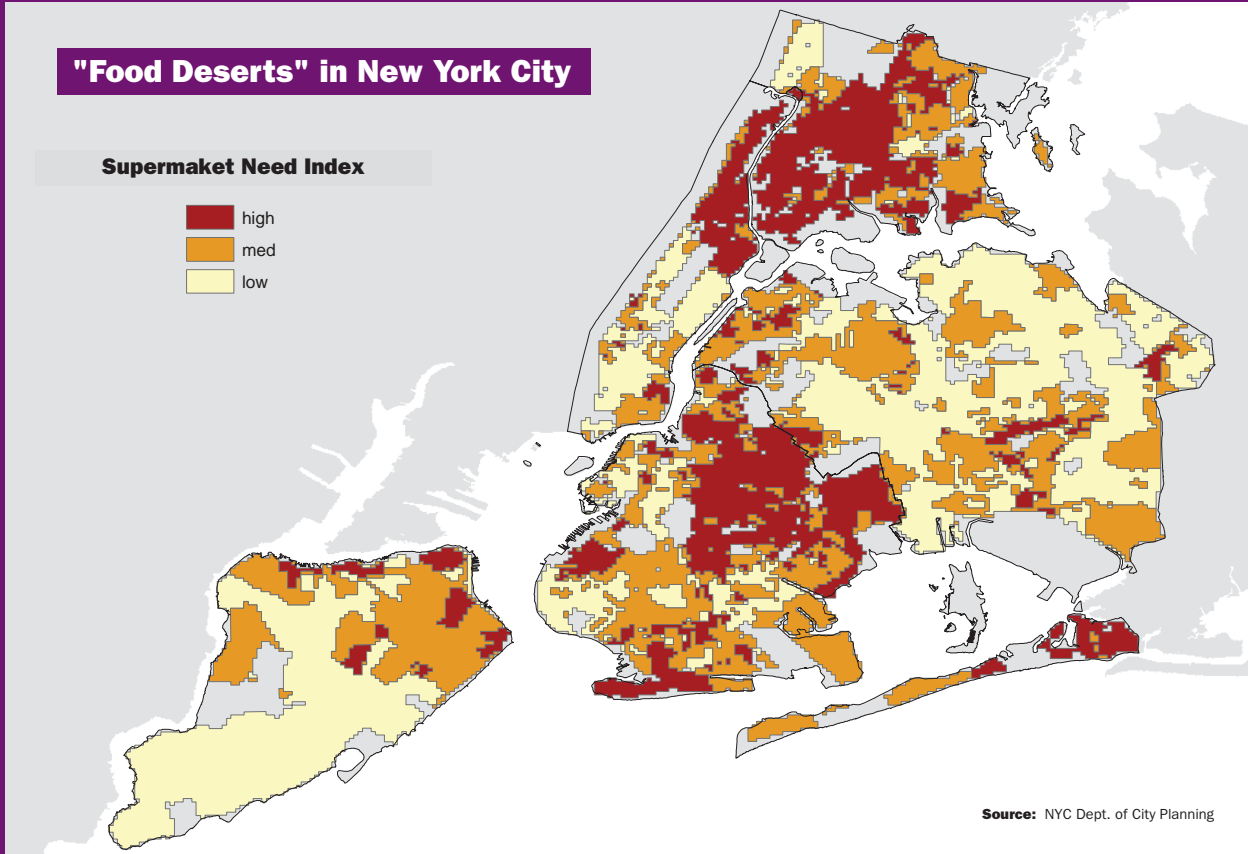
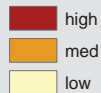
STRATEGY:

Expand fresh food retail in underserved areas of the city.

While millions of New Yorkers are without easy access to a grocery store, nearly all New Yorkers live near an unhealthy food outlet.¹⁵⁰ As a result, many of us do not consume adequate fruits and vegetables, are obese or overweight, and suffer from costly diet-related diseases. Additionally, New York City is losing as much as \$1 billion in grocery store sales each year to surrounding suburban areas due to a lack of stores in many neighborhoods.¹⁵¹ The City could gain as many as 100 new grocery stores to fulfill this need.¹⁵² With each new grocery store employee contributing \$2,800 to the city's tax base, the economic impact of additional grocery stores is considerable.¹⁵³ Through the Food Retail Expansion to Support Health (FRESH) program, the city is now directing

"Food Deserts" in New York City

Supermarket Need Index



Source: NYC Dept. of City Planning

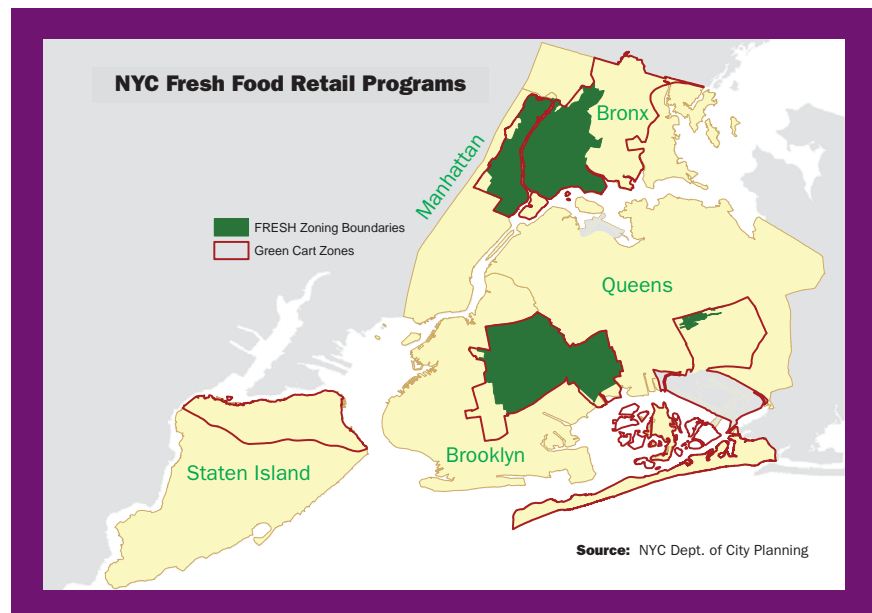
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financial and zoning incentives to the food retail industry to begin meeting this need. Given the size of the demand, the city should pursue other programs to increase fresh food venues in underserved neighborhoods. Additionally, New York State is now providing healthy food retail financing, which could be utilized within the city.

Proposals:

- **Aggressively market the FRESH Program.**

In 2007, the City Council partnered with the Food Trust in Philadelphia to identify "food deserts," or areas with a severe shortage of fresh food access. This work launched a broader effort in partnership with the Bloomberg Administration to form a Supermarket Commission whose goal was not only to identify food deserts, but also develop strategies



Source: NYC Dept. of City Planning

for eliminating them. The result was FRESH, the first program of its kind in the country. This program, launched last year, provides financial benefits and zoning incentives to

businesses that expand or create new grocery stores in targeted areas. The FRESH zones currently cover three areas in the city identified as the highest need based on health



outcomes and grocery store shortages: Jamaica, Central Brooklyn, and South Bronx/ Upper Manhattan. To date, three grocery stores have utilized the program, adding 63,000 square feet of additional grocery store space, providing 93 new jobs and retaining 90 existing jobs.¹⁵⁴ The City Council will continue to market FRESH to potential supermarkets to help them identify financial resources and assistance with energy efficiency programs that will encourage expansion into these underserved neighborhoods.

- **Support efforts to expand food co-operatives.**

Although grocery stores and large supermarkets provide a considerable amount of food to consumers, other models of retail are available. One of these, food co-operatives, has been gaining public support in several areas of the city. The longest running and perhaps most famous food co-operative in the city is the Park Slope Food Co-op in Brooklyn. This co-operative has been in existence since 1973 and now boasts over 12,000 members.¹⁵⁵ By the Park Slope Food Co-op's model, members must work at the store 2 hours and 45 minutes every four weeks.¹⁵⁶ Relying at least in part on member labor has allowed the Park Slope Food Co-op to keep their prices at a 20 to 40 percent discount



Photo Credit: William Alariste

for members. However, only members who maintain this level of service may shop there.

