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How Great Cities are Fed Revisited: Ten Municipal Policies to Support the New York City Foodshed

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ESSAY

HOW GREAT CITIES ARE FED REVISITED: TEN MUNICIPAL POLICIES TO SUPPORT THE NEW YORK CITY FOODSHED

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INTRODUCTION

In October 1921, a planned nationwide railroad strike made real the possibility that a city as large as New York, dependent on distant food supplies and losing nearby farmland to suburbanization, would be at risk if those supplies were cut off.¹ The potential strike prompted the Chief of the Commerce Bureau of the Port of New York Authority, Walter P. Hedden, to write a comprehensive assessment of the city's food supply.² His book, *How Great Cities Are Fed*, published in 1929, is the first documented use of the term "foodshed," the geographic area from which food flows into a community, including the rural and urban farmland, processing and distribution facilities, transportation systems, and wholesalers and

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1. *See generally* W.P. HEDDEN, HOW GREAT CITIES ARE FED 17-36 (D.C. Heath & Co. ed., 1920) (detailing the impacts of freight rates, protective tariffs, and inspection standards on the flow of foodstuffs to New York and other cities).

2. *See, e.g., id.* at 16 (indicating that the book is intended to examine problems with perishable food distribution of the city).

retailers that make up a region's food system.³ Hedden also noted that New York City's ("City") food supply had expanded across the hemisphere, with fruits and vegetables traveling an average 1,500 miles from farm to table.⁴

However, for nearly the next eighty years the subject of food remained largely off the agenda of city planners and policy makers in New York and in most other American cities.⁵ Municipal officials viewed food production as an essentially rural issue and food availability a concern of the private sector.⁶ With the exception of the location of food distribution infrastructure, the urban planning literature largely ignored food, and urban planners had neither the mandate nor the training to address regional food issues.⁷

Within the past several years, this has begun to change. City governments have become more engaged in food systems planning.⁸ Many cities are changing zoning ordinances to support urban agriculture.⁹ Others have taken steps to expand the number of pushcarts selling fruits and vegetables, or to encourage the development of supermarkets.¹⁰ Regional planning organizations, like

3. See generally *id.* at 17, 20-21 (analogizing the flow of water in a watershed to the flow of food in a foodshed, then discussing how foodsheds are not defined by distance zones, but instead by transportation rates, seasonal distinctions, and shipping seasons).

4. See *id.*

5. See Gregory Alexander Donofrio, *Feeding the City*, GASTRONOMICA: THE JOURNAL OF FOOD AND CULTURE, Fall 2007, at 38.

6. See Kameshwari Pothukuchi & Jerome L. Kaufman, *Placing the Food System On the Urban Agenda: The Role of Municipal Institutions In Food Systems Planning*, 16 AGRIC. AND HUMAN VALUES 107, 216, 219 (1999).

7. See Kameshwari Pothukuchi & Jerome L. Kaufman, *The Food System: A Stranger to the Planning Field*, 66(2) J. OF THE AM. PLANNING ASS'N 113, 114 (2000).

8. See KIMBERLY HODGSON ET AL., URBAN AGRICULTURE: GROWING HEALTHY, SUSTAINABLE PLACES 5 (Am. Planning Ass'n ed., 2011); see also AM. PLANNING ASS'N, POLICY GUIDE ON COMMUNITY AND REGIONAL FOOD PLANNING Introduction (2007), <http://www.planning.org/policy/guides/pdf/foodplanning.pdf>; Kameshwari Pothukuchi, *Community and Regional Food Planning: Building Institutional Support in the United States*, 14 INT'L PLANNING STUD. 348, 349 (2009).

9. See Nina Mukherji & Alfonso Morales, *Zoning for Urban Agriculture*, ZONING PRACTICE, March 2010, at 2.

10. See, e.g., LINDA SHAK ET AL., RECIPES FOR CHANGE: HEALTHY FOOD IN EVERY COMMUNITY 14 (2010) (discussing the benefits of supermarkets in urban areas).

the Delaware Valley Regional Planning Commission and the Chicago Metropolitan Agency for Planning, have created sustainability plans that include ideas for transforming the food system.¹¹

Despite the recent interest in food systems planning and policymaking, including some regional planning initiatives, few cities have grappled with the problems facing their surrounding foodshed. To the extent that city officials focus on food at all, their attention is often directed to the part of the food system that is wholly within the city, such as the city's food retail sector or food processing businesses, or nutritional standards.¹² New York City's recently updated sustainability plan, for example, emphasizes the challenges associated with addressing the climate and environmental impacts associated with food production that occur outside of the five boroughs.¹³

But cities exist within interdependent regions, and a city's food infrastructure, like its transportation, water, and energy infrastructure, spans many jurisdictions. Moreover, a variety of benefits are attributed to a productive foodshed that can supply a particular community with some or most of its nutritional needs. These include: possible energy and material efficiency; improved taste and nutritional quality of fresh food due to the shorter distances between producers and consumers; decreased need for processing and packaging; regional farmland preservation and the continued viability of small and medium size family farms near cities; community food security in both urban centers and rural farming communities as a result of a thriving regional agriculture sector; and closer relationships between producers and consumers that also improves

11. See CHI. METRO. AGENCY FOR PLANNING, GO TO 2040: COMPREHENSIVE REGIONAL PLAN 142 (2010), available at <http://www.cmap.illinois.gov/2040/main> (follow "Download the full plan (PDF)" hyperlink); EATING HERE: GREATER PHILADELPHIA'S FOOD SYSTEM PLAN (2011), available at http://www.dvrpc.org/asp/pubs/publicationabstract.asp?pub_id=10063.

