

THE PUBLIC PLATE_{IN} NEW YORK CITY



A Guide to Institutional Meals



New York City
Food Policy Center
AT HUNTER COLLEGE

TABLE OF CONTENTS

Acknowledgements	2
Introduction	3
Part I: Overview	4
The Agencies	6
Coordination	8
Key Stakeholders	10
Meal Provision: Stages of the Process	12
Meal Provision: Basic Parameters	14
Part II: Goals, Constraints and Emerging Solutions	16
Goals	16
Constraints	18
Finance	18
Regulation	22
Infrastructure	24
Skills	25
Consumer and Stakeholder Preferences	26
Emerging Solutions	27
Part III: Recommendations	39
References	43

BOXES

1. NYC Food Standards	9
2. DOE School Food Financing	15
3. History of School Lunch in New York City	17
4. Geographic Preference	21
5. Children's Aid Society	29
6. Greenmarket Co.	32
7. Food Waste at Riker's Island	35
8. Styrofoam trays	37

In addition to the full report, an Executive Summary and a supplement entitled Agencies-At-A-Glance, an overview of the food programs of ten city agencies that serve food, are available at <http://nycfoodpolicy.org/research/>

Suggested citation:Public Plate Report Working Group. The Public Plate in New York City: A Guide to Institutional Meals. New York City Food Policy Center at Hunter College, 2014. Available at <http://nycfoodpolicy.org/research/>

ACKNOWLEDGEMENTS

We thank the New York City Council and Hunter College for their support of the NYC Food Policy Center and the following people inside and outside City government who provided information for this report. We also thank the Cornell Cooperative Extension Service and Wellness in the Schools for use of their photographs. All views expressed herein are those of the authors and do not necessarily reflect the positions of those we interviewed, the City Council, or City University of New York.

Liz Accles	Howard Grossman	Michael Owh
Bridget Anderson	Risa Jaslow	Carol Parker-Duncan
Bobson Arigbe	Laura Johnson	Stefania Patinella
Flavia Barros	Paulette Johnson	Darryl Ratray
Nancy Barthold	Sue Joslin	Connie Ress
Stephen Berger	Kim Kessler	Marah Rhoades
Olivia Blanchflower	Kendra Koch	Christina Riley
Tony Branch	Ashley Lederer	Nancy Romer
Tracy Cashin	Jenna Liut	Jody Rudin
Gerald Cohen	Joseph Maltese	Bobbie Sackman
Frank Cresciulo	Andrea Bachrach Mata	Deena Sandos
Elysa Dinzes	Agnes Molnar	Paula Sangster-Graham
Fern Gale Estrow	HaeSun Nam	Debra Sheintoch
Maryellen Flynn	Dave Nocenti	Michele Silver
Myles Foley	Cecile Noel	Arlene Spark
Megan Galeucia	Cathy Nonas	Triada Stampas
Annemarie Garceau	Stephen O'Brien	Providencia Valentin

Abbreviations and Acronyms List

ACS:	Administration for Children's Services	HRA:	Human Resources Administration
CACFP:	Child and Adult Care Food Program	HASA:	HIV/AIDS Services Administration
CFA:	Community Food Advocates	GPO:	Group Purchasing Organization
CSPs:	Competitive Sealed Bids	MOCS:	Mayor's Office of Contract Services
DCAS:	Department of Citywide Administrative Services	MOFP:	Mayor's Office of Food Policy (also referred to as the MOFP, Office of the Food Policy Coordinator)
DFTA:	Department for the Aging	NSLP:	National School Lunch Program
DHS:	Department of Homeless Services	OGS:	New York State Office of General Services
DOC:	Department of Correction	RFP:	Request for Proposal
DOE:	Department of Education	SBP:	School Breakfast Program
DOHMH:	Department of Health and Mental Hygiene	SFSP:	Summer Food Service Program
DPR:	Department of Parks and Recreation	SNAP:	Supplemental Nutrition Assistance Program, formerly known as Food Stamps
DSNY:	Department of Sanitation	TANF:	Temporary Assistance for Needy Families
DYCD:	Department of Youth and Community Development	USDA-FNS:	United States Department of Agriculture- Food and Nutrition Services
EFAP:	Emergency Food Assistance Program	WITS:	Wellness in the Schools
FPWA:	Federation of Protestant Welfare Agencies		
HHC:	Health and Hospitals Corporation		