While this particular model of a food co-operative may not be desirable for all communities, there are nearly a dozen neighborhoods around the city with residents who are seeking assistance to begin their own co-operatives. As has been seen in the South Bronx and East New York, starting and maintaining a food co-operative can be extremely difficult. They face challenges in maintaining strong membership, finding space, and managing the flow of products. However, when they do succeed, they provide an important asset to their communities. The City Council will therefore be partnering with organizations and communities across the five boroughs to assess the feasibility of expanding co-ops, building community capacity, and launching new co-operatives.

- **Improve bodega infrastructure.**

In neighborhoods that lack grocery stores, consumers turn to other available outlets such as bodegas. While bodegas offer a convenient option for nearby residents, they do not frequently offer the types of fresh foods that support a healthy diet. Instead, they generally specialize in processed, shelf-stable food

products. The result is an over-reliance on nutritionally poor, calorie dense convenience foods. The New York City Department of Health and Mental Hygiene (DOHMH) has been offering valuable assistance to these bodegas to help them carry fresh, healthier options. This has included help with sourcing fresh foods, storing them, and merchandising them to appeal to customers. Additionally, through this program, bodegas have been able to obtain permits to place produce stands outside their stores.

Despite this helpful program, many bodega owners face structural challenges that prevent them from sourcing and stocking fresh food. These include distribution challenges and a lack of shelving, refrigeration, air conditioning, and awnings, all of which help extend the shelf life of fresh products. Bodegas are, by their nature, small independent businesses, which makes the upfront investment in these kinds of infrastructure out of reach. To assist these small business owners carry fresh products, the City Council will explore ways to provide infrastructural support. Additionally, by working with wholesale farmers, regional products can find a new retail outlet in these bodegas. Not only will this kind of investment and collaboration improve the food



Photo Credit: WallyG



environment for consumers, it will assist small business owners and the regional farming economy.

- **Improve the Green Cart program by expanding the electronic benefits transfer (EBT) service.**

In 2007, the City Council passed legislation creating a new street vendor program, the Green Cart Program. The program established a new license for vendor carts to sell fresh produce in designated areas of the city, identified as having a shortage of fresh food access and high levels of diet-related disease. To date, there are over 400 active Green Cart licenses citywide. Not only does the program help create a healthier food environment in these neighborhoods, but it has also created hundreds of jobs for independent retailers. Many of these retailers are immigrant New Yorkers who have been able to launch their own small enterprises.

The Green Cart Program has been growing over the past several years and, as with any new initiative, several opportunities for improvement

have been identified. Specifically, the Green Carts offer an excellent opportunity to expand utilization of SNAP benefits in their neighborhoods. Currently, some Green Carts are piloting EBT. Similar to the farmers' market program, increased revenue for the vendors and purchases of fresh produce by Supplemental Nutrition Assistance Program (SNAP) recipients is expected. Once this pilot has concluded, the city should identify ways to successfully support EBT on Green Carts citywide.

STRATEGY:

Better support food outlets that provide fresh and healthy foods.

In addition to expanding fresh food retail in underserved areas, we must support existing stores and other venues that provide healthy food. These can include existing grocery stores, co-operatives, farmers markets, community supported agriculture (CSA) drop-offs, pantries, senior centers, and many other types of food outlets. These outlets may prepare, sell, or donate food; or they may help families enroll in public programs, learn about healthy cooking, or even teach

children how to grow vegetables. Together, they serve as a positive influence on the city's food landscape and help make our food environment more supportive of healthy, sustainable outcomes. However, given the sheer size and density of the city, residents oftentimes don't know what lies in their own backyard. These outlets must be supported as assets in communities and marketed to residents.

Proposals:

- **Pilot a food retail workforce development program.**

Over 47,000 people work in the food retail sector today.¹⁵⁷ There was a time in New York City history, before the evolution of the modern supermarket, when food retail workers were full-time employees who could support a family on their income. While this remains true for some food retail workers, most are part-time and temporary workers, and the industry is characterized by high turnover. For store owners, training a revolving workforce can be a financial burden. For workers, there is reduced incentive to invest themselves in their work. Providing training to underemployed and unemployed people to create a pipeline into the industry and a career path for workers can begin to address some of these issues.

The City Council is partnering with the Hope Program to pilot a new food retail training program called GroceryWorks. The program is being designed with the input of the food retail industry, labor unions, and other experts to ensure that high quality training is provided and that program graduates will be placed in good jobs. In its first year, the program will train 100 unemployed people.¹⁵⁸ The initial investment of \$2,400 in the training and job placement of a former welfare recipient through this program will save taxpayers \$6,290 in the first year alone.¹⁵⁹ The training will focus on



Photo Credit: Karp Resources



the skills needed to maintain a high level of quality at stores, including safe food handling, sourcing good food, and merchandising.

- **Create neighborhood healthy food guides.**

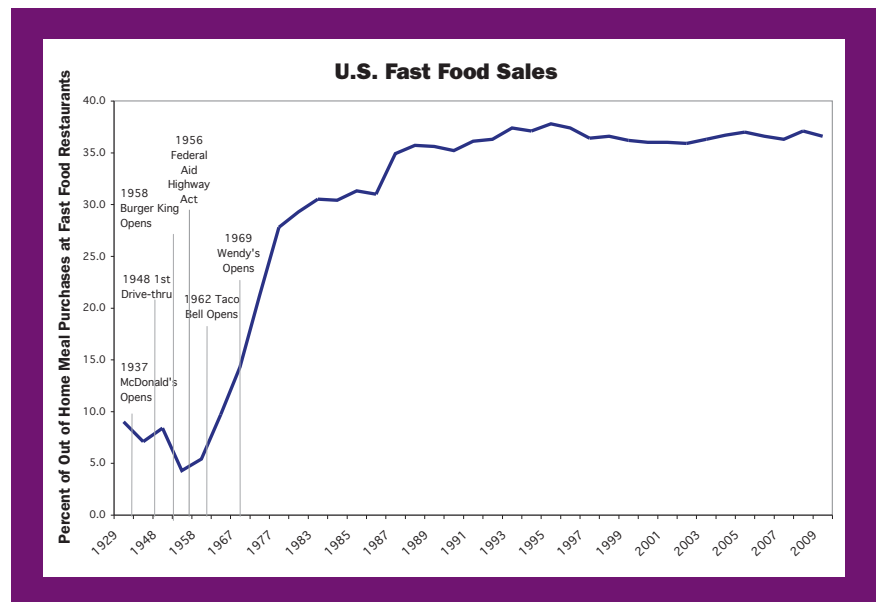
The city boasts hundreds of healthy food venues – from farmers markets to community gardens to local produce stands. However, locating all of these resources can be a daunting task. Additionally, for policymakers, performing a thorough assessment of a neighborhood's food environment can be difficult. Disparate organizations and city agencies gather and report on various components of the food landscape, but there is no centralized system to collect, analyze, and publicize all of this information.

The City University of New York (CUNY) has for several years managed a database of city information, collected into an online map. This includes transportation, zoning, and other key data. However, significant opportunity exists to utilize this information to map neighborhoods' food environments. A food map could draw on information from all of our community gardeners, urban farms, farmers markets, and CSAs. Additionally, it could also collect information on SNAP enrollment offices, emergency feeding programs, and supermarkets. From this expanded set of information, community boards and community organizations could assess their neighborhood food environments to advocate for key changes. As a result, neighborhood food guides could be produced and distributed to help market healthy food outlets to residents.

STRATEGY:

Discourage unhealthy food consumption.