12. See Kevin Morgan & Roberta Sonnino, *The Urban Foodscape: World Cities and the New Food Equation*, 3 CAMBRIDGE J. OF REGIONS, ECON. & SOC'Y 209, 221 (2010).

13. See THE CITY OF NEW YORK, PLANYC: A GREENER, GREATER NEW YORK 164 (2011), available at http://nytelecom.vo.llnwd.net/o15/agencies/planyc2030/pdf/planyc_2011_planyc_full_report.pdf [hereinafter "PLANYC"].

democratic decision-making, trust, and accountability among individuals within the food system.¹⁴

Some cities are beginning to embrace food systems planning by looking beyond their borders to the foodsheds in which they exist.¹⁵ While there are limits to a city's ability to support the farming communities just beyond the city edge, many planning and policy mechanisms are available to municipal governments to help create a productive and sustainable regional food system. San Francisco has been outward-looking in seeking to source municipal food from the region's foodshed.

Using New York City as a case study, and inspired by Hedden's comprehensive work, this essay describes ten municipal policies that can support the city's foodshed.¹⁶ It focuses on New York City for three reasons. First, New York City's physical foodshed is threatened by sprawling development.¹⁷ Between 2002 and 2007, New York State lost nearly 490,000 acres of farmland.¹⁸ During that same period, the number of farms in the Hudson Valley region declined by 3%, with a 10% loss in farmland acreage.¹⁹ One fifth of farms with 500 acres or more were lost,²⁰ and farming as an occupation in the region remains precarious, requiring the farm operators of most Hudson Valley farms to hold an off-farm job to supplement farm income; with most farmers close to retirement age, the possibility of losing farmland to development as farmers seek retirement income remains high.²¹

14. See Jack Kloppenburg et al., *Coming Into the Foodshed*, 13(3) AGRIC. & HUM. VALUES 35-36 (1996) (identifying various problems with distancing in the food system).

15. See, e.g., PAULA JONES ET AL., SAN FRANCISCO EXECUTIVE DIRECTIVE ON HEALTHY AND SUSTAINABLE FOOD 1 (2010), available at <http://www.sfgov3.org/Modules/ShowDocument.aspx?documentid=503> (discussing San Francisco Mayor Gavin Newsome's 2009 directive strategizing on the city's food system policy).

16. See *infra* p. 4.

17. See *id.*

18. See USDA ECON. RESEARCH SERV., *State Fact Sheets: New York: Farm Characteristics*, <http://www.ers.usda.gov/statefacts/ny.htm#FC> (last updated May 19, 2011).

19. See GLYNWOOD CTR., INC., STATE OF AGRICULTURE IN THE HUDSON VALLEY 3 (2010), available at http://www.glynwood.org/files/2011/02/State_of_Ag_2010.pdf.

20. See *id.*

21. See *id.*

A second reason is that our watershed exists within our foodshed, occupying some of the same land. New York City draws approximately ninety percent of its water, unfiltered, from an agricultural region that spans several upstate counties.²² The City entered into a memorandum of understanding with those counties committing the city to provide funds for whole farm planning, land acquisition, sustainable forestry practices, local economic development, and other programs that support, directly and indirectly, sustainable farming practices to keep its aquifers pure.²³ To the extent that farming in the watershed declines, communities will be even harder pressed to find other forms of economic development that may include natural gas extraction using toxic chemicals (hydrofracking) or large-scale entertainment venues, like casinos, that attract large numbers of visitors and require infrastructure, such as parking lots, that contribute to non-point source pollution.

A third reason is that the unmet demand for local food is large, providing an opportunity for the economy to grow by spending more of our food dollars regionally. A 2005 study found that New York City's restaurants, supermarkets, and other wholesale purchasers constitute a potential but unfulfilled demand for some \$866 million worth of locally produced food.²⁴ Given the rising interest in local food over the past five years, reflected in the growth of farmers markets, community supported agriculture programs, and other direct marketing efforts,²⁵ the potential market in New York City may be even larger than the 2005 estimate. Providing the infrastructure to make wholesale sourcing of local food less costly and more

22. See Rutheford H. Platt et al., *A Full, Clean Glass? Managing New York City's Watersheds*, 42 ENV'T 8, 10 (2000).

23. See N.Y. STATE ENVTL. FACILITIES CORP., *New York City Watershed Memorandum of Agreement*, <http://www.nysefc.org/Default.aspx?TabID=76&fid=389> (follow "NYC MOA- Table of Contents.pdf" hyperlink) (last visited May 20, 2011).

24. See MKT. VENTURES, INC. & KARP RES., *NEW YORK CITY WHOLESALE FARMERS' MARKET STUDY: FINAL REPORT EXECUTIVE SUMMARY 8* (2005), available at <http://www.marketventuresinc.com/download/NYC-WFM-ExecSum-Phase-1.pdf> [hereinafter "WHOLESALE FARMERS' MARKET STUDY"].

25. See generally STEVE MARTINEZ ET AL., U.S. DEP'T AGRIC., *LOCAL FOOD SYSTEMS: CONCEPTS, IMPACTS, AND ISSUES* (2010), available at <http://www.ers.usda.gov/Publications/ERR97/ERR97.pdf>.

convenient would meet this demand and keep dollars circulating in the region's economy.