INTRODUCTION

Each year, ten New York City agencies serve an estimated 260 million meals, making the City one of the largest meal providers in the world. With the rising prevalence of diet-related disease and mounting evidence of the crucial role of nutrition in determining health, interest has escalated in what urban planner Kevin Morgan has called “the public plate” as a lever for improvement of public health.¹ Others have noted that the sourcing of food for the public plate can support local and regional agriculture and food producers and provide stable employment for the growing population of under- and unemployed New Yorkers.² At the same time, environmentalists have raised concerns about the handling of waste from municipal agencies in general and from meals in particular, and about the carbon footprint and other environmental implications of urban food procurement practices. Institutional meals are an important defense against hunger, a problem that continues to disrupt the lives and health of too many New Yorkers. Thus institutional food is at the intersection of health, economic development, environmental protection, and social justice.

The City spends more than a quarter of a billion dollars annually for the food served on the public plate, and nearly as much on labor for food preparation. Some NYC meals are planned, prepared and served directly by municipal agencies in public institutions such as schools and jails. Others are offered by independent non-profit organizations with which the city contracts, such as senior centers or child care programs. Some are prepared by city employees in kitchen facilities owned and operated by the city, or by the staff members of contracted organizations in their own kitchens; others are produced by vendors from whom the meals are purchased by city agencies or contracted programs. Some are served at the sites at which they are prepared; others are prepared in central kitchens and delivered to satellite locations. This report explores these institutional meals provided or sponsored by the City of New York.

In its 2010 FoodWorks report,³ the New York City Council established a goal to “improve the nutrition of institutional meals” in the city. For want of a better term, we have adopted the label “institutional meals” throughout this report to designate meals and snacks prepared and served by city agencies, and meals and snacks partially or wholly financed by city funds (or by federal or state funds administered by a city agency), but prepared and served by private entities. The term “institutional meals,” however, can be problematic. To many people, the term connotes size; they think of “institutional food” as any food prepared and served in large settings, whether those settings are public or private. Our use of the term, on the other hand, includes all meals served or administered by the City, regardless of the size of the setting in which they are served, but excludes meals that are not publicly financed and regulated, even though they may be served in institutions such as universities or private healthcare facilities. There does not seem to be an ideal term to designate those meals that the city controls or can strongly regulate, so we have followed the City Council in using the terms institutional meals and institutional meal programs.

Objectives This report seeks to provide policy makers and advocates with the information they need to make decisions that will further strengthen New York City’s already robust institutional meals programs. With a new Mayor, a new City Council, and a growing food justice movement, NYC has the opportunity to create new models for using its public plate to improve health and nutrition, the economy, the environment and social justice. Such progress depends on a careful analysis of the successes and limitations to date.

This report provides an introduction and overview. It seeks to provide a foundation and serve as a resource for the policy discussions needed to make further progress. While we hope to paint a useful picture of institutional food service in NYC, given the complexity and diversity of this system, we do not expect to provide, in this brief format, an exhaustive accounting. The report describes institutional meal provision and identifies issues and challenges that occur across agencies and programs. It identifies areas in which further research is needed. It makes recommendations for the City Council, the new Mayoral administration, advocacy organizations and concerned citizens. Brief profiles of meal provision by individual city agencies are presented in a Supplement to this report. Boxes throughout the text provide greater detail on issues that may be of interest to some readers.