The food environment observed in many neighborhoods is characterized by a higher concentration of



Source: USDA, ERS, Food CPI and Expenditures, Food Away from Home, 1929-2009

unhealthy food outlets compared to healthy food outlets. Just as the rise in obesity has occurred over the past several decades, the changing balance in our food environment has been a slow, steady progression. Reversing these trends and establishing a healthier balance of food options for New Yorkers will therefore require a long-term policy response. New York City has already become a national leader on public health policies to reduce unhealthy food consumption. These have included nutritional standards for public meal programs and vending machines on city property, calorie labeling on chain restaurant menus, and a ban on trans fat in food service establishments. Additionally, the DOHMH has launched aggressive campaigns against soft drink and salt consumption. Together, these policies are a compelling effort to encourage healthier eating habits. However, they do not address the very real problem of what choices New Yorkers face in their neighborhoods every day. Not only will restoring a healthy food environment require encouraging good options, but it will also require addressing the overabundance of unhealthy food options.

Proposal:

- **Discourage consumption of fast food.**

There are over 24,000 food service establishments in New York City,¹⁶⁰ ranging from Italian restaurants on Arthur Avenue in the Bronx to Sri Lankan restaurants on Staten Island's North Shore. The diversity of food options is unmatched by any other city in the U.S. The sheer number of choices and the convenience of having food anytime, anywhere, is part of the fabric of New York City life. However, in the midst of this vibrant restaurant scene there are real and widespread faults.

Over the last three decades, there has been a staggering rise in the prevalence of fast food establishments.¹⁶¹ In 1970, Americans spent about \$6 billion on fast food.¹⁶² In 2000 they spent more than \$110 billion.¹⁶³ While they offer consumers convenient and relatively inexpensive meals, there is also a high long-term cost. As New Yorkers eat more meals outside of the home, our overall caloric intake has increased.¹⁶⁴ The pervasiveness of fast food establishments and the consumption of fast food, in particular, have been associated with higher incidence of obesity, weight gain, and increased waist circumference.¹⁶⁵



Large chain fast food establishments have particularly troubling effects. They market their foods directly to children through the use of toys, mascots, and advertising during youth television programming, and cluster their establishments near schools.¹⁶⁶ The effects of these business practices are now seen in the high rates of children who are overweight and obese.¹⁶⁷ Specifically, children who attend schools within walking distance of fast food establishments have significantly higher weight and body mass index.¹⁶⁸ The combination of targeted marketing, proximity, and low price have proven attractive to the youth market, who now have an obesity rate of 40 percent.¹⁶⁹

Other cities have attempted to limit fast food establishments with various policies. Los Angeles placed a moratorium on all new fast food establishments in part of the city.¹⁷⁰ San Francisco recently voted to prevent toys from being given out with unhealthy menu items.¹⁷¹ London is pursuing land use policies to limit fast food establishments near schools.¹⁷² The City Council will review best practices nationally and internationally to discourage the consumption of fast food, and create more opportunities for healthy food service in neighborhoods around the city. By identifying effective strategies to restore a healthier food environment in all neighborhoods, we hope to reverse some of the trend toward obesity and higher rates of diet-related disease.

GOAL 8

Strengthen the safety net of hunger and nutrition programs.

New York City provides a safety net of various food and nutrition programs for New Yorkers who lack the financial resources to purchase enough food. This safety net

became critical for thousands more New Yorkers in the most recent recession, as unemployment peaked near 10 percent. The reach and quality of these programs has had a widespread impact on New Yorkers' ability to maintain a good diet and improve their health outcomes. Currently, 1.75 million New Yorkers receive SNAP benefits each month, a program administered by the city's Human Resources Administration (HRA).¹⁷³ Yet barriers to enrollment prevent many more eligible people from using these benefits. Additionally, the federal Special Supplemental Nutrition Program for Women, Infants and Children (WIC) is a proven means to reducing food insecurity and improving the health outcomes of children.

Many children and adults also receive meals from schools and other institutions, but utilization of some of these programs could be improved. Lastly, approximately 1.3 million New Yorkers, many of them children and seniors, rely on emergency food programs.¹⁷⁴ While these non-profit organizations provide a much-needed service to hungry New Yorkers, they themselves often struggle to acquire the healthy food that hungry families need. Many of them run out of food before adequately meeting demand.¹⁷⁵ Strengthening this safety net of programs is therefore vital to improving food consumption in New York and the quality of life for over a million residents. **To improve these programs, the City Council will pursue a strategy of improving federal food programs and removing local barriers to enrollment.**

STRATEGY:

Improve federal food programs and remove local barriers to enrollment.

The combination of federal, state, and local food and nutrition programs provides a broad safety net for food insecure residents.

However, for many individuals and families, these benefits do not run deep enough to last a whole month or to pull them out of food insecurity. Additionally, our local public meal programs struggle to improve their food quality and extend their reach because reimbursement rates for individual meals do not take into account the high cost of service delivery in New York. The proposals below will be a key step in addressing food insecurity through enhanced benefits for individuals and improved meal programs provided by institutions.

Despite the breadth of our public safety net, many New Yorkers still do not take advantage of the benefits for which they are eligible. As might be expected, the fewer barriers to enrollment in public nutrition programs, the higher the enrollment of eligible consumers.¹⁷⁶ All New Yorkers juggle multiple, competing responsibilities. For low-income New Yorkers, the task of meeting all of these obligations can be overwhelming as they balance child care, employment, and appointments to receive benefits. In fact, most people on SNAP work at least part-time and have children. For them, having the time to learn about and apply for public benefits can be a difficult task under our current system. There are several key improvements that can be made to the administration of benefits programs to remove barriers to enrollment and improve food security.

Despite the critical role of state and federal policies in addressing hunger, there are also multiple things the city can do to improve utilization of the programs and benefits available now. We must remove barriers to enrollment, better coordinate the programs we have, and aggressively market our programs to needy New Yorkers. Drawing down these additional federal benefits will not only help us address food insecurity in our city, it will provide a critical



NYC School Food by the Numbers

School Food Budget	\$143,533,088
Students	1,000,000
Meals Served Daily	860,000
Schools	1,500
Salad Bars	586
Students Eligible for Free & Reduced Price Lunch	75%

Source: Budget of the City of New York and NYC Dept. of Education

economic stimulus as we increase the purchasing power of consumers without increasing local costs.

Proposals:

- **Strengthen the federal Child Nutrition Act to improve school meals.**

The Child Nutrition Act governs many of our public food programs, including school lunches, school breakfast, summer meals for children, the child and adult care feeding program, and the WIC program. This legislation was originally passed over 40 years ago and is updated approximately every five years. It determines how much federal funding New York City agencies receive for the meals they serve, the nutritional standards for those meals, and who is eligible to receive them. The Council and a local coalition of organizations have advocated for key changes to this law to improve the programs' impact. These changes include higher reimbursement rates to allow city agencies to improve the quality of foods served and streamlined eligibility determination and enrollment to help more New Yorkers get the meals they need. Although some of these changes are likely to be incorporated into the new legislation this year, paying for them might come at the cost of other vital programs, such as SNAP-education. The City Council and our

partner organizations will continue to advocate for a stronger Child Nutrition Act now and for the future and to make sure food and nutrition benefits for low income New Yorkers are not reduced in one program to serve another.

- **Improve the Supplemental Nutrition Assistance Program (SNAP).**

1) Increase federal benefit amounts to reflect higher costs of living.

Federal legislation also governs SNAP income eligibility standards and provides funding for the benefits people use to purchase groceries. However, states and cities are left with the task and cost of administering this program. Unfortunately for New York City, the way in which eligibility is determined and the amount of benefits offered to families is not sufficient for an adequate, healthy diet. In New York City, over 27 percent of children live below the federally-defined poverty line, much higher than the national rate.¹⁷⁷ Additionally, the cost of living in New York City is higher than the national average, but SNAP benefits do not reflect these costs. Our soup kitchens and food pantries often see a surge in demand at the end of the month as families see their SNAP benefits dwindling. In recognition of this problem and the increased pressure on our safety net programs

during the recession, Congress made some changes to funding levels through the American Recovery and Reinvestment Act. These included an increase in the amount of SNAP benefits people can receive and federal funding for emergency feeding programs. As a result, many emergency feeding programs were better able to meet demand.¹⁷⁸ The City Council will continue to advocate for increased federal funding for these programs to ensure that we have the resources to adequately combat hunger in neighborhoods across the five boroughs.

2) End finger imaging for SNAP applicants.