I. FOODSHED POLICIES

Cities like New York can take a number of steps to support urban and regional agriculture and ensure that their foodsheds remain economically vibrant and ecologically sustainable. The following ten policy recommendations are neither exhaustive nor unique. They involve four categories of policy intervention: public procurement of regional products; infrastructure development to support regional food production; direct assistance to farmers; and long-term planning at the city and neighborhood level to provide the infrastructure that a healthy foodshed requires. The ideas have been discussed by food system planners and advocacy organizations, and have been incorporated into City policy plans like City Council Speaker Quinn's FoodWorks: A Vision to Improve NYC's Food System,²⁶ Manhattan Borough President Scott Stringer's Food in the Public Interest,²⁷ FoodNYC: A Blueprint for a Sustainable Food System,²⁸ and the 2011 update to the Mayor's PlaNYC: A Greener, Greater New York.²⁹

A. Public Procurement of Foodshed Products

1. Procure Regionally Produced Food

Using the public purse to buy food from regional producers can be a powerful strategy to support agriculture within a city's foodshed. For example, the City's Department for the Aging serves over 12.4 million meals annually through home delivery and senior centers, the Department of Juvenile Justice feeds more than 5,000 youths in its

26. See generally THE N.Y.C. COUNCIL, FOODWORKS: A VISION TO IMPROVE NYC'S FOOD SYSTEM (2010) available at http://council.nyc.gov/html/food/files/foodworks_fullreport_11_22_10.pdf [hereinafter FOODWORKS].

27. See generally SCOTT M. STRINGER, FOOD IN THE PUBLIC INTEREST: HOW NEW YORK CITY'S FOOD POLICY HOLDS THE KEY TO HUNGER, HEALTH, JOBS AND THE ENVIRONMENT (2009), available at http://www.mbpo.org/uploads/policy_reports/FoodInThePublicInterest.pdf.

28. See generally SCOTT M. STRINGER, FOODNYC: A BLUEPRINT FOR A SUSTAINABLE FOOD SYSTEM (2010), available at http://www.mbpo.org/uploads/policy_reports/mbp/FoodNYC.pdf.

29. See generally, PLANYC, *supra* note 13.

detention facilities, and the Health and Hospitals Corporation, the largest health care system in the country, provides meals at its hospitals and nursing homes.³⁰ Overall, New York City agencies *other than the Department of Education* serve 225 million meals and snacks annually.³¹ Adjusting procurement to preferentially source regionally-grown food for these millions of meals would channel the roughly \$175 million that New York City agencies spend on food for various social service programs to the region's farmers.³²

The provenance of the ingredients in the meals purchased and served by these city agencies are not currently tracked by the Mayor's Office of Contract Services, which oversees, approves, and helps to manage procurement by city agencies.³³ Legislation pending in the City Council (Int. No. 452) would require the City's chief procurement officer to develop guidelines for agencies that will assist in maximizing the purchase of New York state food, defined as food grown, produced, harvested, or processed within the state.³⁴ The procurement officer would be required to develop New York State purchasing guidelines for agencies, publish these guidelines on the

30. See *City Offices*, NYC.GOV, <http://www.nyc.gov/portal/site/nycgov/menuitem.d1aff3921cfb1307a62fa24601c789a0> (last visited May 17, 2011).

31. See Press Release, New York City Office of the Mayor, Mayor Bloomberg and Shaquille O'Neal Announce New Food Standards for City Agencies (Sept. 19, 2008), <http://www.nyc.gov/cgi-bin/misc/pfprinter.cgi?action=print&sitename=OM&p=1306596589000>. The Mayor's Executive Order 122 of September 19, 2008 states that "the City serves over 1,000,000 meals on a typical day through its public schools, hospitals, senior centers, correctional facilities, homeless shelters, and other programs." N.Y.C. Exec. Order No. 122 (Sept. 19, 2008), available at [http://www.chronicdisease.org/nacdd-initiatives/cardiovascular health/leadership/Sodium/CVHC_NYC_ProcurementExecutiveOrder_2008.pdf](http://www.chronicdisease.org/nacdd-initiatives/cardiovascular%20health/leadership/Sodium/CVHC_NYC_ProcurementExecutiveOrder_2008.pdf) [hereinafter "Executive Order 122"].

32. See FOODWORKS, *supra* note 26, at 22, 23. '

33. See Jake Luce, Deputy Chief of Staff, N.Y.C. Mayor's Office of Contract Serv., Testimony before N.Y.C. Council Committee on Contracts 13 (Feb. 28, 2011) (transcript available at <http://legistar.council.nyc.gov/LegislationDetail.aspx?ID=828460&GUID=8B484573-3BE2-4A2D-8C13-425453936D04&Options=ID|Text|&Search=452>).

