One Thousand Friends of Food: Strategies for the Implementation of Local Food Policy in New York City

by

Deborah Helaine Morris

B.A. History and History of Art University of Michigan, Ann Arbor, MI (2004)

Submitted to the Department of Urban Studies and Planning in partial fulfillment of the requirements for the degree of

JUN 0 8 2009

LIBRARIES

ARCHIVES

MASTER IN CITY PLANNING at the MASSACHUSETTS INSTITUTE OF TECHNOLOGY

June 2009

© 2009 Deborah Helaine Morris. All Rights Reserved.

The author hereby grants to MIT the permission to reproduce and to distribute publicly paper and electronic copies of the thesis document in whole or in part.

| | and the second of the second o |
|--------------|--|
| Author | |
| | Department of Urban Studies and Planning May 21, 2009 |
| Certified by | |
| | Professor Judith Layzer Department of Urban Studies and Planning Thesis Supervisor |
| Accepted by | · · · · · · · · · · · · · · · · · · · |
| | Professor Joseph Ferreira Chair, MCP Committee Department of Urban Studies and Planning |

One Thousand Friends of Food

Strategies for the Implementation of Local Food Policy in New York City

ABSTRACT

This thesis is an exploration into how New York City can incorporate local food system planning into their existing sustainability program by capitalizing on recent energy and grassroots initiatives. I argue for the importance of local and regionally produced food as a part of food system sustainability, and propose that food issues be addressed at the local level.

In order to learn how food planning transforms from a social and advocacy movement and into policy, I compare food policy initiatives in Chicago, San Francisco, and Vancouver. My analysis of each city's food program reveals their shared aspiration to provide affordable, accessible, and fresh food with few adverse environmental impacts. Each city's strategies are the product of local conditions, interests, and political culture. I recommend that as the New York City government looks towards coordinating food policy, these precedents illustrate the necessity of tailoring urban food policy practices to suit local conditions, community culture, and needs.

This paper evaluates the effectiveness of nascent food policy efforts while suggesting roles for policy makers, community groups, and citizens in New York City.

Thesis Advisor: Judith Layzer Title: Linde Career Development Associate Professor of Environmental Policy

ACKNOWLEDGEMENTS

This thesis is the product of many hands and minds.

Thank you to the people doing inspiring work around the world who took the time to help me reflect on the importance of food systems change.

None of this could have been possible without the support of Bradley Price, my parents Dona and Jeffrey Morris, my patient advisor Judy Layzer, my reader Sam Bass Warner, and my extremely supportive colleagues in DUSP. Special thanks to Kira Boesch, Connie Chung, Jennifer Edwards, Rachel Hockfield, Sarah Neilson, Sarah Snider, Shantha Susman, and Laurie Tamis.

INTRODUCTION

On May 2, 2009, over 1000 people attended a conference devoted to food issues at John Jay High School in Brooklyn, New York. Conceived of by members of the Park Slope Food Co-op and planned with the help of over 50 partner organizations and hundreds of volunteers, the Brooklyn Food Conference attracted a crowd of residents, activists, politicians, policy makers, farmers, chefs, vendors, eaters and food thinkers. These friends of food attended 70 workshops devoted to one issue: how to improve access to locally produced, fresh, healthy food in New York City (NYC).

Although this conference and its attendees focused specifically on the NYC context, interest in locally grown food has recently exploded across the United States. In 2007, the New Oxford American Dictionary selected the word "locavore" as its word of the year (OUP 2007). The word—loosely defined as "[a person who pursues] the use of locally grown ingredients, tak[es] advantage of seasonally available foodstuffs that can be bought and prepared without the need for extra preservatives"—demonstrates not only the "ethos of the year and [locavore]'s lasting potential as a word of cultural significance and use" (an assertion made by the lexicographers at Oxford University Press regarding every annual selection), but that the interest in food's origins parallels increased popular interest in making independent lifestyle





Participants at the Brooklyn Food Conference. Source: Photos by Author.

choices that are eco-aware and health-conscious. Although the word "locavore," and the rhetoric surrounding the benefits of eating locally, have blossomed in recent years, absent from this conversation is how to transform the local food advocacy movement into a mainstream component of urban public policy.

The success of the Brooklyn Food Conference and the emergence of national interest in locavorism represent a transformation of local food from a marginal fad into a broad urban movement. This thesis explores how NYC government (NYCG) can use the opportunity of this turning point to integrate local and regional food planning into its operations.

In the course of this thesis, I argue for the importance of local and regionally produced food in the context of NYC specifically, and the United States generally. Through a discussion of the challenging scales of food system sustainability planning, I contend that food issues are best addressed at the city level. This thesis draws on the precedents of Vancouver, Chicago, and San Francisco: leading examples of North American cities that have already integrated food planning into their sustainability, public health, and economic development efforts. By analyzing the evolution and achievements of each city's food program I determine that these cities share the common aspiration of affordable, accessible, healthy, fresh food with few adverse environmental impacts. The diverse approaches they employ, however, are rooted in local needs, interests, and political culture. I argue that as NYCG looks towards coordinating food policy, these precedents illustrate the necessity of tailoring urban food policy practices to suit local conditions, concerns and needs.

Subsequently, I recommend that NYCG promote the consumption of more regionally and locally grown food in the context of its own political culture, community coalitions, and interests. This paper evaluates the effectiveness of nascent food policy efforts while suggesting a collaborative

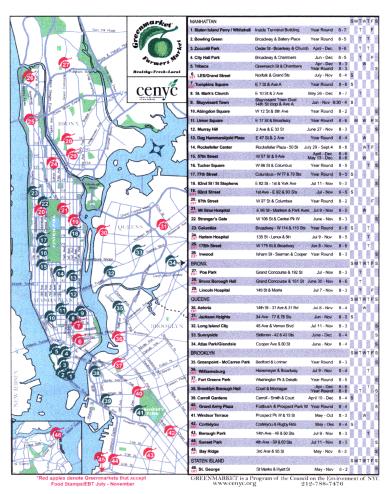
structure for policy makers, community groups, and citizens in NYC.

Food policy is not entirely new to local government, yet planning for food sustainability requires a systematic evaluation of the relationships between public health, the physical environment, energy, economics, and accessibility, while incorporating community participation and enthusiasm. The strategies and lessons learned from these cases point to the importance of viewing the food system as urban infrastructure similar to transportation or health systems. A strong urban food system manages the food supply chain so that it is accessible, reliable and capable of continuously serving generations into the distant future.

FOOD AND FOOD POLICY IN NEW YORK CITY

NYC is a dense metropolis with extraordinarily complex food demands. It provides a home for a population of over eight million people with diverse and discriminating tastes in food and widely ranging economic access to food. NYC is renowned for its restaurant and food service sector and also houses a robust food manufacturing industry. Because of its high density, NYC has few spaces for food cultivation. Besides a small network of community gardens, there are four functioning farms: the East New York Farms, the Bronx Taqwa Community Farms, Red Hook Community Farms, and the Queens County Farm Museum (Lewis 2009). While these farms generate a relatively small amount of food, they provide the valuable social and community service of educating residents about food production and consumption.

As a result, NYC imports nearly all of its food, from across the country and across the globe. Food is expensive and varies widely in quality and accessibility. NYC has the largest farmers' market system in the country: there are 46 farmer's markets across the city (many of which are year round), sponsored and coordinated by 15 different organizations (Farmers' Market Federation of New York 2009), and over 80 Community-Supported Agriculture drop off locations all providing a wide variety of fruit and produce grown in upstate New York, New Jersey, or Pennsylvania (Just Food



Map of NYC's Greenmarket System. Source: CENYC 2009.

2009). At the same time, more than three million New Yorkers, 38 percent of the population, live in communities without grocery stores or places to purchase fresh produce (NYCEDC 2008) and over two million residents, nearly a quarter of the population, are at risk of hunger or otherwise considered food insecure (Berg 2009).¹

In the face of these sobering statistics, an astounding array of organizations currently work on these food system challenges. More than 20 non-profits claim improvement to NYC's overall food system as a central mission. There are more than 300 community-based organizations involved in neighborhood level food issues including food insecurity, food distribution, gardening for consumption, and advocacy (NYCCAH 2009). Yet, the NYCG has only recently focused on food system issues.

On February 7, 2009, the office of the Manhattan Borough President Scott Stringer released the report, "Food in the Public Interest" (Moskin 2009). This report had two goals: to raise awareness of the value of a local food system in terms

of the health and economy of New Yorkers, and to encourage all municipal agencies to adopt policies that would foster the development of a local and sustainable food system by highlighting possible points of leverage (OMBP 2009). A compilation of hundreds of suggestions on how to improve the food system, accessibility, the local economy, and urban health. This report is most noteworthy for its scope, which was unusually broad for a Borough office. Rather than tackling the issue of the food system and how it affects his Manhattan constituents, the Borough President produced a report that is about the city as a whole.