New York City is one of only four jurisdictions in the country that requires finger imaging of SNAP applicants. In total, almost 100,000 New Yorkers were required to provide finger prints over the past year solely in order to receive SNAP benefits for them and their families.¹⁷⁹ Proponents of this policy argue it saves the city valuable resources because it reduces fraud in the system. Yet no compelling evidence of this has been demonstrated to date. On the contrary, evidence exists that the policy costs the city greatly and deters eligible, food insecure, New Yorkers from receiving the federally-funded benefits they need.¹⁸⁰

In 2006, the Mayor's Commission on Economic Opportunity estimated as many as 28 percent of eligible New Yorkers were not enrolled in SNAP.¹⁸¹ Using our current enrollment¹⁸² as a baseline, nearly 500,000 New Yorkers are eligible but not enrolled in SNAP. This is in alignment with other citywide estimates that range from 500,000 to almost 800,000 people.¹⁸³ According to some research, finger imaging has a direct deterrent effect on recipients, which indicates as many as 29,500 New Yorkers likely do not receive SNAP because of the finger imaging requirement.¹⁸⁴



The potential benefits of this policy have not been demonstrated and do not support its persistence. Finger imaging only captures one type of potential fraud—the attempt by someone to open more than one benefit case. Officials on both the state and federal levels have testified that finger imaging does not increase programmatic integrity or reduce fraud.¹⁸⁵

Even by HRA's own estimates, there have been relatively few duplicate cases, only 0.35 percent of cases in 2008 of all 278,225 new cases were duplicates.¹⁸⁶ Moreover, whether these cases were due to agency administrative error is unclear. To date, no penalties have been pursued for any of these cases and other methods for identifying duplicate cases have not been attempted. Additionally, officials both in New York State and the USDA have recognized that finger imaging deters eligible low income people from receiving SNAP benefits.¹⁸⁷

The direct and indirect costs of the policy are considerable and support its elimination. Direct costs include finger imaging machinery and staff time to handle in-person appointments by applicants. New York State eliminated the finger imaging requirement for SNAP applicants, but provided an exception to New York City to continue the policy. This exception was provided on the condition that the city would provide additional locations and hours for SNAP applicants to reduce the burden on applicants. These additional hours and locations also have an associated direct cost to the city, although they have not yet been consistently or publicly quantified. To date, estimates of these direct costs by HRA have ranged from \$150,000 to over \$900,000 annually.¹⁸⁸

There are also large costs to the city due to this policy. Each of these estimated 29,500 low income people would receive an average federal benefit of \$153.59 monthly, or \$1,843 annually.¹⁸⁹ The city is therefore losing \$54.4 million each year in foregone federal

benefits. Because these benefits are spent in scores of local businesses and markets, there is also an indirect economic loss as a result of this policy. Additionally, as these New Yorkers are not able to afford fresh food, they rely on our emergency feeding programs that already struggle to meet demand. For all these reasons the policy should be immediately eliminated.

3) Continue SNAP outreach through agency data matches and grocery stores.

Even if the city eliminates the finger imaging requirement for receiving SNAP benefits, there are thousands of New Yorkers who may not even know they are eligible or why they should apply. WIC is an even smaller program in the city, but one that has been shown to measurably improve the health and well-being of mothers and their children. To support these programs and healthier outcomes, the city must continue to improve its outreach efforts.

One recently successful project targeted outreach to people enrolled in Medicaid, but not in SNAP. Because the program requirements are similar, those who are enrolled in Medicaid are also likely eligible to receive SNAP. However, the databases that organize the caseloads for these two programs are separately administered. By matching the two databases, HRA was able to identify approximately 650,000 New Yorkers enrolled in Medicaid but not in SNAP.¹⁹⁰ Identifying these New Yorkers and targeting outreach to them resulted in 51,000 new SNAP beneficiaries.¹⁹¹ This type of common sense approach to administering benefit programs and conducting outreach to eligible New Yorkers should become a routine practice.

Even though targeted outreach has proven successful in improving utilization of government programs, broad-based outreach in communi-

ties is also needed. Only with this approach can we reach people with limited English proficiency or those who have no experience with public programs. The City Council is therefore partnering with grocery stores around the city to conduct outreach to more New Yorkers who may be eligible for WIC and SNAP.

• Improve the WIC program.

1) Enact federal legislative changes to the WIC program.

The WIC program was created nearly 30 years ago with the goal of improving the health of low income pregnant women, new mothers, infants, and children up to age five.¹⁹² Through the program, women receive vouchers for formula and certain types of food for themselves and their children. They also receive nutrition counseling. Evaluation of the program has demonstrated lower Medicaid costs for recipients, longer gestation periods, higher birth weights, and reduced infant mortality.¹⁹³ Forty five percent of infants born in the United States receive WIC assistance.¹⁹⁴ The program is therefore a key strategy for addressing food insecurity and related health issues among low-income women and their children.

Despite the program's clear benefits, it does not have the depth of impact for all needy mothers and children because of federal recertification requirements. Currently, children must be recertified every six months, which requires a doctor's examination. The City Council has and will continue to advocate for a federal change to extend this recertification period from six months to one year. Doing so will remove a significant burden on low-income mothers.

2) Help WIC vendors by translating the vendor book into multiple languages.



Not only does WIC help mothers and their children, it also provides a benefit to local food retailers by establishing a customer base and revenue stream. In New York City, there are more than 2,000 businesses who accept WIC vouchers for food purchases.¹⁹⁵ To become a WIC vendor, a local business must meet very specific stocking requirements of WIC program-approved foods. Local retailers who are approved WIC vendors are subject to inspections and, if they are found in violation of the program rules, they could be issued fines.

Ensuring vendors are in adequate supply in New York City is necessary to the success of the WIC program. They must be readily accessible to women who need to redeem their vouchers for food and formula. The New York State Department of Health (NYSDOH) publishes a handbook to assist vendors in meeting all program requirements.

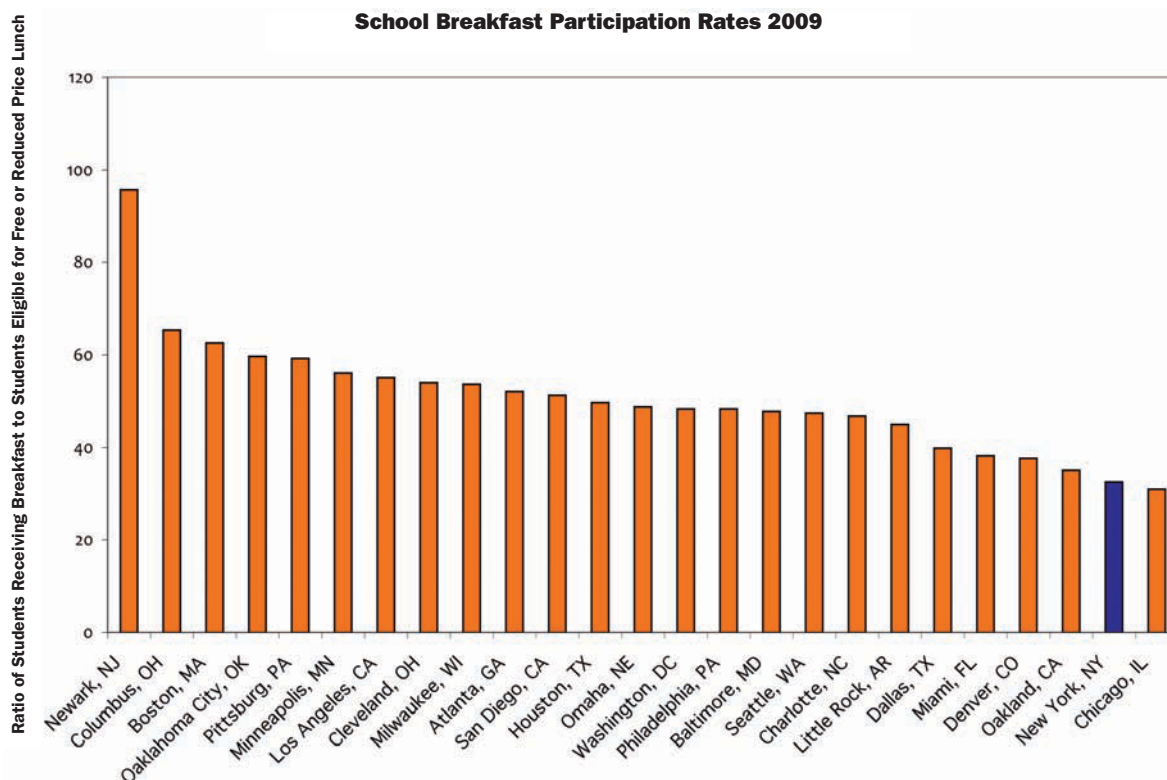
Unfortunately, many vendors and potential vendors in New York City still are not fully able to take advantage of this handbook because, to date, it has only been provided in English. At the urging of the New York City Council, the NYSDOH has committed to translating this book into multiple languages and to revising its website for vendors to be more accessible. Not only will this ensure a supply of WIC vendors for women in communities citywide, it will help our local stores take advantage of another resource to support their business.