34. See NYC COMM. ON CONTRACTS, N.Y.C. COUNCIL, REPORT OF THE GOVERNMENTAL AFFAIRS DIVISION 6 (Feb. 28, 2011), available at <http://legistar.council.nyc.gov/LegislationDetail.aspx?ID=828460&GUID=8B484573-3BE2-4A2D-8C13-425453936D04&Options=ID|Text|&Search=452> (follow "Committee Report 2/28/11" hyperlink) [hereinafter "NYC COMMITTEE ON CONTRACTS"]. The legislation has been laid over in the Committee on Contracts. See *id.*

Mayor's Office of Contract Services website, train agency contracting personnel on how to implement the guidelines, monitor agency implementation, and report on each agency's efforts to implement the guidelines and the overall quantity and amount of New York State food that each agency procures.³⁵ The legislation prohibits preferential procurement that increases the food budgets of an agency, and exempts small purchases and emergency purchases.³⁶

Recognizing that New York City's foodshed encompasses more than the state itself, the New York City Council is also considering enacting a resolution (Res. No. 627) that urges the New York State Legislature to amend the state's General Municipal Law to expand its preferential procurement law to allow New York City to institute procurement preferences for food from the greater New York region, including New Jersey, Connecticut, Massachusetts, Vermont, and New Hampshire.³⁷

In addition to the 225 million meals procured each year by New York City agencies, the Department of Education ("DOE") buys, prepares, and serves approximately 860,000 meals per day, making it the second largest institutional food buyer in the country, behind the US military.³⁸ School Food Plus, a DOE program funded by the Kellogg Foundation that operated from 2004 to 2007, successfully integrated regional foods into the menus of some public schools.³⁹ One estimate suggested that approximately ten percent of DOE's procured food could be produced in the region.⁴⁰

35. *See id.*

36. *See id.*

37. *See* NYC COMMITTEE ON CONTRACTS *supra*, note 34, at 13-14.

38. *See* NYC Department of Education – SchoolFood, NYC DEPT. OF EDUC., <http://www.opt-osfns.org/osfns/meals/default.aspx> (last visited May 18, 2011); *see also* Christine C. Quinn, N.Y.C. Council Speaker, Speech Announcing FoodWorks New York (Dec. 7, 2009) (transcript available at http://council.nyc.gov/downloads/pdf/foodworksny_12_7_09.pdf).

39. AMY KWAN ET AL., RECIPES FOR HEALTH: IMPROVING SCHOOL FOOD IN NEW YORK CITY 17 (2010), *available at* <http://web.gc.cuny.edu/che/NYCSchoolFood.pdf> (stating that the SchoolFood PLUS Initiative had three components, one of which was institutional-level procurement changes).

40. *See* FOODWORKS, *supra* note 26, at 22.

2. Include Provenance and Production Methods in Nutrition Standards

Executive Order (no. 122 of 2008), which outlines the Bloomberg administration's food policy, created the position of "Food Policy Coordinator for the City of New York."⁴¹ This position is situated within the Office of the Mayor, but with reporting responsibilities to the Deputy Mayor for Health and Human Services and the Mayor.⁴² The Food Policy Coordinator's duties include developing and coordinating "initiatives to promote access to healthy food for all New Yorkers."⁴³ This includes increasing access to and use of food support programs like the Supplemental Nutrition Assistance Program (formerly called Food Stamps), developing healthy food standards, and ensuring that the meals and snacks served by New York City meets those standards.⁴⁴ The Food Policy Coordinator must also convene a Food Policy Task Force with representatives from the Health Department, Department of Education, the Human Resources Administration, the Office of the City Council Speaker, and the quasi-governmental Council on the Environment of New York City (now called "GrowNYC").⁴⁵

The existing healthy food standards, which currently govern the nutritional content of food that the city serves to its clients and sells in city facilities, are wide-ranging, covering nutritional qualities like fat and sodium content, requiring agencies that purchase juice to buy only 100% fruit juice, prohibiting fruit canned in syrup, recommending whole wheat bread and pasta, and establishing production standards, like prohibiting deep frying.⁴⁶ These standards are ambitious measures that have undoubtedly improved the health of New Yorkers who rely on New York City food in a wide range of contexts.

Unfortunately, the standards do not address how the food that New York City serves is actually produced. Pursuant to Executive Order

41. See Executive Order 122, *supra* note 31.

42. See *id.*

43. See *id.*

44. See *id.* (discussing increasing access for those who cannot afford to purchase food).

45. See *id.*

46. See *New York City Agency Food Standards*, NYC.GOV, 2-5 <http://www.nyc.gov/html/doh/downloads/pdf/cardio/cardio-NYC-agency-food-standards.pdf> (last visited May 25, 2011).

No. 122 of 2008, the standards must be reviewed and revised three years after their original promulgation.⁴⁷ As the City reviews and revises the standards, the City should consider addressing in the standards some or all of the broader goals of sustainability articulated in policy documents like FoodWorks,⁴⁸ Food in the Public Interest,⁴⁹ PlaNYC,⁵⁰ and other city plans and programs. Broadening the standards to address sustainability might mean adding language that requires New York to buy food produced in the healthiest way possible, with little or no pesticides and synthetic fertilizers, or antibiotics and growth-inducing hormones. For fresh fruits and vegetables procured by city agencies, it might mean preferentially procuring food grown in our watershed or in the Hudson Valley, as legislation currently under consideration by the City Council would encourage.⁵¹ Other environmental and social factors could be considered as well.

Expanding the scope of New York City's Agency Food Standards would not divert attention from the need to get people to eat more vegetables and less sugary beverages. Rather, it would incorporate the other critical dimensions that make a food system both nutritious and sustainable. Moreover, a preference for sustainably produced food could benefit the rural communities surrounding New York City and the ecosystems that our city depends on for drinking water, open space, and clean air.