Methods Data for this report were collected in 2013 through reviews of agency and related websites and the documents available through these websites, and telephone and in-person interviews and e-mails to gather information from each of the city agencies included in this report. The number of contacts with agencies varied according to the complexity of each agency's institutional meal program, and each participating agency reviewed and provided feedback on a draft of the relevant sections. The Mayor's Office of Food Policy and Department of Health and Mental Hygiene also provided input during the process of research and writing and offered feedback on an early draft of the report. To complete our research process, we used peer-reviewed and gray literature, and interviews with advocates and other informed observers, as well as existing expertise within our team. As is often the case when a phenomenon has not been extensively studied, we found the extent and quality of available data to vary significantly among agencies.

PART I: OVERVIEW

Institutional meals served by NYC agencies intersect the lives of New Yorkers as sustenance, as jobs, as business opportunities, and as assistance to the household budget. Consider the following hypothetical family of New Yorkers.

Meet a typical New York family, the Gothams: Sam and Alice and their three children, Willie, age twelve, Susan, age eight and Tasha, just three years old, and Sam's mother, Wilhelmina. For the time being, Sam's younger brother Joey is also a part of their household. Occasionally, the Gothams buy a meal or provide a shower for a distant relative whom they call, "Uncle Eddie," who is homeless.

Sam is a Correction Officer. On a typical day, he rises early to reach Rikers Island in time for the start of his 7:00 A.M. shift. He picks up breakfast at the drive-thru window of his favorite fast food restaurant to eat on the way to work, but at lunch he will eat a healthy meal prepared by Rikers Island food service, a perk of the job that makes sense since there are no restaurants on the island and checking in and out of secure buildings is time consuming. Alice rises early, too. She must send the kids off to school and get baby Tasha to day care, all in time to catch transportation to her own job; she works in the cook/chill facility at Kings County Hospital where meals are prepared for all the hospitals of the New York City Health and Hospitals Corporation.

Breakfast is offered, free of charge to all NYC public school students, regardless of income. Susan will be served a breakfast in her classroom at her elementary school, but Willie's middle school principal decided against Breakfast

in the Classroom. Even though Willie could eat free in the cafeteria, he refuses to do so, claiming that the other kids will think he is “a loser” eating “welfare food”, and complaining that he does not like the whole grain breads and bagels now being served. Alice tries to get him up in time to eat a bowl of cereal and fruit, but he resists rising and often goes out the door without having eaten, promising to “pick something up” at the corner store on the way to school. Alice doesn’t like to think about what he might choose, but she notices that he has been putting on weight.

The Gothams’ income puts them over the eligibility threshold for the free lunches that are available in public schools, but the children can buy a lunch for the substantially subsidized price of \$1.75. When school is over, both Willie and Susan will attend afterschool enrichment programs run by a settlement house in their neighborhood where they will have healthy snacks prepared by the kitchen of the school that houses the program. Under the “area eligibility” provisions, the snacks will be free because the school is in a low-income neighborhood. In the summer, when school is not in session, Willie and Susan can get free lunches at schools, parks or City pools, again funded by the federal government, through the Summer Food Service Program. The school meals, the summer meals and the after school snacks must meet nutrition standards established by the United States Department of Agriculture as well as those set by the City itself.

Baby Tasha will get lunch and two snacks at day care. Since Sam and Alice earn above the income threshold for free meals for Tasha, they pay for her day care meals. The meals, however, are subsidized by the federal government, and they must comply with nutrition standards established by the US Department of Agriculture under the Child and Adult Care Feeding Program (CACFP) and those developed by the Division of Nutrition of the State of New York Department of Health.

The children’s grandmother Wilhelmina will have lunch at a local senior center where she goes to socialize with other older adults. She complains about the blandness of the food, especially since the center has recently taken pains to reduce the sodium content. She will make a voluntary suggested payment for her lunch, but the bulk of the cost will be borne by federal funds from the nutrition title of the Older Americans Act, administered locally by the New York City Department for the Aging. Last year, when she still lived alone, Wilhelmina fell and broke her hip. She was briefly hospitalized at Elmhurst Hospital Center, where her meals were prepared by the same Cook-Chill facility in which her daughter-in-law Alice works, and paid for by Medicare. After returning home, she received meals delivered by Meals on Wheels for several months, but now that she has regained her mobility and lives with her son’s family, she is no longer eligible for the home-delivered meals.