- **Mandate breakfast in the classroom for high-need schools.**

The New York City Department of Education (DOE) administers two key programs that provide food to children: summer meals and school breakfast. During the school year, the DOE serves 860,000 meals each

day. Citywide, approximately 75 percent of public school children are eligible for free and reduced price lunch under federal definitions.¹⁹⁶

Breakfast in schools is not nearly as well utilized as the lunch program, despite its clear benefits to children. Participation in the school breakfast program in New York City is extremely low when compared to other cities. Only approximately 29 percent of children eligible for free and reduced price lunch receive breakfast.¹⁹⁷ Right across the Hudson in Newark, New Jersey, almost 94 percent of students participate.¹⁹⁸ In fact, New York City ranked second to last in a survey of urban school districts' school breakfast participation.¹⁹⁹ Children receiving school breakfast perform better throughout the day, are able to maintain their attention, and have fewer disciplinary issues.²⁰⁰ Moreover, schools providing breakfast have reported



Source: Food Research and Action Center. "School Breakfast in America's Big Cities." December 2009



fewer issues with attendance.²⁰¹ Breakfast for students lives up to its reputation as the most important meal of the day.

Currently, the DOE does not require school principals or teachers to serve breakfast in the classroom to students. Unlike school lunch, breakfast is served at the discretion of the principals, regardless of student need. For many students, the city will not bear the cost of providing breakfast because it is funded through the federal Child Nutrition Act. The cost of breakfast for lower-income students, those who need meal assistance the most, is reimbursed at a set rate. The DOE should therefore take full advantage of this program and mandate breakfast in the classroom in schools that have a high portion of low-income students.

- **Improve the summer meal program.**

Similar to school breakfast, the city's summer meal program for students is underutilized. Summer meal programs are more difficult to administer than school lunches because many students are not attending classes and are difficult to reach. In New York City, the summer meal program is administered by a network of providers, including summer school sites, recreation centers, summer camps, and community-based organizations. Last year, 300 schools, 82 NYCHA sites, and 100 public parks and pools provided summer meals throughout the five boroughs.²⁰² However, compared to utilization of school meals during the academic year, utilization at these sites was low. Schools serve over 860,000 meals each day during the school year.²⁰³ More than 720,000 are to low income students eligible for free and reduced price lunch.²⁰⁴ However, this past summer, approximately 160,000 meals were served daily.²⁰⁵

While it is likely not feasible to reach all of these children during the summer, improvements to the summer meal program can be made to increase participation. The DOE has advertised the program on subways and bus stops and has partnered with the City Council to conduct outreach to increase participation. Yet there are several additional steps that can be taken to reach more students.

- 1) Establish a process to make sure summer meal sites are identified earlier and outreach has begun in advance of summer recess.**

One barrier to adequately publicizing summer meal sites each year is the late publication of the site addresses by the DOE. Although Council Members, the DOE, and community organizations have consistently conducted outreach in past years to attract more participants, it has been undermined because the list of sites is typically not available until June. The DOE should establish a protocol for identifying these sites earlier, including those that are collocated with summer schools, to support more effective outreach efforts.

- 2) Identify and expand on high-utilization sites.**

Free summer meals are provided to school-aged children at several different types of sites: New York City Housing Authority (NYCHA), parks, pools, recreation centers, community organizations, faith-based organizations, and schools. Additionally, a new mobile meal van was piloted just this past summer. Because utilization overall is low across this population of sites and because some types of sites have higher utilization than others, the DOE should identify which types of sites are more popular and expand them to other neighborhoods.

- 3) Produce a list of nearby summer meal sites for parents receiving SNAP or TANF with children.**

While utilization of free and reduced price lunch during the school year is relatively high, summer meals represent only approximately 19 percent of the number of meals students receive during the year.²⁰⁶ This begs the question of where these children are eating during the summer months and whether they are adequately receiving the nourishment they need. Because most of these children are in households that are eligible for SNAP or Temporary Assistance for Needy Families (TANF), the city should target outreach to these parents so they are aware of the program and where they can bring their children to receive summer meals.

GOAL 9

Improve the nutrition of institutional meals.

In an effort to reduce obesity and improve other health outcomes, New York City instituted new nutrition standards for meals served by its agencies. These nutrition standards exceed federal standards for meal programs like school lunches. The standards for meals require City agencies to serve low-calorie beverages like skim or 1 percent milk, eliminate deep frying, include two servings of fruits and vegetables in every lunch and dinner, lower salt content and ensure adequate fiber in meals.²⁰⁷ Furthermore, juices must be 100 percent fruit juice and all food purchased and served must not contain trans fat.²⁰⁸ The Mayor's Office and DOHMH have worked with several city agencies to improve the nutritional quality of institutional meals and ensure they comply with new nutrition standards. While the reach and ambition of this project are impressive, there are structural challenges to improving the



Photo Credit: William Alatraste

quality of institutional meal programs that the city should make a long-term goal for addressing. **The City Council's strategy for improving the nutrition of institutional meals will be to expand the capacity of city agencies to cook whole foods through infrastructural improvements.**

STRATEGY:

Expand the capacity of city agencies to cook whole foods for nutritious meals.

City meals sites, like schools and hospitals that serve a high volume of meals, face infrastructural issues and a shortage of trained staff to prepare whole foods. The DOE has already committed some new staff and resources over the past several years to improve the quality of the meals they serve students. They hired a culinary director and established a new program to test and plan new meals. However, many of their kitchens are not conducive to cooking whole foods. They lack updated equipment and systems required for the safe, efficient, handling of raw ingredients. Of the approximately 1,500 public schools citywide, some of which share buildings, only 300 of them are able to cook meals

from scratch.²⁰⁹ Some of the remaining schools are not able to prepare whole foods for meals because they lack a kitchen. Additionally, many public hospitals also lack the ability to cook whole meals on-site. Partly due to financial constraints, hospitals centralized their food preparation and have meals distributed and reheated on-site.

PROPOSALS:

- **Agency kitchen capital investment and staff training.**

Having a fully equipped and staffed kitchen in every school or hospital is not practical in the short-term. However, investment in the institutions that are ready and able to begin cooking whole foods should be pursued in the coming years. Additionally, for those institutions, there must be an investment in staff training. In this way, the city can begin to transform the types of meals it serves to millions of school children, patients, seniors, and other New Yorkers every day. The city should therefore commit to long-term infrastructural improvement in sites that serve a high volume of meals.

- **Expand salad bars in schools.**

Currently, 586 of the 1,500 public schools across the city have salad bars in their cafeterias.²¹⁰ These salad bars have been a successful means for increasing children's access to fresh, healthy foods, and also for increasing their consumption of fresh produce. Because children are able to select their salad ingredients, these salad bars have been popular among children of all ages. Moreover, these salad bars have the potential to bring regional produce in season to the school food program. The city should therefore aggressively expand this program to as many schools as possible in the coming years.

GOAL 10

Increase quantity and quality of opportunities for food, nutrition and cooking knowledge.