Until this report, policy makers in NYCG had not considered its food system, in the broadest sense, as a part of the urban economy, health, or sustainability movement. In fact, other than a very recent interest in the relationship between nutrition and public health (Severson 2007), policy makers have not evinced interest in the connection between fresh food access and the food's place of origin. This is particularly surprising for a city led by a Mayor, Michael Bloomberg, who has been lauded for his efforts in sustainability planning (Chan 2007).

Prior to the release of the Borough President's report, the NYCG was concerned primarily with food security—

¹The United States Department of Agriculture defines food insecurity as "limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways, that is, without resorting to emergency food supplies, scavenging, stealing, or other coping strategies" (USDA 2009).

specifically, assuring that the entire population of NYC has access, and, more recently, healthy (meaning as fresh and unprocessed as possible) food. In early 2007, the Bloomberg Administration took on food access by hiring a Food Policy Coordinator. The Coordinator subsequently formed a Food Policy Task Force. The Coordinator and Task Force have focused on improving the availability of fresher and healthier foods in areas with few or no grocery stores. A controversial ban on trans fats, a new law requiring the posting of calorie information in chain restaurants, and the simplification of vending license procedures for street purveyors of fruits and vegetables are among the accomplishments of this branch of the NYCG (Severson 2007; NYC Office of the Mayor 2007). Yet, the Food Coordinator is only a single individual, given a broad problem (solve food accessibility in NYC's most challenged neighborhoods) with no staff, no real authority, and only a voluntary team of Task Force members for support (Clapp 2009). In fact, the Food Coordinator's salary does not come from the NYCG's general fund; it is funded by a grant from the NYC Center for Economic Opportunity (Thomases 2009).

At the same time, in a separate branch of the Mayor's Office, the Office of Long Term Planning and Sustainability is implementing PlaNYC 2030, NYCG's sustainability plan

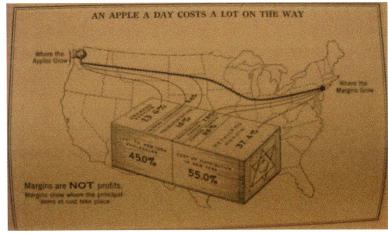
(City of New York 2007), a widely touted call for action and reconsideration of land use management in light of sustainability primarily through building and transportation improvements. PlaNYC has a large staff and the Office of Environmental Coordination behind its many initiatives. As far-reaching as the plan is, however, it does not address NYC's food system. The absence of the food supply chain from the discussion of urban sustainability is a reflection of the narrow way in which policymakers and sustainability planners view food.

Recently, popular interest in food system change has grown exponentially in NYC. Despite the panoply of non-profits and advocacy groups that address food system issues, the Brooklyn Food Conference is the first example of these groups and ordinary citizens coming together to address food issues ranging from lessons in beekeeping, to neighborhood hunger relief, to global food sustainability. The Park Slope Food Co-op Safe Food Committee organized the conference to create a day of education and networking. Interest in the planning of the conference exploded, and the event rapidly ballooned in scale as the organizers worked to be as comprehensive and inclusive as possible (Guy 2009). The resulting event celebrated the spirit, initiative, and potential of NYC's many friends of food.

NYC is renowned for its density and complex social conditions, as well as for creativity and resilience. As NYC faces the challenge of providing healthy and affordable food in the face of a global food system, it can use recent enthusiasm for local food to help coordinate its many community voices and to structure its food policies to promote a food system with local roots. Building on this interest in the production and consumption of local food is the only way for this to happen.

THE VALUE OF LOCAL FOOD

Food, and the ability to access it, is as much an issue of environmental sustainability as of economy, health, and equity. The further food has to move from farm to table, the more it decreases in quality, diminishes in nutritional value, increases in environmental cost, and becomes entangled in a dispersed, global economic and production system over which the city has limited control. The way we grow, transport, and process food produces greenhouse gas emissions and contributes to a system where localities have limited control over the price, quality, and environmental impact of food available to their population.



Historical example of the complexities and costs of shipping food. Source: Hedden 1929.

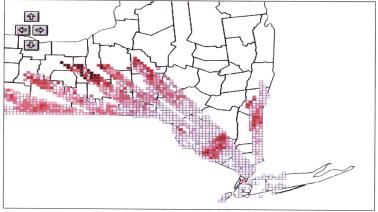
Local food tends to be fresher, and thus, better tasting and more nutritious. Locally grown produce, dairy, and meat products require less transportation and fewer preservative techniques to travel from the ground to the household larder. Every preservative step, from early harvesting, freezing, refrigeration, and pruning, reduces the mass, nutrition, appearance, and flavor of food while impacting cost (Nestle 2002).

The impact of food on the environment goes beyond the impact on the land where it is cultivated. Industrial food travels from the farm to your fork through a long supply chain. Moreover, "foods generate more emissions than generally acknowledged because they require layers of packaging and, in the case of perishable food, refrigeration" (Rosenthal 2008, 2). Even a relatively simple and unprocessed food, such as dairy milk, leaves the farm, and is shipped to a cooperative, where it is shipped again to regional distributor, repackaged, and shipped again to another distributor, and then eventually shipped to grocery store (Lewis 2009). The advantage of a local or even a regional food system is that it shrinks the distance food travels, reduces the number of times goods are packaged and repackaged, and reduces the fossil fuel use—and therefore greenhouse gas emissions associated with storing and transporting food (Peters 2007).

DEFINITIONS OF LOCAL FOOD

Although advocates have made a strong case for local food, they have not agreed on a definition of "local." When it comes to food, local can be defined by political, geographic, and ecological limits (Peters, Bills, Wilkins, and Fick, 2008) and each definition suggests a different scale of policy intervention. One way to define local is to use the legal boundaries of the city, county, or the state. These boundaries disregard distance, transportation, and growing patterns near the city but have the advantage of being broadly accepted economic and social units. For instance, Christian Peters' (2007) analysis of the foodshed of New York State described the State's capacity to produce food for direct consumption. Peters built two different models of New York State: the first minimized the distance food was transported, while the second sought to maximize the agricultural land use value derived from supplying local food needs based on actual production yields for foods eaten as a part of a healthy diet. The purpose of the comparison was to distinguish between the potential of a foodshed and the actual capacity of a foodshed.

Based on his investigation, Peters concludes that New York State, and more specifically, New York City, cannot feed itself solely through instate food that travels fewer than 250 kilometers (~156 miles). Exactly how much food New York City can tap into depends on exactly what type of crops or



New York City's Potential Foodshed within the boundaries of New York State. Source: Peters 2007.

products are cultivated. Peters' analysis can be used in considering the impacts of a range of policy questions regarding the environment, economy, and eating habits of New York State because it provides information about the real-time environmental impacts of change. Peters concludes that local or regional food systems have "probable advantage to the environment" in the associated reductions the fossil fuel use and greenhouse gas emissions associated with reduced food transport (Peters 2007).

An obvious limitation of Peters' analysis, however, is its arbitrary political boundary: Peters worked with data only about



150-mile radius from NYC's center. Source: Image by author based on Google Earth.

the foodshed within New York State even though this political boundary makes little geographic sense for describing a food system for New York City, which is more proximate to the agriculturally productive areas in New Jersey, Connecticut, Delaware, and Pennsylvania. By contrast, distance-defined local food, the most commonly used indicator, typically describes food produced within a radius of the city center (usually a driving distance, such as 150 miles). San Francisco, Vancouver, and the New York City Greenmarket system de-

fine local food using a mileage radius. A more sophisticated definition of geographically local also considers the spatial dimensions of food transactions, including the "food miles," from producer, to distributor, to wholesaler, to jobber, to retailer, to consumer. Defining localness in terms of geography provides a more accurate picture of the distance food travels to reach consumers, while overcoming the distortions in distance created by political boundaries. The boundaries of this definition are easily understood, distance is a relatively simple concept, but this definition often challenges policy makers to cooperate beyond their typical jurisdictions.

A third option, defining local based on ecological factors, considers food production in terms of the foodshed—a management unit that considers climate, soil quality, and land productivity in order to bring food consumption and food production into closer proximity. In "Coming to the Foodshed", Jack Kloppenburg and his coauthors (Kloppenburg et al. 1996) argue that foodsheds provide a conceptual and technical analytic for changing food systems. Invoking the successful model of watershed management, they contend that foodsheds can be used to limit the environmental impact and vulnerability of the food system by closing the loop between production and consumption. More technically, the foodshed is a framework to measures how far food

flows from farm to consumption while also taking into account transportation costs, emissions, and changes in price (Peters, Bills, Wilkins, and Fick, 2008). Thus, foodsheds can be, "valuable for evaluating how the geography of the food system influences its impact on the environment and the vulnerability of populations to disruptions in their food supplies. Moreover, foodshed analysis would help to plan how the geography of food systems should change to enhance sustainability" (Peters, Bills, Wilkins, and Fick 2008, 5).