B. Foodshed Infrastructure Development

1. Enhance Distribution Infrastructure to Support Regional Producers

The City's wholesale food distribution infrastructure could be redesigned to help the farms located in the foodshed distribute their produce more efficiently, enabling them to be more competitive with larger scale suppliers from California, Florida and beyond. For example, the New York City Economic Development Corporation ("EDC"), a nonprofit company operating under contract with the City to provide economic development services, serves as the lease

47. See Executive Order 122, *supra* note 31.

48. See generally FOODWORKS, *supra* note 26.

49. See generally STRINGER, *supra* note 27.

50. See generally PLANYC, *supra* note 13.

51. See NYC COMM. ON CONTRACTS, *supra* note 34, at 2, 7.

administrator for the Hunts Point Terminal Produce Market.⁵² Hunts Point, the largest terminal market in the U.S. country, handles sixty percent of New York City's wholesale produce sales.⁵³

EDC has been working with the Hunts Point produce wholesalers on a redevelopment plan for the market to create a more efficient, sanitary, and operationally up-to-date market that will be more profitable for the current vendors.⁵⁴ A core need is to improve infrastructure to provide cold chain compliance (constant refrigeration and humidity control to ensure that fresh produce stays safe and maintains its freshness). Another important need is to improve the inefficient onsite transportation infrastructure.⁵⁵ One major problem is that rail cars and trucks both use the loading docks, and the congestion adds time, and costs, to the loading process. Other markets in the region have captured growers dissatisfied with the conditions at Hunts Point.⁵⁶ Some of these producers may return to the Hunts Point market if infrastructure improvements significantly reduced the time required to unload produce, lowering distribution costs. The return of these regional growers would, in turn, increase the availability of food grown in the foodshed to supermarkets and other wholesale buyers.

Another step that the city could take to improve the efficiency of distributing food produced regionally is to create a dedicated, permanent wholesale farmers market. As noted above, the unmet demand for local food is substantial.⁵⁷ By creating infrastructure to aggregate, process and distribute this food, sourcing would be more efficient and cost-effective for retail establishments, restaurants, and

52. See *Hunts Point Peninsula*, NYCEDC.COM, <http://www.nycedc.com/ProjectsOpportunities/CurrentProjects/Bronx/HuntsPointVisionPlan/Pages/HuntsPointVisionPlan.aspx> (last visited May 25, 2011) [hereinafter "*Hunts Point Peninsula*"].

53. See FOODWORKS, *supra* note 26, at 44.

54. See *Hunts Point Peninsula*, *supra* note 52.

55. See *id.* (discussing including greater access to the waterfront, streetscape enhancements, and intersection improvements for pedestrian safety).

56. See, e.g., Lisa Finkenscher, *Food Fight at Hunts Point*, CRAIN'S NEW YORK BUSINESS (Aug. 1, 2010, 5:59 PM), <http://www.craainsnewyork.com/article/20100801/SMALLBIZ/308019963> (stating that "bodega owners and mom-and-pop grocers have mostly stopped shopping there, going instead to the 32 produce businesses that have opportunistically cropped up outside the fortress fence").

57. See FOODWORKS, *supra* note 26, at 3, 4.

other institutional buyers.⁵⁸ Such a wholesale market could be built in the Hunts Point terminal market area or on a different site strategically located within the five boroughs.⁵⁹

2. Expand and Support Direct Marketing Opportunities For Farmers

New York City could dramatically expand the network of fifty-four Greenmarkets⁶⁰ and fifty-eight Community Farmers Markets⁶¹ that currently operate throughout the city, thereby providing greater opportunities for farmers to market their produce directly to consumers. Moreover, the City could expand its funding of electronic benefit transfer equipment so that more farmers markets are able to accept Supplemental Nutrition Assistance Program (“SNAP”) and Women, Infants and Children (“WIC”) benefits, increasing their revenues and providing access to fresh fruits and vegetables for low-income New Yorkers. Reducing market fees and streamlining the regulations for farmers markets would also increase the ability of community organizations to start and run new markets.⁶² Farmers markets would also be more efficient if farmers had facilities in New York City to store their food between market days to avoid frequent trips back and forth to the farm.

Other forms of direct marketing, like community supported agriculture programs (“CSA”), which help farmers by getting consumers to share the risk of the harvest by paying for a share of produce at the start of the growing season, would expand the demand for regionally-produced food. If the City supported the growth of CSA programs, farmers in the foodshed would be better able to market their food to New Yorkers. One example of this is a plan by the City Council to work with the New York City Department for the Aging to create opportunities for CSAs in the city’s senior centers,

58. See *FOODWORKS*, *supra* note 26, at 11.

59. See generally *WHOLESALE FARMERS’ MARKET STUDY*, *supra* note 24, at 8 (discussing the preference survey participants had for certain boroughs).

60. Greenmarkets are operated by the organization. See generally *Greenmarket Farmers Markets*, GROWNOC.ORG, <http://www.grownoc.org/greenmarket> (last visited May 25, 2011).

61. See generally SCOTT M. STRINGER, OFFICE OF THE MANHATTAN BOROUGH PRESIDENT, RED TAPE, GREEN VEGETABLES: A PLAN TO IMPROVE NEW YORK CITY’S REGULATIONS FOR COMMUNITY-BASED FARMERS MARKETS (2011), available at <http://www.libertycontrol.net/uploads/mbpo/RTGVRreport.pdf>.