Along with a healthier food environment and meal options, consumers must also be equipped with

knowledge to make choices about what to eat. Currently, education about food, nutrition, and cooking is delivered in a variety of settings. New and expecting mothers receive nutrition education through the Supplemental Nutrition Program for Women, Infants, and Children (WIC). Young children receive education about where food comes from and what to eat from countless innovative programs. Additionally, thousands of Supplemental Nutrition Assistance Program (SNAP) recipients receive nutrition education through the Food Bank for New York City's Cookshop program and the Cornell Cooperative Extension, both programs funded by the federal SNAP-Education program. While these programs have grown in recent years and offer valuable services, they are not enough to confront the loss

of food knowledge over the past several decades. Better coordination among these programs and expanding other innovative, successful models of education will help restore some of this knowledge to New Yorkers. For example, school garden programs nationally and within the city have demonstrated immense promise in connecting children to their food and encouraging consumption of fresh, healthy foods.²¹¹ The city should assess the various services currently available through SNAP-Education and other programs, their target audience, and their effectiveness to improve nutrition and health outcomes. **As a first step toward achieving the goal of improving opportunities for nutrition education, the City Council will work to maximize our existing SNAP-Education program.**

Proposal:

- **Maximize SNAP-Education funding.**

As a compliment to the SNAP program, the federal government provides funding for a program called SNAP-Education with the goal of increasing the likelihood that SNAP recipients will make healthy food choices with their benefits. Activities target both potentially eligible and current SNAP recipients. Each year, state SNAP agencies must submit a plan for utilizing this federal funding for nutrition education programming. The programs must target behavior and be scientifically-based. To maximize the effects of this important federal program, local organizations and agencies should partner with state officials to conduct a review of the program, identify best practices, and explore future opportunities for the program.





Post Consumption





Post Consumption

Post-consumption is the phase of the food system that manages the by-products of all other food system phases, such as food scraps and used cooking oil, water from washing and other processing, and packaging materials. Approximately one-fifth of the city's waste stream is organic matter from food scraps. Another 36 percent of the waste stream is recyclable materials, such as food packaging. Some waste is recycled and a very small portion is composted. Most of the by-products generated by New York City's food system are sent to a landfill or incinerator.



POST- CONSUMPTION

As the largest city in the country, New York City produces an immense amount of waste. We each produce an average of 5.15 pounds of garbage every day, or approximately 1,880 pounds each year.²¹² In a city expected to reach 9 million residents in the next 20 years, the problem of what to do with all of this waste is staggering. Our Department of Sanitation spends nearly \$530 million each year collecting materials in the municipal waste stream.²¹³ For decades, the city avoided higher sanitation costs by unfairly placing much of the burden of handling our waste stream on the residents of Staten Island. But since the long overdue closure of the Fresh Kills Landfill in 2001, costs have increased as we have exported more of our waste. For example, in 1999, the City spent \$110 million dollars on waste disposal.²¹⁴ This year, the City will spend almost three times that amount, \$310 million, to export our waste to landfills and facilities in other jurisdictions.²¹⁵

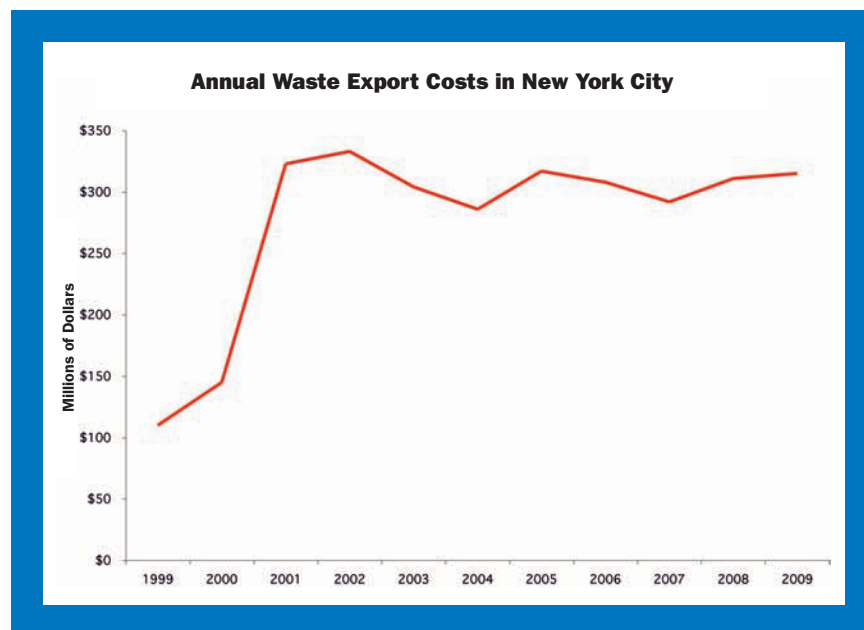
A considerable portion of our waste stream comes from waste generated by the food system.²¹⁶ At each phase in the food system, there are different types of by-products that enter the

residential, commercial and institutional waste stream. For example, agricultural production in the city generates organic waste resulting from planting, trimming, weeding, and other growing activities. In addition, there are ancillary by-products

like used containers, packaging on soil, and water run-off. In processing, waste is generated from washing, packaging, and preparing foods. Distribution of food requires additional packaging and produces waste as some food perishes before reaching its destination. Even after reaching consumers, as much as 27 percent of food is discarded before consumption.²¹⁷ As consumers, we also generate waste in the form of discarded food scraps and packaging.

The consequences of the waste we generate from food consumption are not limited to the city's budget – they also impact our health and environment. Waste disposal practices, particularly involving food waste, cause significant impacts on greenhouse gas (GHG) emissions and therefore climate change, and truck traffic associated with waste hauling negatively impacts air quality in certain neighborhoods. Despite the significant effort put towards recycling, roughly 84 percent of our residential waste is sent to landfills

Source: NYC Dept. of Sanitation



POST- CONSUMPTION

GOAL 11: *Decrease waste throughout the food system.*

STRATEGY: *Improve the net environmental impact associated with food procured by city agencies and institutions.*

Proposals:

- Reduce packaging on food procured by city agencies.
- Identify alternatives to polystyrene foam in city food programs.
- Discourage bottled water consumption.

GOAL 12: *Increase resource recapture in the food system.*

STRATEGY: *Increase residential, commercial, and governmental composting.*

Proposals:

- Establish a voluntary household composting program.
- Explore citywide composting of food waste.

STRATEGY: *Increase recycling of waste related to food processing and packaging.*

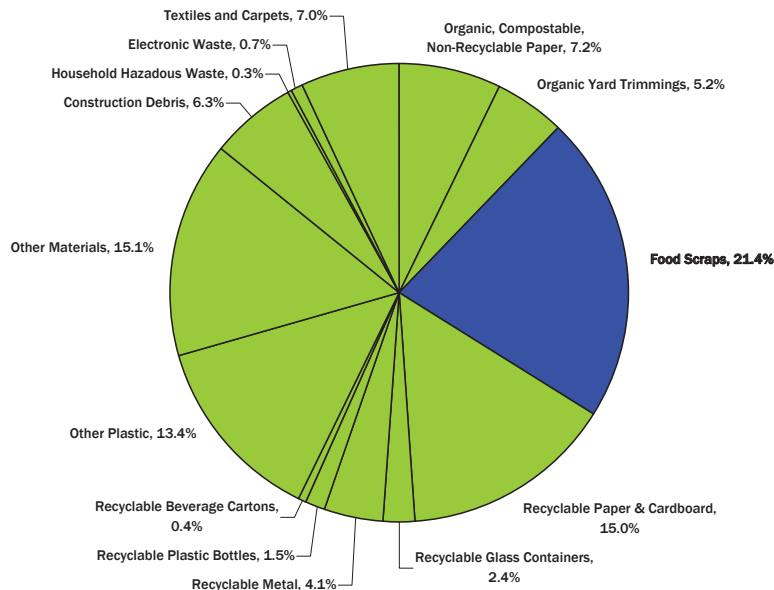
Proposals:

- Encourage restaurant grease recycling.
- Increase citywide recycling of food-related packaging.