This ecologically grounded definition of local is consistent with a larger concern about a city's overall ecological impacts. William Rees and Mathis Wackernagel describe these impacts as a city's ecological footprint, "a land-based surrogate measure of the population's demands on natural capital (Rees and Wackernagel 1999, 228)." An ecological definition of local food provides the most comprehensive description of the total impacts of the food system.

Foodsheds provide the most comprehensive description of a local food system; yet, the concept does not fit easily into the standard language of urban policy because it completely disregards municipal jurisdictions and requires sophisticated analysis to determine. As a result, foodshed planning requires a full commitment to regional research, planning, and cooperation. Consequently, the language of local food policy often becomes muddled as it is adjusted to fit more closely with policy norms.

THE CHALLENGES OF MOVING TOWARDS A MORE LOCAL FOOD SYSTEM

Even if policy makers frequently employed a foodshed analysis, it would still be an incomplete vision of a sustainable food system because the model is detached from the culture of food activists and eaters. While the foodshed model emphasizes environmental aims, it disregards the inhabitants within. As a result, the local and sustainable agriculture movement stresses the romantic appeal of locally grown food, anti-corporate animous, and the power of consumer choice.

In Animal, Vegetable, Miracle, Barbara Kingsolver tries to make fashionable the rejection of industrially grown, non-local produce through an impassioned appeal for self-sufficiency that involves sacrificing chocolate and out-of-season fresh fruit (Kingsolver 2007). Kingsolver details her family's transition from being residents of suburban Tucson to farmers and land stewards of a property in Appalachia. Kingsolver is fortunate to have a profession that allows her the freedom to work around the times and seasons of growing and harvesting, as well as property with high-quality soil and a long growing season. Such a lifestyle shift is impractical for most people, however, and highlights the greatest problem facing local food: it isn't easy, affordable, or accessible for most people. Further, local food isn't an option that everyone has an equal opportunity to choose. Local and regionally

produced food can be difficult to track down, and when it is available, often it isn't promoted or labeled as local (Jones 2009).

Eating local food is more difficult than making a simple choice at the grocery store, and sometimes consumer choice is not only a matter of price or quality. Alison Alkon's, "Paradise or pavement: the social constructions of the environment in two urban farmers' markets and their implications for environmental justice and sustainability" is an investigation into food consumption practices, through a comparison of markets in North Berkeley and West Oakland, California. Her analysis reveals how loaded individual food choices are with political and cultural meaning because access to food choice provides access to civic dialogue (Alkon 2008). Specifically, Alkon finds that shopping at farmers' markets, regardless of the neighborhood, allows patrons to individually make choices that have environmental impacts (in the case of North Berkeley) and socioeconomic impacts (in the case of West Oakland). Patrons shopped at farmers' markets in part because they could use their purchase to support certain environmental causes, specific farmers, and particular businesses.



Shoppers choose between supporting farmers at the Union Square Farmers' Market or shopping at Whole Foods Market in NYC. Source: Photo by Author.

If people are already making food-purchase choices to promote goals other than eating well or staying within a specific budget, can these choices have a collective impact on the food system at large? No one has taken a more public stand on this than the journalist, Michael Pollan. In *The Omnivore's Dilemma*, Pollan argues for a more systematic change in food choice and food consumption habits through changes in the habits of the individual (Pollan 2006). By contrasting the

ingredients and sources of a meal from McDonalds with a meal he cultivates, forages, and hunts for himself, Pollan critiques the behaviors and food choices of Americans in order to explore (and condemn) the industrial food supply chain while making an emotional appeal for the consumption of foods that are unprocessed and procured in a more personal fashion (Pollan 2006). Pollan omits the role of state and city policy, and suggests that, in order to change the way food is cultivated, produced, and sold, there must be a restoration of the consciousness of individuals as eaters. Pollan suggests that if individuals become more aware of the origin and long-term environmental and social costs of the foods they eat, the food system will shift away from the industrial machine.

In his subsequent work, *In Defense of Food*, Pollan opens with this premise and proceeds to make basic suggestions on how eaters should change their habits. (Pollan 2008). Using the lens of debates in nutritional science and public health, Pollan suggests that eaters stop shopping in convenience stores and instead grow food (if possible) or go to farmers' markets in order to eat most healthfully. However, he does not delve into ways for municipalities to promote or facilitate this transition. What is most persuasive about Pollan's narrative is that he links health and food choices to the larger food

system. He writes (Pollan 2008, 161), "depending on how we spend them, our food dollars can either go to support a food industry devoted to quantity and convenience and 'value' or they can nourish a food chain organized around values – values like quality and health." Thus, Pollan demands the reconsideration of food choice in order to impact the food system, and promote the parts of the food supply industry (namely, local and environmentally cognizant farmers) that he believes should more dominant.

Michael Pollan is not the only voice calling for change in the food system, but he and nearly every other proponent is placing his or her faith in the consumer. Changes in individual consumer behavior are not enough to change the food system alone; yet, this is the way change in the food system is frequently discussed. Patricia Allen, in *Together at the Table: Sustainability and Sustenance in the American Agrifood System*, concludes that the local and alternative food movements are inherently social movements (Allen 2004). The types of organizations, the alternative rhetoric they employ, and the channels they pursue are focused on change in the social realm. Allen demonstrates that the effectiveness of these groups is limited by their insistence on remaining "alternative." It is possible, then, that the self-consciously "alternative" nature of the food movement, along with the



Reverend Billy and the Church of Stop Shopping Protesting Starbucks and Corporate Food. Source: Photo by Author.

challenges to describe and define what is local food, have made it difficult to incorporate food into the more traditional realm of mainstream public policy for all citizens.

THE ROLE OF CITIES IN FOOD POLICY

Notwithstanding this emphasis on individual choice, government will almost certainly have a role in moving society towards local food systems. Cities are the logical entities for food policy because they can act as a service provider and an advocate for state, regional, or even national food systems change. Food policy bridges the more traditional arenas of social, economic, and environmental planning; but at every level, food system issues are typically fractured into two categories: food access for the food insecure or agricultural production policy.

At the federal level, entitlement programs (Supplemental Nutrition Assistance Program and the WIC food stamps program) and agricultural policy (subsidies for farmers) are both managed by a single agency, the Department of Agriculture (USDA). Federal agricultural policy has long favored large-scale industrial agricultural producers who supply national and global markets versus smaller-scale regional or local producers positioned to serve more proximate communities. Further, federal health and nutrition standards tend to be subordinate to agricultural policy, with little integration of goals. The result is a program like the USDA School Lunch program, which creates a captive market—low-income children— for excess agricultural commodities of varying qual-

ity and nutritional value and which leads to oddities such as ketchup being classified as a vegetable (Nestle 2002).

Because these policies view eaters and food producers separately, there are few intersections that provide any sense of the concept of a national eating public. One of very few exceptions is the Community Food Projects Competitive Grant Program, which was created in 1996 (renewed in 2002) to fight food insecurity in low-income communities through the development of community food projects. This appears to be the only federal program designed to increase food security through local food production, thus recognizing the importance of the entirety of the whole food system to community members.

National change may be in the air. The Obama administration has made very public displays of interest in the linkages between food, nutrition and agriculture. The selection of Tom Vilsack as Secretary of Agriculture, who created his own organic "people's garden" outside his headquarters and, even more notably, the recent decision by the Obamas to plant a vegetable garden on the South Lawn of the White House (Burros 2009), indicates a potential for departure from the decades of a particular federal disposition. Even with spade in hand, however, Michelle Obama concedes that

a public display of the rewards of individual kitchen gardening isn't a broad answer to the food dilemma (Burros 2009).

Food planning needs to be comprehensive and coordinated across all levels of government. Local government provides an opportunity to address the disjuncture between the food needs of the city and the food that is available to the city. The lack of coordination, or even absence, from most local policy agendas demonstrates that policy makers and residents do not fully comprehend the intertwined and "embeddness" of food in urban life (Pothukuchi and Kaufman 1999).