62. See *id.* at 13.

and plans to work with the New York City Housing Authority (“NYCHA”) to increase access to CSAs in housing projects.⁶³

3. Adapt Zoning to Facilitate Regional Distribution

The Department of City Planning (“DCP”) is responsible for conducting planning and zoning studies and recommending changes to the zoning resolution to promote the city’s policy goals.⁶⁴ In addition, the DCP participates in New York City’s Uniform Land Use Review Process (“ULURP”).⁶⁵ It also has within its purview the review of overall land use issues related to transportation (for food movement), community facilities (including food-related facilities such as community farms) and the use of public spaces, which may include food-related facilities.⁶⁶

In recent years, DCP has studied food access issues, considering the impact of zoning on the location of food retail establishments.⁶⁷ The DCP prepared a study identifying the dearth of supermarkets in certain low-income communities, and in response, prepared zoning incentives to encourage supermarkets to locate in these neighborhoods.⁶⁸ The initiative, Food Retail Expansion to Support Health (“FRESH”), combines zoning changes and financial

63. See *FOODWORKS*, *supra* note 26, at 22.

64. See *About Us*, N.Y.C. DEP’T OF CITY PLANNING, <http://www.nyc.gov/cgi-bin/misc/pfprinter.cgi?action=print&sitename=DCP&p=1306781988000> (last visited May 30, 2011) [hereinafter “DCP”] (stating that the DCP provides “policy analysis” and initiates “comprehensive, consensus-based planning and zoning changes”).

65. See *Uniform Land Use Procedure*, N.Y.C. DEP’T OF CITY PLANNING, <http://home2.nyc.gov/cgi-bin/misc/pfprinter.cgi?action=print&sitename=DCP&p=1306783682000> (last visited May 30, 2011). The Uniform Land Use Review Procedure is a standardized process for the public review of land use changes. See *id.*

66. See DCP, *supra* note 64 (stating that the DCP provides “policy analysis and technical assistance relating to housing, transportation, community facilities, demography, waterfront and public space”).

67. See *generally Going to Market: New York City’s Neighborhood Grocery Store and Supermarket Shortage*, N.Y.C. DEP’T OF CITY PLANNING, <http://www.nyc.gov/html/dcp/html/supermarket/index.shtml> (last visited May 30, 2011) (discussing the DCP’s study of the widespread shortage of supermarkets in New York City).

68. See CITY PLANNING COMM’N, N.Y.C. DEP’T OF CITY PLANNING, N.Y.C. ZONING TEXT AMENDMENT N 090412 ZRY (2009), available at <http://home2.nyc.gov/html/dcp/pdf/cpc/090412.pdf>.

incentives to make it more profitable for developers to include supermarkets in their projects, and to allow the construction of supermarkets in light manufacturing districts without a special permit.⁶⁹ The proposed zoning incentives offer additional floor area in mixed residential and commercial buildings that include grocery stores, reductions in required parking, and larger stores that are allowed as-of-right in light manufacturing districts.⁷⁰ The initiative also provides New York City Industrial Development Agency financial incentives to grocery store operators.⁷¹ City Planning could do more to support the regional foodshed. It could, for example, create a plan to support a more efficient and environmentally sustainable infrastructure to facilitate the processing, storage, and distribution of food, including regional products. And it could also review existing zoning and building restrictions that may inhibit agricultural practices

The FRESH initiative applies to areas of the city with the least access to healthy, fresh food, which have been defined by the Department of City Planning to include the South Bronx, Upper Manhattan, Central Brooklyn, and Downtown Jamaica.⁷² City Planning hopes that rezoning will stimulate the growth of supermarkets in these neighborhoods, thereby providing more equitable access to food, promoting healthy eating, and reducing diet-related diseases.⁷³

4. Support Urban Food Production

The five boroughs are part of New York City's foodshed, and food production within the city results in a wide range of benefits, from enabling low-income residents to grow their own fresh produce to educating youth, providing safe spaces for seniors to garden, and adding greenery to a community. Several agencies that are responsible for supporting community gardens and urban farms

69. See *FRESH Food Store Areas*, N.Y.C. DEP'T OF CITY PLANNING, <http://www.nyc.gov/cgi-bin/misc/pfprinter.cgi?action=print&sitename=DCP&p=1306787922000> (last visited May 30, 2011) (stating that larger stores will be allowed to locate "as-of-right" in light residential areas).

70. See *id.*

71. See *id.* (listing incentives such as real estate tax reductions, sales tax exemptions, and mortgage recording tax deferrals).

72. See *id.*

73. See *id.*

should receive increased funding to expand the number of urban agriculture sites and to help them operate more productively by providing services like technical assistance, compost, and equipment.

For example, the Department of Parks & Recreation (“DPR”) runs a program called GreenThumb, one of the nation’s largest urban gardening programs with some 700 participating gardens.⁷⁴ The Department of Housing Preservation and Development (“HPD”), which develops housing in NYC, has incorporated food production into some of its innovative projects; such as a residential project in the Bronx called Via Verde.⁷⁵ Additionally, NYCHA runs one of the country’s largest community gardening programs, providing materials and technical support to some 3,000 gardeners in more than 600 registered gardens citywide.⁷⁶

5. Recycle Organic Matter Into Fertilizer

The New York City Department of Sanitation (“DOS”) is responsible for collecting and disposing of the city’s solid waste.⁷⁷ Organic material, which can be recycled into compost, constitutes twenty-nine percent of the residential waste stream.⁷⁸ The DOS operates a variety of composting education programs, funds non-profit organizations that compost food and yard waste, and offers low-cost compost bins to residents who wish to compost at home.⁷⁹

74. See *GreenThumb Community Gardens*, N.Y.C. DEP’T OF PARKS AND RECREATION, http://www.nycgovparks.org/sub_about/partners/greenthumb/greenthumb.html (last visited May 30, 2011).