Source: NYC Dept. of Sanitation. Bureau of Waste Prevention, Reuse and Recycling

Composition of Residential Waste in New York City 2004 - 2005



or incineration facilities.²¹⁸ Much of this waste is comprised of organic material, such as food scraps, that break down and produce methane.²¹⁹ Methane is 23 times more potent than CO₂ and methane specifically resulting from landfills represents 1.8 percent of GHG emissions nationally.²²⁰ Similarly, municipal solid waste comprises 3.8 of New York's statewide GHG emissions, which is second only to fuel consumption as a single-source of emissions.²²¹

The decisions institutions and consumers make about what we buy can have a great effect on these trends over time. Over the 20 years since New York City began its recycling program, our diversion of recyclable materials has increased measurably.²²² But despite the success of our residential recycling program during that time, the composition of the city's waste stream has changed. A comparison of the waste stream from 1990 to 2004 reveals that we discard more plastics, particularly those that are not currently recyclable in the City, while materials like glass and metal, which are more easily recycled, have decreased.²²³

This fact demonstrates that the composition of the waste stream is not dictated solely by our individual consumption patterns, but also by the decisions made by product and packaging manufacturers in the private sector. Our plan below therefore includes a series of proposals to change institutional, private sector, and individual practices to decrease waste throughout the food system and increase recapture of the system's by-products as a resource.

GOAL 11

Decrease waste throughout the food system.

To reduce the costs and environmental impacts of handling food system waste, we must decrease the amount of waste we generate upstream. By making choices about what we purchase, how we use it, and what we discard, we can begin to decrease the volume and weight of our waste. However, doing so will require changes to our government purchases, better decision-

Post Consumption



making by private sector producers and distributors, and encouraging better consumer choice. **Our main strategy for reducing food system waste upstream will be to improve the environmental impact associated with agencies' and institutions' food procurement.**

STRATEGY:

Improve the net environmental impact associated with food procured by city agencies and institutions.

Just as the city has immense power to affect the regional food system through its purchasing policies, it can, through various policy changes, significantly reduce the waste stream. The city procures significant amounts of food and beverages for meal programs, vending machines, events, and other venues. Over the past 20 years, the city has made significant strides toward diverting recyclable materials in the waste stream. To further these efforts, the city should also reduce its impact upstream by reducing its use of packaging overall, while also transitioning away from materials like polystyrene foam that cannot be easily recycled and toward recyclable and reusable materials.

Proposals:

- **Reduce packaging on food procured by city agencies.**

The City Council will be introducing legislation requiring the Mayor to establish guidelines for city agencies to reduce packaging for the food they procure. The guidelines will outline preferred methods businesses may use to package their products. Companies will be encouraged to follow these guidelines, and those that consistently comply will be recognized. The City Council will also introduce a resolution calling on the state to authorize us to regulate the amount and type of material used to package goods that the city purchases.



- **Identify alternatives to polystyrene foam in city food programs.**

Reducing the city's impact on the waste stream will also require gradual elimination of non-recyclable materials. One material that is very difficult to recycle is polystyrene foam, also known as Styrofoam.²²⁴ This foam material is lightweight, but still contributes approximately 16,500 tons of waste to the city's waste stream annually.²²⁵ Currently, the city is a large consumer of polystyrene due to

the New York City Department of Education's (DOE) school lunch program, which serves meals on polystyrene trays. Each day, the school meal program uses 830,000 of these polystyrene trays.²²⁶ As one parent organization contends, if you stack all of these trays they would be 8 times the height of the Empire State Building.²²⁷ The DOE has taken steps to eliminate these trays one day per week, on "Trayless Tuesdays," instead using a paper-based product. There are several challenges that prevent broader elimina-

tion of polystyrene trays. They tend to be less expensive than available alternatives and the paper products used for Trayless Tuesdays are not conducive to serving different types of foods. Working with the DOE and the Pratt Institute for Design, the City Council will launch a design challenge for students nationally to create an alternative to the DOE's polystyrene trays. The challenge will include material, design, and cost parameters to encourage viable alternatives.

- **Discourage bottled water consumption.**

Over the past decade, consumption of bottled water nationally has increased ten-fold from 3 billion bottles annually in 1997 to 31 billion as of just a few years ago.²²⁸ Even though many plastic water bottles are recyclable, significant resources are needed to manufacture, transport and dispose of or recycle those plastic bottles. By switching from disposable single-use bottles to reusable drinking containers, consumers can significantly decrease our solid waste stream. In an effort to lead by example, the City Council stopped purchasing bottled water for its central offices and events in 2008. To further discourage unnecessary reliance on single-use bottled water consumption, the City Council has passed new legislation to change a section of the city's Building Code requiring building owners to provide potable water. The new law also discourages the reliance on bottled water by eliminating bottled water as a permissible option to satisfy the water availability requirements. Additionally, the legislation requires new water fountains installed as part of this requirement to be designed to allow for the use of reusable water containers. Since the city operates and maintains water fountains in parks and other outdoor public areas, we should encourage the installation of similarly designed drinking fountains at city water fountains. Together, these new policies will encourage broader transition from consuming bottled water to reusable water bottles.



Collage Illustration by Omany Luna





Source: Photo Credit: Mandi Nadel

GOAL 12

Increase resource recapture in the food system.

Much of our food system can now be categorized as an open system, with byproducts at each phase being diverted to various waste streams. Our goal is to close this system where possible and treat these byproducts as resources to be reinvested. Packaging, whether plastic, paper, glass, or metal, used in the processing and transport of food can be recycled and reused as other materials. Additionally, organic scraps from growing, manufacturing, household cooking, and institutional kitchens, can be recaptured for composting and reused as inputs into the production of food. The advent of new technologies is helping to close this system nationally, and we must continue to explore their adoption here. **The strategies listed outline our plan to increase resource capture by expanding composting, ensuring that more of the materials we consume are recyclable, and recycling as much of these materials as possible.**



STRATEGY: Increase residential, commercial, and governmental composting.

The city currently disposes of approximately 3.3 million tons of residential waste per year, 21 percent of which is food scraps.²²⁹ This represents a larger portion of the overall waste stream than all designated recyclable metals, glass, and plastics and non-recyclable plastics combined.²³⁰ Additionally, the commercial waste stream is an estimated 3.2 million tons each year, 18 percent of which is food waste.²³¹ Currently, very little of this organic matter is collected for composting, although some not-for-profit organizations, individual households, and commercial carters

are working to increase composting. The following initiatives intend to build on and support those efforts.

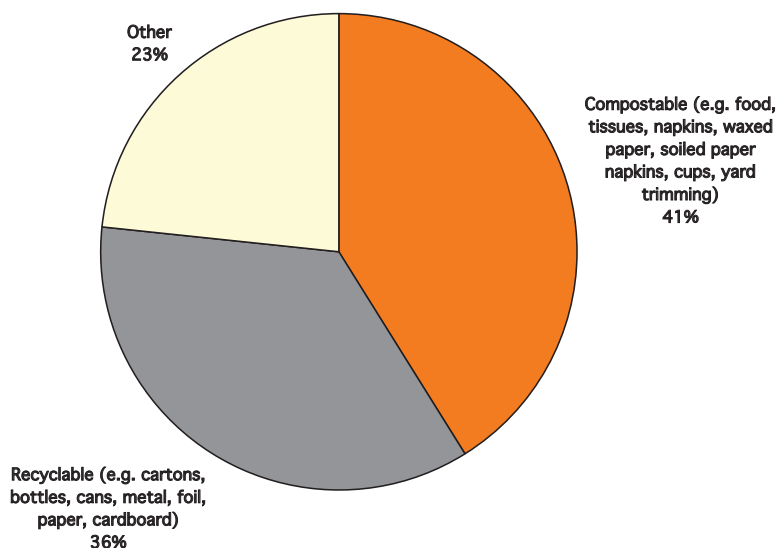
- **Establish a voluntary household composting program.**

Through grassroots efforts, a few farmers markets in the city accept compost hand-delivered by residents who source separate at home. The largest of these programs occurs at the Union Square Farmers Market with the assistance of the Lower East Side Ecology Center. This program accepts approximately 12,000 pounds each week, or 312 tons each year. While an admirable program, this represents only approximately .04 percent of all residential compostable materials. Due to the popularity of this program, the City Council will be expanding it in partnership with Green Markets to three additional farmers markets throughout the city. In the first year, the program will increase household composting by 225 tons. While still a small portion of the potential waste stream, the program capitalizes on the support for composting in the city and, where possible, immediately begins to implement new programs. By recapturing these source-separated organic materials, we are also diverting this byproduct from consumers into a stream to use the materials as a resource for growing food.