As a local issue, food can be nestled into to the more traditional local government policy areas of environment, transportation, and economic policy, which make it all the more compelling to voters. In fact, there is, "so much potential to create policies promoting food security, local food systems, and economic justice at the local levels [because] this is the arena in which people and small, local organizations participate... More people, at least in terms of raw numbers, will support a state bill to ban junk food in schools than will weigh in from across the country to support a piece of national food stamp legislation" (Winne 2008, 167). In short, the evidence points strongly towards the benefits of local

policy to strengthen management of the food supply, and the general receptiveness to it by the public at the local level.

Cities have mechanisms for managing their food supply. In particular, cities provide (and can manage, provide incentives, and penalize) the infrastructure used to move, store, transfer, process, and sell food. The current rhetoric surrounding food and its relation to the environment and economy is deficient, perhaps because it "fails to convey the problematic nature of the conventional food system... It offers no sense of the many linkages that exist between the parts of the food system and between food and other systems. Above all, it fails to outline the food system as an important urban system" (Pothukuchi and Kaufman 1999, 214). Food flows through the city's public markets and roads; its handling is monitored and regulated by local standards. By shifting their focus from the end product (food for purchase) to the infrastructure of the supply system, urban policy makers can find opportunities for leverage.

Looking at the food system as infrastructure isn't a new idea, and it actually isn't new to New York. In 1929, after a railroad strike threatened to close freight flowing into NYC, local policy makers realized the complexity of the food supply chain, and that managing food supply is a far larger endeavor

than guaranteeing a captive market of hungry residents. W.P. Hedden, chief of the Bureau of Commerce of the Port Authority of New York at the time, noted that, "as this committee met to study the problem of feeding the city in the event that railway transportation should cease, it became apparent immediately that there was a dire lack of information regarding the city's food needs, the sources from which they were supplied, and the manner in which these supplies were transported and handled" (Hedden 1929, 1). In order to describe the web of relationships embedded in the food system, Hedden was the first to coin the term foodshed to describe the food system, Hedden (1929, 17) writes,

The drainage basin from which a river draws its water is outlined by heights of land, making a continuous watershed, or divide...By analogy, we may conceive of the flow of foodstuffs to consuming markets as determined by foodsheds. The barriers which deflect raindrops into one river basin rather than into another are natural land elevations, while the barriers which guide and control movements of foodstuffs are more often economic than physical.

Hedden's committee proposed that the NYCG look at the complete chain of the food supply (storage, transport, middleman, handling, etc) and that the NYCG should manage the supply chain through the development of public markets, of new storage facilities, and promote the multi-modal movements of food goods, by ship, rail, truck, and car.

In 2007 the American Planning Association created a policy guide to address these issues of Community and Regional Food Planning. This guide suggests a role for local level policy, planning, and planners because issues related to food access touch on a variety of professional areas where planning and policy intersect, such as neighborhood and community economic development, land use regulation, environmental and economic justice, and public health. By enumerating the impacts of the national and global food system on the local built environment through a discussion of grocery store consolidation, obesity and diet-related disease, hunger, andwaste, the APA encourages "planners to engage in planning that both strengthens community and regional food systems and encourages the industrial food system to provide multiple benefits to local areas" (APA 2007, 3).

LESSONS FROM FOOD POLICY INNOVATORS

Although the APA policy guide is an excellent starting point for budding food planners in New York City; it is more valuable to see how cities are actually working to implement food systems goals. In order to learn how food planning transforms from a social and advocacy movement and into policy, I compared the policies of food policy initiatives in Chicago, San Francisco, and Vancouver.² This analysis of the evolution and achievements of each city's food program revealed the common aspiration of affordable, accessible, healthy, fresh food with few adverse environmental impacts. The strategies utilized by each city, however, are very much a product of local conditions, interests, and political culture.

The purpose of this comparative exercise is to determine how NYC, as well as other cities more generally, can incorporate food systems thinking into the work that they already do. These precedents demonstrate that there isn't a one-sizefits-all approach to local food planning and that urban food policy practices must suit local conditions, concerns and needs. Food policy must evolve from regional land and food resources, existing community and political organizations, and local culture.

Chicago

Chicago, the "Candy Capital," is the third largest city in the United States, with close to three million residents. It is at the center of a metropolitan region of close to ten million people. Chicago is located in Illinois, which is the second largest agricultural exporter (behind California) in the United States, with nearly 77 percent of the total land area in the state under agricultural production. Yet, less than .2 percent of these crops are for direct consumption (City of Chicago Department of Planning and Development 2007), and instead are corn and soybean crops grown for processing. At the same time, many of these valuable farmlands, which are proximate to Chicago, are at high risk for development.

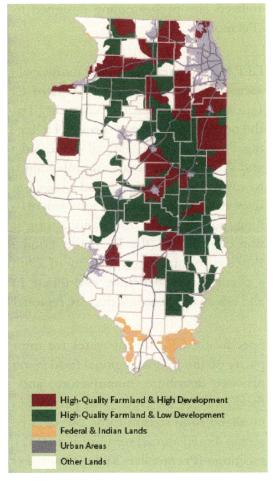
Chicago's extensive road, rail, and shipping infrastructure have long made it a freight transportation hub, which fostered the growth of Illinois's agricultural export economy (Porter 2006). Chicago is the largest food and beverage processor in North America, with a particular emphasis on

² The methodology utilized was a review of the policies, public reports, and responses of each city's food systems planner (or equivalent) in each case city. This analysis is based on the answers to the following questions: What type of food program does this city have? How and why was it established? What are the goals of the city's food program? How has your city integrated local and regional food planning mechanisms into typical local government regulations, planning, and development functions such as land use, economic development, environment, parks and recreation, health and human services, and public health? What aspects of this program have been most successful? What aspects have been least successful?

processed foods and candy, in addition to a storied tradition of meat processing.

The City of Chicago launched a series of climate change action plans to reduce energy consumption and costs beginning in 2001. These plans have included a heat island mitigation plan, green roofs and green building incentives, and zoning changes to permit the resurfacing of alleys to reduce storm water runoff and increase density strategically. As the City of Chicago prepared a bid for the 2016 summer Olympics, it has looked for ways to establish itself as a frontrunner in sustainable policy and progressive planning.

In 2002, the City of Chicago created the Chicago Food Policy Advisory Council (CFPAC), in order to create a consultative body to the municipal government on issues such as: access through farmers markets, public transit in food deserts, emergency food programs, economic sustainability through small food business, urban agriculture, and to centralize the community voice on issues of food security (Cooley 2009). Prior to CFPAC, the many community and citywide groups working on hunger, food access, and the provision of emergency food issues were disconnected from each other, their work was community specific, and there was very little cen-



Sprawl threatens Illinois's high-quality farmland. Source: City of Chicago 2007

tralized city programming designed to support their work (Peemoeller 2009).

CFPAC is separate from the municipal government. CFPAC receives no funding from the City of Chicago, and instead is funded by the Chicago Community Trust, LaSalle Bank, and the non-profit advocacy groups Heifer International, Growing Power, and Sustain (all dedicated to sustainable eating and growing practices). Membership on the CFPC is open to anyone involved with food issues, but includes representatives not just from City Departments of Health and Planning, but also local and national non-profits, residents, and non-city groups (the Evanston Food Policy Council). CF-PAC's autonomy from the City of Chicago allows it to have a participatory structure, coordinate independent research, and advocate on issues that are regional in scope.

Specifically, CFPAC advocates for improvements to the capacity of the Illinois regional food system so that it can grow, process, distribute, manufacture, and sell nutritious local food to all of Chicago. This particular dedication to a more localized food stream came out of a participatory and consensus-based annual summit, as well as quarterly open public meetings (Peemoeller 2009). From these meetings, CFPAC develops an agenda, conducts and coordinates research, and

makes recommendations for the local and state government, while working with other coalitions and advocacy groups.

CFPAC's describes its most significant accomplishment to be empowerment. Its meetings and summits have organized many community members, groups, and politicians, and brought food onto the policy agenda. Because CFPAC is organized into working groups, it is able to involve a wide range of people, develop constituencies, and build a base level for civil engagement. This grassroots effort has given organizations and people tools to work with their aldermen and advocate for change (Peemoeller 2009).

In the past seven years, CFPAC has held four summits, produced an inventory of Chicago's Community Food Security (2004), as well as numerous education programs and grassroots campaigns to support backyard chicken husbandry, community gardening, and nutrition education. Additionally, CFPAC has provided funding for community garden programs, farmer education programs, and, in coordination, with other Food Policy Councils (Springfield and Evanston), advocated for changes in agricultural policy at the State level (Peemoeller and Cooley, 2009). One of the great successes that the CFPAC attributes to this collaboration is the 2007 Illinois Food Farms and Jobs Act. This act created the Il-

linois Local and Organic Food and Farm Task Force, which was tasked to create "a plan for expanding and supporting a State local and organic food system and for assessing and overcoming obstacles to an increase in locally grown food and local organic food productions" (State Senate of Illinois 2007).