75. See generally *Via Verde – New Housing New York Legacy Project*, PLANNYC <http://www.plannyc.org/taxonomy/term/747> (last visited May 30, 2011).

76. N. RESEARCH STATION, U.S. FOREST SERV., RESTORATIVE COMMONS: CREATING HEALTH AND WELL-BEING THROUGH URBAN LANDSCAPES 233 (Lindsay Campbell & Anne Wiesen, eds., 2009), available at <http://www.nrs.fs.fed.us/pubs/8810>.

77. See generally *About DSNY*, N.Y.C. DEP’T OF SANITATION, <http://www.nyc.gov/html/dsny/html/about/about.shtml> (last visited May 30, 2011).

78. See, e.g., *Collections and Givebacks*, N.Y.C. DEP’T OF SANITATION, <http://www.nyc.gov/html/nycwasteless/html/compost/collections.shtml> (last visited May 30, 2011) (listing the different composting programs offered by the NYC Sanitation Department); *Composting Operations*, N.Y.C. DEP’T OF SANITATION, <http://www.nyc.gov/html/nycwasteless/html/compost/operations.shtml> (last visited May 30, 2011) (describing the department’s composting operations).

79. See, e.g., *Organics in NYC’s Residential Waste Stream*, N.Y.C. DEP’T OF SANITATION, <http://www.nyc.gov/html/nycwasteless/html/resources/>

In addition, Local Law 37 of 2010 re-establishes a citywide yard waste composting program,⁸⁰ while Local Law 42 of 2010 requires the DOS, with the Mayor's Office of Long Term Planning and Sustainability, to assess the viability of a curbside collection program for household and institutional compostable waste, including a study of the viability of instituting a food waste composting program for the residential or commercial waste stream.⁸¹ Creating programs to beneficially reuse organic material in the waste stream would enable the City to supply community gardens and urban farms with valuable fertilizer while diverting this material from waste disposal facilities.

In addition to the Department of Sanitation, the New York City Department of Environmental Protection ("DEP") operates the city's sewage treatment system, which produces 1,200 wet tons of sludge ("biosolids") each day.⁸² Biosolids have been beneficially reused as fertilizer and soil conditioners for farmland, parkland, lawns, golf courses and cemeteries.⁸³ However, after the recent closure of a sludge pelletization plant, the DEP has landfilled the sludge that had previously processed at this plant for landscaping and agricultural uses.⁸⁴ The DEP is committed to a comprehensive plan for sludge management that includes beneficial reuse, and in December 2010, issued a request for proposals for beneficial reuse projects.⁸⁵

C. Direct Support of Regional Farmers

1. Provide Technical and Financial Support to Farmers

The Federal Surface Water Treatment Rule⁸⁶ requires drinking water that comes from surface water (e.g., reservoirs) to be filtered.

wcs_organics.shtml (last visited May 30, 2011) (stating that "[n]early 29% of NYC's residential waste is suitable for source-separated composting, including yard trimmings, food wastes, compostable paper").

80. *See generally* New York, N.Y., Local Law No. 37 (2010).

81. *See generally* New York, N.Y., Local Law No. 42 (2010).

82. *See Beneficial Use of Biosolids*, N.Y.C. DEP'T OF ENVTL. PROT., <http://www.nyc.gov/html/dep/html/wastewater/wwsystem-biosolids.shtml> (last visited May 26, 2011).

83. *See id.*

84. *See* Press Release, N.Y.C. Dep't of Env'tl. Prot., DEP Issues Request for Proposals to Reuse Sludge, ("November 5, 2010) *available at* http://www.nyc.gov/html/dep/html/press_releases/10-95pr.shtml.

85. *See id.*

86. *See generally* 40 C.F.R. § 141.70-141.75 (2010).

The City's largest reservoir system, located in the Catskill region about 100 miles north of New York City,⁸⁷ supplies ninety percent of the City's water, is currently unfiltered, and is one of only five major surface water systems in the nation that supply water without filtration.⁸⁸ New York City has successfully obtained a Filtration Avoidance Determination from the EPA.⁸⁹ One of the conditions of the waiver is a requirement that the City engage in various conservation activities to protect the source water, including buying or obtaining conservation easements on sensitive land near streams, and providing financial support to the approximately 350 farmers in the watershed so that they can use best management practices on their farms to reduce runoff of manure, pesticides and fertilizers, and soils.⁹⁰ This program is administered by the Watershed Agricultural Council ("WAC"), which holds conservation easements on some 20,700 acres of farms and forests in the watershed, and supports "buy local" marketing programs for regionally produced food and wood products.⁹¹

By providing this assistance, the DEP not only helps farmers to be more efficient, but also enables them to comply with increasingly stringent environmental standards and therefore remain operating within the watershed compatibly with an unfiltered water supply. By helping farmers to remain profitable as farmers, the DEP program enables villages and towns within the Catskills to remain economically viable as agricultural communities, forestalling larger scale residential and commercial development that would bring larger

87. See *NYC's Reservoir System*, NYC.GOV, <http://www.nyc.gov/html/nycwater/html/drinking/reservoir.shtml> (last visited May 31, 2011). The Catskill-Delaware watershed is north of New York City and west of the Hudson River. See *id.*

88. See Press Release, U.S. Env'tl. Prot. Agency, EPA Grants NYC New Waiver from Filtering Drinking Water from its Catskill/Delaware Water System (Jul. 30, 2007), available at <http://yosemite.epa.gov/opa/admpress.nsf/3881d73f4d4aaa0b85257359003f5348/54aeb32b2719f5f585257328004c70da!OpenDocument>.