- **Explore citywide composting of food waste.**

In addition to the household composting program, the City Council will continue to explore future policies to encourage composting of organic waste throughout the food system. This year,

Compostable and Non-Compostable Portion of NYC's Waste Stream



Source: NYC Dept. of Sanitation. Bureau of Waste Prevention, Reuse and Recycling



the City Council passed Local Law 42, requiring the city to conduct a study of various options for increasing residential, commercial, and governmental composting. These include exploring the viability of curbside organic waste collection, development of new composting facilities within the city, and utilization of local transfer stations to consolidate source-separated organics for delivery to composting facilities outside of the city. Additionally, the city is exploring new technologies to transform our waste into compostable materials while capturing and reusing the energy from that process. Two particular technologies under consideration are anaerobic digestion and thermal processing. Anaerobic digestion breaks down municipal solid waste to remove inorganic components. Recyclable materials can be recovered, while organic materials are converted either to gas that can then be used to generate electricity or to a solid product that can be used as fertilizer. Although some inorganic materials are still sent to landfill, the volume is significantly reduced and much of the byproduct is converted to a new resource. In thermal processing, organic components of municipal solid waste are also converted to gas that can be used to generate electricity. Other materials may also be produced, such as reusable mixed metals, industrial salts and chemicals that can then be sold or recycled.

STRATEGY:

Increase recycling of waste related to food processing and packaging.

Much of the energy flow increases in the U.S. over the past several years are due to changes in our food system. These changes have included an increase in the meals we eat outside the home and a greater reliance on packaged convenience foods. This produces waste in the form of added food packaging from items like pre-packed salad mixes and pre-cut fruit. To address this waste, recycling of food related packaging such as plastic boxes, paper cartons, and cans will be a vital strategy for improving our

food system. Additionally, because New Yorkers rely on the over 20,000 restaurants in our city for many of our meals, the commercial waste stream is considerable. In particular, restaurants produce kitchen grease that can be transformed into biofuel rather than being discarded – another way to close the food system loop and improve sustainability. The following proposals outline our strategy for encouraging more recycling of food waste in the city.

• Encourage restaurant grease recycling.

New York City's restaurants and other commercial kitchens produce used grease and oil, which by law, they are prohibited from disposing of through the city's sewer system. Instead, restaurants and commercial kitchens have historically been encouraged either to dispose of waste oil and grease with their regular solid waste or through waste oil reprocessing to make feedstock for materials such as soaps. Today, thanks to developments in reprocessing, much of this used cooking grease can be transformed into a biofuel to heat buildings or run vehicles. Restaurants are now partnering with organizations like Ready, Willing, and Able to pick up the grease and transform it into biofuel. Already one plant is opening in the city to process this grease, creating jobs within the five boroughs. The City Council also recently passed legislation that requires heating oil sold in the city to contain at least two percent biofuel, which will broaden the market for recycled restaurant grease.

• Increase citywide recycling of food-related packaging.

Since the City Council enacted Local Law 19 in 1989 to launch a comprehensive curbside recycling program, our recycling rate increased from 1 percent to 20 percent in 2000.²³² This remarkable increase over time illustrated the impact government policies can have on residents and our citywide environmental impact. Unfortunately, the city temporarily suspended the recycling program for budgetary reasons in 2002 and since its reinstatement, our diversion rate has climbed back to just over 16 percent.²³³

To encourage an even greater recycling rate, the City Council recently passed legislation to amend Local Law 19. Although not specifically focused on food waste, this new legislation has several key approaches to increasing recycling that will positively impact waste associated with the food system. It will require the New York City Department of Sanitation to recycle all rigid plastics, such as yogurt containers and take-out food containers, once a new facility opens in 2012. This component alone will divert 8,000 tons of plastics every year from landfills and incinerators. The legislation also requires an additional 300 public recycling bins be placed in public places over the next three years and that an additional 700 public bins be sited within the next 10 years. These changes, along with programmatic improvements to agencies' recycling efforts, public outreach and education, and additional research on our citywide recycling performance will significantly recapture materials from the food system waste stream.



Photo Credit: Shira Golding





Next Steps





TRACKING OUR RESULTS

ESTABLISHING A FOOD POLICY COUNCIL

In designing this blueprint, we consulted with experts and stakeholders from around the city. In the same way, implementing these new ideas and policies will require input beyond that of government officials. Cities throughout the U.S. have adopted Food Policy Councils to track their progress toward achieving food system goals. These councils provide valuable insight and accountability. They also give a voice to the constituencies affected by the very food system issues we intend to address. The Mayor's Office has already created a Food Policy Coordinator and inter-agency task force at the request of the City Council. It should also be noted that as the Mayor's Office of Long-Term Planning and Sustainability drafts its update to the PlaNYC report, it has taken heed of our and others' calls to include food in its new proposals. However, community and industry input has been noticeably absent from previous food policy efforts by the city. The City Council therefore calls on the Mayor to create a New York City Food Policy Council. This Council will elicit non-governmental input on policy changes and institutionalize the work embodied in this report.

REPORTING ON CITY FOOD SYSTEM DATA

The more we explored our food system for this report, the more gaps we discovered in basic data about food the city buys and serves and the impacts of various food-related programs. Until we have more comprehensive information about our food system, our attempts to improve it can only be partial solutions. Therefore, the City Council will introduce legislation that will allow us to better understand the current state of our food system, monitor changes, and provide a foundation for future work. This reporting bill will establish metrics at each phase of the food system to determine where city purchased food comes from, whether our local processors are benefiting from city programs, the reach and quality of our agency meal programs, our progress toward eliminating hunger, and the environmental sustainability of our Hunts Point markets. By passing this legislation, we will be better able to measure the effectiveness of current efforts and target future initiatives.

CONCLUSION

FoodWorks is the result of over a year of research and more than 100 meetings with New Yorkers involved in every phase of the food system: gardeners, chefs, small business owners, researchers and academic experts, not-for-profits, emergency food providers, and manufacturers, as well as officials at every level of government. We also conducted surveys and reviewed studies from across the country and around the world.

The 59 proposals in our report outline a strategy for a healthier, greener, and more productive food system. It contains ideas that the City Council can begin implementing immediately, and ideas that will require a commitment from our state and federal colleagues. Some will help us create new jobs and keep more of our food dollars in the local economy. Some will improve public health in the five boroughs or help keep our air, water and soil from becoming polluted. Others will strengthen our city's infrastructure for decades to come.

We'll use government resources in smarter ways and help more families take advantage of existing programs. We'll empower farmers and business owners to drive economic activity in sustainable ways. We'll give communities better options and depend on them to make good choices. We'll respond to the needs of New Yorkers today while planning for the city of tomorrow.

Our report identifies initiatives and best practices with real potential to strengthen our food system at this moment in our city's history. But this report is far from the final word on food system development in the city. Rather, it is the beginning of a conversation with New Yorkers. The story of our food system is a story of change, and like any blueprint, FoodWorks must continue to evolve and incorporate new ideas and realities.

Changing any large-scale system takes time and commitment. The effects of these efforts will not be felt overnight. But we can no longer afford to ignore growing problems with our food system. We must seize opportunities to build a system that truly serves our changing needs – just as generations of New Yorkers and Americans have done so many times before.

We already have the tools in place; now we have a plan. All we need is the will to see these changes through, to make smart decisions, and to leave a system that is stronger, healthier, and more sustainable for future generations.



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