One of the current goals of the CFPAC is to help the City of Chicago form a Department of Food to coordinate a food policy program that will encompass issues of the environment, procurement and food security. CFPAC's staff participated in a working group that studied Chicago's food system and looked for a strategy to improve the quality of life and health of residents. The outcome of this two-year project was the Department of Planning and Development's plan (2007), Chicago: Eat Local Live Healthy. This plan is a framework for creating a food system where the production and distribution of locally grown, healthy food is available, accessible, and affordable to residents year-round. The plan outlines five initiatives:

 Encourage the production of locally grown produce by preserving farmland in the region and connecting local farmers with local markets.

- Increase food production in more urban settings and encourage children to develop an interest in gardening skills.
- Focus on the business of locally grown, natural, and organic food processing.
- Improve access to locally grown produce for residents, especially seniors and young children.
- Increase public awareness about the benefits to eating healthy (Chicago Department of City Planning and Development 2007, 14)

The plan outlined programs to encourage access to fresh produce through the development of farmer's markets, urban agriculture, and farm to school programs. Additionally, the Department of City Planning is strongly interested in making Chicago not just a center of food processing, but the "hub of a local and regional healthy food system that includes production, processing, and distribution" (Chicago Department of City Planning 2007, 18). The City of Chicago links healthy eating with an economic development strategy. Thus, the City of Chicago hopes to help existing food businesses to grow and to attract new food businesses by marketing interest in local and organic food and providing subsidies for job creation (Peemoeller 2009).

In 2008, CFPAC produced *Building Chicago's Community Food Systems* (Allen et al. 2008), an assessment of all of the food related activities performed, department-by-department, within the government of the City of Chicago. This report, along with collaboration promoting the Chicago Department of City Planning's "Eat Local Live Healthy" initiative, are moving Chicago towards conversation includes coordinated food access as well as food quality and food geography.

One of the results of CFPAC's consensus-building, open membership organizational structure is that there still are a variety of groups, tackling local food issues, in an uncoordinated manner. Some participate in CFPAC program and some do not. The CFPAC has limited resources, which are usually raised on a project-by-project basis, so "there is very limited organizational capacity for follow through on projects comprehensively" (Peemoeller 2009). Although CFPAC may thrive as a networking organization, its ability to advise the City of Chicago is hindered by the limited scope of projects the working groups chose to tackle and the limited support for the people working on the projects.

The relationship between CFPAC and the City of Chicago is somewhat confounding. Although CFPAC maintains its autonomy and ability to critique the City by not being a part

of it, it also has limited resources and very little ability to follow through on its own initiatives. CFPAC may be technically able to advocate for issues that impact an area greater than Chicagoland, but it still has no representative authority, and thus, a limited space at the policy bargaining table.

Additionally, although the City of Chicago is beginning to look into improving access to local food, it faces a serious challenge: there is simply greater demand than supply for food produced within Illinois's borders or even within the region (Wisconsin, Indiana, and Michigan). Changing the agricultural products of the region will require significant change in the practices of the local agricultural sector, an issue that extends far beyond the City of Chicago's authoritative reach. Curtailing the USDA subsidies that encourage the cultivation of commodity crops, a larger statewide response to the demand for comestibles agricultural products, as well as strengthening state protections to prevent the conversion of agricultural lands into housing will go a long way towards helping Chicago towards its food goals.

San Francisco

San Francisco is a small but extremely dense city that is home to just over 800,000 people on just 47 square miles of land.

It is located on the west coast of California, edging on the agriculturally productive Central, Napa, Sonoma, and Sacramento Valleys. San Francisco is renowned for its dramatic topography, with very steep hills and few flat areas, a mild Mediterranean climate, and a socially progressive community.

San Francisco's cost of living is one of the highest in the country. Nearly 150,000 San Franciscans are at risk for hunger, and 43,000 are food insecure (San Francisco Food Bank 2007). San Francisco has a significant homeless population, all of whom are considered food insecure. The San Francisco municipal government has traditionally provided a range of support services, and also has large set of community-based anti-hunger organizations and advocacy groups.

In 1993, the establishment of a Commission on San Francisco's Environment kicked off San Francisco's engagement with sustainability and with food issues. The purpose of the Commission was to develop a set of environmental principles and a sustainability plan for San Francisco. The development of these principles led to the creation of San Francisco's Department of the Environment. In 1996, the Department of the Environment created a citywide Sustainability Plan that

identified food and agriculture among its key areas for improvement (Jones 2009).

As a part of this interest in sustainability, in 2001, the San Francisco Department of Public Health's Environmental Health section created San Francisco Food Systems (SFFS). SFFS was formed as a private-public partnership that could address food systems issues within the City and County of San Francisco through action research projects, policy planning and recommendations (Jones 2009). SFFS has an office within the San Francisco Department of Public Health's Environmental Health unit, but it is not considered a part of the municipal government. SFFS has a staff of six employees who work on issues that include urban agriculture, community organizing, health policy, social science, public health, nutritional science and events planning. A major project of SFFS is the San Francisco Food Alliance (SFFA), which works on issues education, advocacy, and community representation regarding the food system by organizing an annual conference to bring together experts, policy makers, and community members (Jones 2009).

In addition to this quasi-government organization, the Department of Health launched a Sustainable Food Initiative, and created a staff position of Food Systems Planner, which

begot the San Francisco Food Working Group (SFFWG). The Executive Director of SFFS is also, interestingly enough, the Director of Food Systems within the Department of Health. The SFFWG is a multi-agency collaboration which links staff working on food related projects across City departments. The goals of the SFFWG are:

- Increase awareness about sustainable food systems
- Collaborate across city agencies and with the San Francisco Unified School District to incorporate locally and sustainably produced healthy food into city institutions.
- Develop a long-term vision and action plan for citywide sustainable food purchasing, including a needs assessment and a pilot procurement policy.
- Collectively develop a food policy outlining standard definitions for sustainable and local food in the City and County of San Francisco. (SFFWG 2008)

The combined energy and thinking about food systems in San Francisco has led to a massive amount of research, publications, and recommendations for the City and citizens to implement. SFFS produced a *Guidebook* (2003), to introduce and train residents and community organizations on how to conduct a community food assessment. The outcome of these guidebooks was SFFA's *San Francisco Collaborative Food System Assessment* (2005), an incredibly detailed, well-

researched, systemic view of food retailing, food assistance, and urban agriculture in San Francisco.

The San Francisco Collaborative Food System Assessment stands out as a particularly helpful policy tool. It provides detailed information and maps, at the community scale, of exactly how citizens access food and the quality of the food available when and where citizens find it. It scales up and summarizes opportunities across the city to improve the supply of locally grown food (SFFA 2005). Since the Assessment, SFFS has researched and worked on issues such as Farmto-Hospital programs, food quality in childcare programs, cultural food practices for management and health, and in partnership with the San Francisco Redevelopment Agency, SFFS is evaluating opportunities to include the food system issues in redevelopment projects.

The SFFWG and SFFS have tackled together the issues of improving the nutrition and quality of the school lunch program by creating a salad bar that includes local ingredients in schools where the majority of students are enrolled in the free lunch program (Jones 2009). Not only is this a departure from the ingredients provided by the USDA school lunch program, this initiative has required significant collaboration with the San Francisco Unified School District (which is out-

side mayoral control), interagency teamwork, and community support. SFFS searched for ways to prepare school lunch foods closer to the school (since nearly all food is prepped off-site) and for vendors who could provide salad ingredients that were pre-prepared (Jones 2009) while the SFFWG was able to negotiate with schools and secure funding from the Mayor.

What is most notable about the food systems work in San Francisco is the overall amount of energy and commitment. The Department of Health has made a significant commitment to defining healthy and nutritious food as fresh, locally, and responsibly produced. This definition informs the host of programs the SFFWG works on, and the research performed by SFFS.

San Francisco is nearly saturated with groups interested in food issues. Beyond SFFS, the SFFSWG, and the SFFA there are more than 10 non-profit groups in San Francisco still looking specifically at issues of the local food supply unrelated to the City's work. A complete foodshed analysis, Think Globally~Eat Locally (Thompson 2008) was produced by the American Farmland Trust and Sustainable Agriculture Education without reference to the initiatives or research performed by the City of San Francisco.

The relationship between the SFFS and the SFFSWG is quite nebulous. The Executive Director of SFFS is also the staff Food Systems Planner for the Department of Health and thus, Director of the SFFSWG. This double-duty staffing creates a conflicted role, where the evaluator is also the evaluated. This dual role, simplifies community relationships by creating a direct flow of information between city agencies and community groups; however, the structure is more top-down than bottom up.