89. See *id.*

90. See generally Michael C. Finnegan, *New York City's Watershed Agreement: A Lesson in Sharing Responsibility*, 14 PACE ENVTL. L. REV. 577, 619-30 (1997) (discussing the conditional waiver on the filtration requirement granted to New York City).

91. See *Strategy 2011-2014*, N.Y.C. DEP'T OF ENVTL. PROT. 24 (2011), available at http://www.nyc.gov/html/dep/pdf/strategic_plan/dep_strategy_2011.pdf.

populations to the watershed with built infrastructure, and the resulting non-point source pollution that would deteriorate water quality.

The DEP could do more to support sustainable farming activities as a strategy to manage the quality of the City's upstate drinking water reservoirs and surrounding watersheds. A healthy farming economy in the Catskills would also make it more politically acceptable to prevent environmentally risky but revenue-generating ventures like hydrofracking and natural gas extraction within the watershed. The activities of the WAC would have to be expanded to include farming business development and the development of processing infrastructure within the Catskill region to support value added food production. These might include supporting a wide range of food businesses, from cheese-making ventures to slaughterhouses.

2. Nurture New Farmers

The average age of principal farm operators in New York State is 56.2 years old, presaging a dramatic departure from the farming profession within the next decade or so.⁹² A key to sustaining regional food production beyond increasing the demand for regionally produced food and improving the value added processing and distribution infrastructure is fostering the development of new farmers to take over the farmland that exists in the foodshed. Preparing New Yorkers for work in the farming sector can help them to move into productive, sustainable careers while simultaneously supporting the health of the region's agricultural economy. The City could help to expand the programs that exist to train new farmers. For example, one such program, GrowNYC's New Farmer Development Project, links immigrants with farming skills to farmers who have available land.⁹³

92. See *Census of Agriculture - 2007 Census Publications*, U.S. DEP'T OF AGRIC., http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1_Chapter_1_State_Level/New_York/st36_1_063_063.pdf (last updated Feb. 3, 2009).

93. See *New Farmer Development Project*, GROWNOC, <http://www.grownoc.org/greenmarket/nfdp> (last visited May 30, 2011).

D. Long-Term Planning

1. Incorporate Foodshed Into Long-Range City Sustainability Planning

One of the main goals of the City's long-range sustainability plan, PlaNYC, is to accommodate a million new residents in adequate housing located near transit, with functioning infrastructure, and sufficient open space.⁹⁴ Achieving these goals requires maintenance of a regional working landscape that supports productive open spaces and that prevents unbridled sprawling, low-density development. Protecting open space by concentrating residential construction in already developed communities with transit requires not only planning to permit higher density development in appropriate locations within New York City, but also a sustainable foodshed that allows the peri-urban areas to remain relatively undeveloped. Moreover, a sustainable, economically viable foodshed is needed to support the increased demand for food from the million new residents anticipated in the next two decades.

New York City's PlaNYC 2030, released in 2007,⁹⁵ was virtually silent on food production, processing, distribution, or disposal. The April 2011 update to PlaNYC addresses food in various contexts, particularly in discussions of what constitutes sustainable neighborhoods and in reference to specific initiatives like community- and school gardens and composting programs.⁹⁶ Expanding the scope of PlaNYC to include regional food production and distribution issues and adopting the policy proposals in FoodWorks would advance the City's overall sustainability goals.

CONCLUSION

The ten policy initiatives outlined in this essay would go a long way towards establishing the financial investments, physical infrastructure, and programs that would support a more profitable and sustainable regional foodshed for New York City. Through direct procurement of food produced regionally, the development of a more efficient distribution infrastructure designed to meet the needs of

94. See generally PLANYC, *supra* note 13.

95. See *id.*

96. See *id.* at 164.

peri-urban farmers, and policies to direct the agencies that affect the foodshed – from the Department of Environmental Protection to Parks and Recreation – the region’s food producers, processors, distributors and retailers would benefit. The result would be a metropolitan area with vibrant rural communities that sustain productive open space, connect city residents to the producers of their food, and retain working landscapes that provide ecosystem services like clean drinking water and aesthetically pleasing open space.

The tendency to look inward makes sense from a pragmatic point of view, since cities can most easily affect how land is used and how businesses operate within city boundaries. Given the food system problems that cities face, from food insecurity to the nutritional quality of meals provided by public agencies,⁹⁷ city officials often focus on issues that they can most directly affect rather than broader foodshed concerns, particularly if solving foodshed problems requires developing costly distribution infrastructure or spending more for regionally produced food. A lesson from Walter Hedden’s work is that planners need to comprehensively consider the entire foodshed in developing programs, policies, and infrastructure to ensure its sustainability.

97. See Nevin Cohen & Jennifer Obadia, *Greening the Food Supply in New York City*, SUSTAINABILITY IN AMERICA’S CITIES: CREATING THE GREEN METROPOLIS (Matthew I. Slavin ed., Island Press, 2011).