Vancouver

Nestled in the southwest corner of British Columbia, Vancouver is reputed to be one of the world's most livable cities. Vancouver is relatively small with just under 600,000 residents, but is situated in a metropolitan region of close to 2.2 million people. Vancouver is a port city with a significant dependence on the metropolitan area's proximate natural resource industries, including forestry, mining, fishing, and agriculture. The metropolitan region has 41,035 hectares of farmland in current use, which is about 14 percent of the region's area (Metro Vancouver 2009). Farmers produce over a 100 different types of crops and livestock in the region on farms that are an average size of 16 hectares.

Over the last twenty years, Vancouver experienced a robust real estate market, with high-density development and high prices. Preparation for the 2010 Winter Olympics has intensified development, but also pushed the city towards innovative planning. At the same time, Vancouver has faced challenging social conditions with a growing population of people living in poverty and increasing homelessness.

In the late 1990s, there was a vast but disconnected network of non-profits and human services coalitions working on anti-hunger initiatives. Although the city administration was involved in the provision of emergency food resources, it was the charitable food sector that was more interested in broader food supply issues. The Vancouver Food Policy Network (VFPN) was formed to galvanize local level community initiatives and advocate for provincial funding for public health improvements, including food and nutrition. The VFPN, funded by the Department of Health, linked anti-hunger advocates with the City Department of Social Planning, the City Health Department, the British Columbia Dieticians and Nutritionists Association, and the British Columbia Ministry of Agriculture. This assemblage used the vocabulary of health promotion to broaden the set of approaches used to combat hunger, including agricultural land sustainability, and farmer-city relationships. This led to

a shift in policy framework and food moved from an issue of public health to an issue of environmental sustainability. These changes spurred the development of Vancouver's first farmers' market in 1995 (Mendes 2006 and Kahn 2009).

Bringing a farmers market to Vancouver was no small accomplishment. Besides the dearth of adequate public spaces and the challenge of finding a network of farmers with a diverse range of crops, the vending of fruits and vegetables from trucks is illegal in the City of Vancouver. The VFPN mobilized staff within the Department of Social Planning and the Department of Health to negotiate through different parts of Vancouver's government towards a solution. The solution, although not all that convenient, was caseby-case permission for each market (Kahn 2009). Because farmers' markets appeal to a broad range of constituents, this aspect of food system planning remains on the citywide agenda. Shifts in political tides and a period of municipal reorganization have stymied progress on other food systems issues by reducing the influence of the Department of Social Planning and moving the Department of Health from the municipal government into the metropolitan government (Mendes 2006).

Beginning in 2000, the City of Vancouver began progressive growth planning and efforts to protect the natural environment with the creation of the Corporate Climate Change Action Plan. This urban sustainability initiative aimed to reduce the City's greenhouse gas emissions in order to accomplish a 20% reduction from 1990 levels in greenhouse gas emissions by 2010. A result of this interest in sustainability planning was a City Council mandate to make Vancouver a sustainable city through integrated consideration of economic, ecological, and social impacts. Through the creation of a "just and sustainable system" (City Council of Vancouver 2003) food made its way onto this policy agenda. (Kahn 2009).

The City Council's mandate resulted in the creation of a Vancouver Food Policy Council (VFPC). The VFPC was organized as an advisory group to the City Council, which would incorporate both local and regional perspectives by appointing members from community groups, regional governance bodies (including the Coastal Health Commission and the Greater Vancouver Regional District), as well as members of the City Council and municipal government. The mission of the VFPC is to review how the local food system functions and make recommendations for improvements at the municipal level to encourage safe and equitable growing, distribution, and provision of food in Vancouver. Members include farmers, food distributors, nutritionists, processors,

waste managers, activists, and academics engaged in the food system. The City Council's mandate also led to creation of two food policy positions within the government: a liaison (a temporary position) and a food policy social planner (a permanent position), both to be located in the Department of Social Planning (Kahn 2009).

The purpose of funding these new positions was to "act as catalyst for issues both within and beyond the City government [and] use a food systems approach to monitor and develop food-related programs, services and projects currently provided and or supported by the City of Vancouver" (Vancouver City Council 2004). In addition to allocating funding for the staff salaries, the City Council allocated \$15,000 per anum for programming and research costs.

As a result, in 2005, the Department of Social Planning, the Western Economic Diversification Canada Organization, and Simon Fraser University Centre for Sustainable Community Development sponsored the development of the Vancouver Food System Assessment. This report evaluates the availability, accessibility, and quality of food available in Vancouver and articulates that the City's over reliance on charity, uncoordinated programs, and a food system that is based entirely on imports has limited the self-reliance of commu-

nities while making the food system vulnerable to disruption from the outside (Barbolet et all 2005).

To remedy this vulnerability, the Assessment suggests investing in community-based action programs to relocalize Vancouver's food. It argues that programs tailored to the specific needs of the neighborhoods, whether they be greater emergency food access through connections with farmers or organized community gardening, when taken together will help Vancouver develop a "system-wide approach to addressing food insecurity could stimulate critical shifts in the local food economy" (Barbolet et al. 2005). The implication is that Vancouver's Food Systems planner will be able to coordinate policy that responds to community priorities individually.

Community-based initiatives can bridge the gaps between social work and the food economy and create a hybrid "social food economy" (Barbolet et al 2005, 29). For this new social food economy to emerge, the Assessment recommends that the Vancouver government add local food to the city's ethical procurement policies, promote sustainable food procurement for the 2010 Olympics, expand the role of urban agriculture in city-led developments, and review city by-laws

related to food security to find ways to enhance the production and distribution of food within the City.

The publication of the *Vancouver Food Assessment* assisted the Food Policy Council in the formation of its priorities, which were and continue to be:

- Creation of a food charter for the City of Vancouver
- Increased access to groceries for residents of Vancouver
- Creating an institutional food purchasing policy
- Developing a coordinated effort towards waste management (Barbolet et al 2005, 3)

Since it began its work in full, the Food Policy staff at the Department of Social Services has implemented programs to increase food production within the city limits. In 2005, the Food Systems Planner at the Department of Social Planning put together a working group of city staff, VFPC representatives, community members, and academics to conduct a land-use inventory of public land and policies to assess the potential for urban agriculture. This exercise provoked the interest of the city council, and led to the commitment by the City Council for the creation of 2010 new gardening plots by January 2010, as an Olympic legacy (Kahn 2009). As a part of this commitment, the City of Vancouver created a number of creative food-productivity programs,

including the Grow-A-Row/Share-A-Row program which organizes local gardeners to donate extra fruit and vegetables from their own plots to community food agencies as well as Neighbor Backyard Gardens programs which encourage the sharing of underutilized gardens by linking interested gardeners with plot owners (Kahn 2009). Additionally, the Food Systems Planner was able to coordinate a set of City Council recommendations to enable residents to keep backyard hens for laying and to encourage urban bee keeping.

In 2007 the Mayor and City Council adopted a Vancouver Food Charter, one of the goals of the VFPC. This document (City of Vancouver 2007) establishes a commitment to a stronger local food system through the following principles:

- Economic development of a local food sector
- Improving ecological health through a reduction in the average food miles, which is over 2500 km (~1554 miles).
- Insisting that healthy, affordable, and quality food is a human right.
- Encouraging cooperation in all levels of government, businesses and NGO's to promote sound food system strategies.
- Celebration of sharing and eating food through education (City of Vancouver 2007, 1).

Interest in food issues changes with every political administration, and the progress of the food agenda has been stalled during political shifts in the City Council and the Mayor. As a result, the two person staff devoted to food systems issues was cut down to one, and the \$15,000 budget could be easily cut (Kahn 2009). Additionally, a change in leadership in the Department of Social Planning has led to a restructuring that requires that the entire staff become generalists. This approach denies the importance of food system expertise and has created a specific challenge in coordinating food policy across the city government and regional authorities (Kahn 2009).

The widely touted 2010 community garden program will probably have a short-lived impact, as the majority of the new gardens were created on private land that could be developed at any moment. The program has not been able to be proactive about finding solutions for permanent gardening facilities, and has difficulty working with the Parks Administration (which is outside the Vancouver City Government) in lowering the standards for park development (Kahn 2009). No policies have been put into place to protect these spaces for the future. Additionally, no progress has been made to change vending and zoning regulations to ease the creation of farmer's markets.

As for the VFPC, it has no authority to raise its own funds, and, in its advisory role, must remain non-partisan, and uncritical of the city. The VFPC has spent a great deal of time debating "what food policy means and what food policy should be rather than doing food policy" (Kahn 2009). As a result of the reorganization of the Department of Social Planning, the City of Vancouver no longer has a staff person on the VFPC. Thus, the effectiveness of the VFPC and the city's food policy staff member is limited by their inability to work together.

Key Commonalities and Differences

San Francisco and Vancouver both have staffs dedicated to the coordination of food issues in their respective cities. As a result, those cities have coherent citywide approaches to food: they are able to work more closely with the government on agenda setting and have clearly stated visions of how to improve their city's food system. Vancouver has adopted a food charter, and San Francisco has included food systems change as one of its pillars of sustainability. In addition, having staff that concentrate on food systems issues provides the SFFS and the VFPC a single point of coordination within the city structure. In contrast, the City of Chicago does not have any staff that work specifically

on food issues. Because the CFPAC is purposefully distinct from the municipal government, it focuses on community-level communication and coordination, and it communicates and collaborates selectively with the local government while maintaining an independent voice for critique. The City of Chicago, however, is considering the creation of not only a staff position, but also the development of a Department of Food that would operate separately from CFPAC.

Vancouver and Chicago both have advisory food policy councils, which evolved as policy advising bodies because of a need for formal coordination of community voices on food issues. Both the VFPC and CFPAC have created a space for coordination, and have evolved as advisory bodies because of the consensus they build between emergency food service providers, retailers, local food advocates, community members and city representatives for an official purpose. In contrast, the SFFS was created in order to perform research and perform community outreach, but not necessarily to develop consensus or coordinate the work of existing organizations. The VFPC, CFPAC, and SFFS all consider citizen education and empowerment central to food policy.

CFPAC, however, stands further away from the municipal government because it wants to be able to criticize when

necessary. CFPAC is funded entirely by non-profits and advocacy groups, while SFFS is funded and housed by the City of San Francisco, and the VFPC is funded by Vancouver's city council. Funding sources impact the capacity and nature of the work performed by all of these organizations. CFPAC and the VFPC have vulnerable funding streams. CFPAC operates grant-to-grant, while VFPC's funding must be annually renewed by the City Council. SFFS is funded by the Department of Health and is treated like any other discretionary program within the Department. The SFFA is a project of SFFS, and is funded by SFFS, and thus, the Department of Health.

In terms of agendas, the Vancouver and San Francisco are examples of cities that are working towards improving their relationship with proximate local and regional food sources. In contrast, Chicago faces the challenge that the capacity of its local food system is limited by the region's focus on commodity crops. Thus, Chicago is searching for ways to change the agricultural system, while San Francisco and Vancouver are searching for ways to tap into existing and appropriate sources of food.

SFFS has focused on procurement issues and improving food services by the city, like the school lunch program. The VFPC has expressed strong interest in tackling procurement issues, but has not yet made tangible progress, and Vancouver's food systems planners cannot create new policy for the entire City, they can only coordinate programs within the Department of Social Planning

The VFPC and CFPAC emphasize the importance of community and urban gardening in their agendas: both have ambitious community garden creation programs, although neither has found solutions that permanently resolve land tenure issues. As a result, SFFS works to improve the City of San Francisco's actual operation and how it provides services, while Vancouver and Chicago focus more on responding to demand for services and programs. All three of these food policy programs resulted from a combination of popular community-level movements in the city and organizational challenges.

RECOMMENDATIONS FOR A SUSTAINABLE FOOD SYSTEM IN NEW YORK CITY

The Brooklyn Food Conference and the Borough President's report are two recent examples of strong indicators of community-based, grass-roots, and even political interest in expanding the role of NYCG into local food systems planning. These signals, along with national interest in locavorism, make this moment a rare opportunity for NYCG to tackle food planning in a comprehensive manner. NYCG must create an organizational structure to organize these community voices and incorporate the work they do into the PlaNYC sustainability efforts.

One recommendation is to adapt the current New York City Food Policy Task Force into a Food Policy Council. Because New York City already hosts so many small food initiatives, the City needs a dedicated organization, like a Food Policy Council, to build relationships with these organizations and bring them into a systemic relationship with each other. Further, a single staff member who is not associated with any city agency simply cannot develop relationships or build citywide coalitions. The Food Policy Coordinator should be brought under the umbrella of PlaNYC, which is part of the Office of Environmental Coordination. Additionally, the Food Policy Coordinator needs resources beyond a limited grant. The NYCG should provide a clear and regular line of

funding, similar in structure to the public-private partnership of SFFS.

Second, NYC has a regional agricultural system that it could take more systematic advantage of as a strategic resource. NYCG should conduct a foodshed analysis to better understand its regional resources. Unlike Vancouver, Chicago, and even San Francisco, New York City already has a substantial farmer's market system. Almost half of these markets are managed by the non-profit, New York City Council on the Environment. The other half is managed by a wide array of community groups. Most of these markets could be expanded, especially in Queens and the Bronx, and made more frequent (many of them are only 1 day a week), and could be given better and facilities with more secure tenure (more than sidewalk space). Pairing this program with the experimental Fruit and Vegetable Vending Cart program, so that cart vending could be used in low-income neighborhoods to vend fresh local produce when possible, would improve accessibility to local produce. Providing Electronic Benefit Transfer (EBT) devices to all farmers' market and cart vendors would encourage the use of food stamps on local produce.

Third, to enact more local procurement policies, New York City needs to improve the ability of local and regional farmers to bring their products into NYC. This could be best be accomplished by working with nascent regional food organizations, like the New York State Food Policy Council, but also by taking a role in the management of the wholesale distribution markets. New York City no longer has any publicly operated wholesale markets; instead, it leases the management of its wholesale markets, Hunts Point and Arthur Avenue Markets, to corporate market cooperatives (NYCEDC 2008). Hunts Point, the world's largest food wholesale food and meat distribution center, services New York City and the metropolitan region. The Hunts Point center is a central point that nearly all fresh food that reaches New York City passes through. It seems reasonable that NYCG should be able to work with lessees to accommodate local farmers directly and allow them to enter the wholesale market without an intermediary distributor.

Fourth, community gardens can also support food production while encouraging community education and appreciation for the value of local fresh food. There are relatively few spaces for new gardens to be developed, but New York City should consider a garden-sharing program like the Share-a-Row in Vancouver to take advantage of the back-

yards and lawns in NYC's outer boroughs. Although roof gardens are growing in popularity, due to the design, quality, and accessibility of most rooftops in NYC, roof gardens are an expensive solution that will not provide substantial yields (Clapp 2009). NYCG can explore cost-effective solutions on safe and accessible rooftops, but should prioritize the preservation of existing community gardens and urban farms through an expansion funding for garden preservation from the Parks Department.

Finally, the NYCG should work to strengthen and develop constituencies engaged in food issues. Building public interest in food systems issues will increase involvement and, ultimately, bring innovation and responsiveness into the food system. Events like the Brooklyn Food Conference indicate that there is interest, but a single event is not enough. There need to more public forums (at least one in every borough), as well as events that are citywide in scope. These events are opportunities to bring policy makers, activists, and eaters together tackle food system challenges. Although it is impossible to calculate the effects of awareness and excitement, only with expansion of current enthusiasm for sustainable food can food systems change move to the center of NYCG's policy agenda.

Planning for food sustainability requires a systematic analysis of the relationships between the foodshed, public health, the local economy, and community structures while incorporating and responding to community energy. The strategies and lessons learned from these cases point to the importance of city-level interventions and community participation. A strong urban food system creates not only a steady supply of food, but also, strong and active citizens.

REFERENCES

Alkon, Alison. April 2008. "Paradise or pavement: the Social Constructions of the Environment in Two Urban Farmers' Markets and their Implications for Environmental Justice and Sustainability." Local Environment, 13:3, 271-289.

Allen, Erika and, Clawson, Lauralyn and, Cooley, Rodger and, deCoriolis, Andrew and, Fiser, Dennis. 2008. Building Chicago's Community Food Systems. Chicago: Chicago Food Policy Advisory Council.

Allen, Patricia. 2004. Together at the Table: Sustainability and Sustenance in the American Agrifood System. University Park, PA, Pennsylvania State University Press; Published in cooperation with the Rural Sociological Society.

American Planning Association. 2007. "Policy Guide on Community and Regional Food Planning." [Online] URL: www.planning.org/policyguides/food.html.

Barbolet, Herb et al. 2005. Vancouver Food Assessment. Vancouver Department of Social Planning, Western Diversification Canada Organization, and Simon Fraser University: Vancouver.

Bellows, Anne and Hamm, Michael. 2001. Local autonomy and sustainable development: Testing import substitution in more localized food systems. Agriculture and Human Values. Volume 18, Number 3, September, 2001

Berg, Joel. 2009. Interview with Author. May 2, 2009.

Berry, Wendell. 1996. The Unsettling of America: Culture & Agriculture. San Francisco, Sierra Club Books.

Burros, Marian. 2009. NYTIMES online, The Caucaus Blog: "White House Garden Is Not Exactly Shovel-Ready." [Online] URL: http://thecaucus.blogs.nytimes.com/2009/03/20/white-house-garden-is-not-exactly-shovel-ready/.

Chan, Sewall. April 23, 2007. NYTIMES online, The Empire Zone: "The Mayor and His Plan: Reaction". [Online] URL: http://empirezone.blogs.nytimes.com/ 2007/04/23/the-mayor-and-his-plan-reaction/?scp=19&sq=PlaNYC&st=cse

Chicago Food Policy Advisory Council. 2004. Chicago's Community Food Security. CFPAC: Chicago.

City of Chicago Department of City Planning. 2007. Chicago: Eat Local Live Healthy. City of Chicago: Chicago.

City of New York. 2007. PLANYC 2030. New York, New York: Office of the Mayor.

Clapp, Jenifer. 2009. Phone interview with author, March 16.

Cooley, Rodger. 2009. Phone Conversation with Author. March 23.

Feagan, Robert. 2007. "The place of food: mapping out the 'local' in local food systems." Progress in Human Geography 31(1): 23-42.

Guy, Aron. 2009. "A Taste for Change: Brooklyn Food Conference Organizers Step up to the Plate." The Indypendent. [Online] URL: http://www.indypendent.org/2009/02/06/taste-for-change/

Hedden. W.P. 1929. How Great Cities are Fed. New York: D.C. Heath and Company.

Henriques, Diana. April 22, 2008. "The Food Chain: Price Volatility Adds to Worry on U.S. Farms." The New York Times.

Illinois State Senate. 2007. Illinois Food, Farms, and Jobs Act. State of Illinois: Illinois.

Jacobs, David R., and Steffen, Lyn M. 2003. Nutrients, Foods, and Dietary Patterns as Exposures in Research: A Framework for Food Synergy. American Journal of Clinical Nutrition. Volume 78.3 (2003): 508S-513S.

Jones, Paula. 2009. Phone Interview with Author. April 15.

Kahn, Devorah. 2009. Phone Interview with Author. April 22.

Kingsolver, Barbara. 2007. Animal, Vegetable, Miracle. New York: Harper Collins.

Kloppenburg, Jack Jr., and Hendrickson, John, and Stevenson, G.W. 1996. Coming into the Foodshed. Agriculture and Human Values. Volume 13.2 (June 1996): 33-42.

Kloppenburg, Jack Jr., and Lezberg, Sharon, and de Master, Kathryn, and Stevenson, George W., and Hendrickson, John. 2000. Tasting Food, Tasting Sustainability: Defining the Attributes of an Alternative Food System with Competent, Ordinary People. Human Organization. Vol. 59 No. 2 (Summer, 2000): 177-186.

Lewis, Bob. 2009. E-mail message to author, March 16.

MacClancy, J., and Henry, C. J. K. 2007. Consuming the Inedible: Neglected Dimensions of Food Choice. New York, Berghahn Books.

Mendes, Wendy. 2006. Creating a 'Just and Sustainable' Food System in the City of Vancouver: The Role of Governance, Partnerships and Policy Making. Simon Fraser University Dissertation: Spring 2006.

Metro Vancouver. 2009. Regional Growth Strategy Agriculture Backgrounder. Vancouver, Metro Vancouver.

Moskin, Julia. 2009. Manhattan Borough Chief Pushes for Better Nutrition in City. The New York Times, New York. February 6.

Nestle, Marion. 2002. Food Politics: How the Food Industry Influences Nutrition and Health. Berkeley, University of California Press.

New York City Economic Development Corporation (NYCEDC). 2008. Going to Market: New York City's Neighborhood Grocery Store and Supermarket Shortage. New York, NY.

New York City Coalition Against Hunger (NYCCAH). 2009. [Online] URL: http://nyccah.org.

New York Industrial Retention Network. 2007. More than a link in the food chain: a study of the citywide economic impact of food manufacturing in New York City. New York, N.Y.

New York Times Editors. March 21, 2009. NYTIMES online, Room for Debate: "Washington's Not-So-Secret Garden." [Online] URL: http://empirezone.blogs.nytimes. com/2007/04/23/the-mayor-and-his-plan-reaction/?scp=1 9&sq=PlaNYC&st=cse

Office of the Manhattan Borough President Scott Stringer (OMBP). 2009. Food in the Public Interest. New York, City of New York Office of the Manhattan Borough President.

Oxford University Press (OUP). 2007. Oxford Word Of The Year: Locavore: OUPblog. [Online] URL: http://blog.oup.com/2007/11/locavore/

Peemoeller, Lynn. Chicago Food Policy Council. Phone Interview with author April 27, 2009.

Peters, Christian, and Bills, Nelson, and Wilkins, Jennifer, and Fick, Gary. 2006. "Foodshed Analysis and Its Relevance to Sustainability." Renewable Agriculture and Food Systems: Cambridge, UK: Cambridge University Press.

Peters, Christian Joseph. 2007. Mapping Potential Local Foodsheds in New York State: a Spatial Analysis of the Capacity to Produce Food Closer to the Point of Consumption. Cornell PhD Dissertation: August 2007.

Pirog, Richard and, Van Pelt, Timothy and, Enshayan, Kamyar, and Cook, Ellen. 2001. Food, Fuel, and Freeways: An Iowa perspective on how far food travels, fuel usage, and greenhouse gas emissions. Leopold Center for Sustainable Agriculture. Iowa.

Pollan, Michael. 2006. The Omnivore's Dilemma: A Natural History of Four Meals. New York, Penguin Press.

Pollan, Michael. 2008. In Defense of Food: An Eater's Manifesto. New York, Penguin Press.

Porter, Michael et al. 2006. The Microeconomics of Competitiveness: The Chicago Processed Food Cluster. Cambridge: Harvard University.

Pothukuchi, K. and J. L. Kaufman. 1999. "Placing the food system on the urban agenda: The role of municipal institutions in food systems planning." Agriculture and Human Values 16(2): 213-224.

Rees, William and Wackernagel, Mathis. 1996. "Urban ecological footprints: Why cities cannot be sustainable—And why they are a key to sustainability." Environmental Impact Assessment Review, Volume 16, Issues 4-6: 223-248.

Rosenthal, Elisabeth. April 26, 2008. "The Food Chain: Environmental Cost of Shipping Groceries Around the World." New York, the New York Times. [Online] URL: http://www.nytimes.com/2008/04/26/business/worldbusiness/26food.html

San Francisco Food Alliance. 2005. Collaborative Food System Assessment. San Francisco: CA.

San Francisco Food Bank. 2007. A Look at Hunger in San Francisco: Neighborhood Profiles of Hunger and Food Pantries. San Francisco: CA.

San Francisco Food Working Group. 2009. [Online] URL: http://www.sfgov.org/site/sffood_index.asp?id=66021

San Francisco Food Systems. 2009. [Online] URL: http://sffoodsystems.org/

Severson, Kim. 2007. "Farewell French Fries! Hello Sliced Apples!" in New York Times, April 4, 2007.

Specter, M. A Reporter at Large: Big Foot: Reporting & Essays: The New Yorker. The New Yorker. New York, NY, Conde Nast.

Strumolo, Tom. 2009. Phone Conversation with Author. March 20.

Thomases, Benjamin. 2009. E-mail with Author. March 10.

Thompson, Edward. 2008. Think Globally ~ Eat Locally. American Farmland Trust: Washington D.C.

United States Department of Agriculture (USDA). 2009. Food Security in the United States: Measuring Household Food Security. [Online] URL: http://www.ers.usda.gov/Briefing/FoodSecurity/measurement.htm

Vancouver City Council. 2003. Vancouver Sustainability Principles. Vancouver B.C.

Vancouver City Council. 2004. Creation of Vancouver Food Policy Council. Vancouver B.C.

Vancouver City Council. 2007. Vancouver Food Charter. Vancouver B.C.

Wescoat, J. L. and D. M. Johnston. 2008. Political Economies of Landscape Change: Places of Integrative Power. Dordrecht, Springer.

Wilkins, J. 2005. "Eating Right Here: Moving from Consumer to Food Citizen." Agriculture and Human Values 22(3): 269-273.

Winne, Mark. 2008. Closing the food gap: resetting the table in the land of plenty. Boston: Beacon Press.

Winter, M. 2003. "Embeddedness, the new food economy and defensive localism." Journal of Rural Studies 19(1): 23-32.