Joey, a recent college graduate with a business degree is saving up for the deposit on an apartment of his own; he will take a brown bag lunch to his job at a distributor that has a contract to deliver food to public schools in Brooklyn and Manhattan. Joey works in the marketing department, trying to find new clients. He doesn’t have anything to do with supplying the schools, but he got his job when the company expanded after winning the large school food contract.

Uncle Eddie gets three meals a day at the homeless shelter when he can secure a spot there, and eats frequently in a church affiliated soup kitchen aided by the city’s Emergency Food Assistance Program when he cannot.

As this hypothetical family illustrates, the public plate in New York City provides not only food but also jobs in both the public and private sectors and serves as an engine of economic development. It encompasses a wide

variety of settings for meal or snack service and reaches people of all ages: children in child care, schools, and recreational programs, adults in correctional institutions, homeless shelters, soup kitchens, and various adult day facilities, and older adults in senior centers, through the provision of home delivered meals and in nursing homes; people of any age may consume meals in hospitals. It serves some of New York's poorest residents, but it also reaches into the middle class through school, child care and senior meals. For many senior citizens and for families that qualify for free meals in schools and child care settings, it is an important means of stretching tight budgets. For the city as a whole, it brings large infusions of federal dollars into the economy. Because the public plate provides many meals to vulnerable New Yorkers, it has significant potential for enhancing the overall health of the city's population.



2. Soup kitchen staff and volunteers in a culinary and nutrition training session

The Agencies

Ten NYC agencies provide meals to New Yorkers. They are listed below in order of the number of meals and snacks served annually, from the largest to the smallest, based on the 2013 Food Metrics Report.⁴

AGENCY	Number of Meals & Snacks Served as reported in 2013 NYC Food Metrics Report
Department of Education (DOE)	172,050,000
Administration for Children's Services (ACS)	24,108,829
Department of Youth & Community Development (DYCD)	16,916,940
Department of Correction (DOC)	13,397,350
Department of Homeless Services (DHS)	11,530,897
Department for the Aging (DFTA)	11,309,377
NYC Health & Hospitals Corporation (HHC)	8,215,110
Department of Health & Mental Hygiene (DOHMH)	1,622,491
Human Resources Administration (HRA) HIV/AIDS Services Administration (HASA)	576,939
Department of Parks and Recreation (DPR)	61,121
TOTAL	259,789,054

Department of Education (DOE) Office of School Food and Nutrition Services, known simply as SchoolFood, serves breakfast to an average of 221,519 students daily through the School Breakfast Program (SBP) and lunch to an average of 625,231 students each day through the National School Lunch Program (NSLP).⁵ In addition, it serves fruit and vegetable snacks in classrooms to schools participating in the Fresh Fruit and Vegetable Program, and it provides snacks and in some cases suppers for school-based after school programs. DOE is also the primary sponsor of the federal Summer Food Service Program (SFSP) or “Summer Meals” in New York City. In 2013, more than seven and a half million meals were served to children and youth at schools, parks, pools, libraries, and community based organizations.

Administration for Children’s Services (ACS) contracts with 354 group child care centers and Head Start sites to provide center-based care for approximately 19,000 children and with Family Child Care home networks to care for an additional 8,000 children.⁶ ACS-contracted child care providers are required to participate in the federal Child and Adult Care Feeding Program (CACFP), which reimburses centers and day care homes for the meals and snacks they provide.

Department for Youth and Community Development (DYCD) contracts with non-profit agencies to run afterschool and other out-of-school-time programs such as holiday and summer camps that provide care and enrichment for children and adolescents. About three-quarters of these programs, 472, are located in public schools; their meals and snacks are provided by SchoolFood through the NSLP. Another 48 are located in New York City Housing Authority sites, and their meals and snacks are purchased through a contract with a private meal vendor and reimbursed through the CACFP. The remaining programs may prepare meals on site or purchase them from a vendor; they are also reimbursed through CACFP.

Department of Correction (DOC) operates ten correctional facilities on Rikers Island and four borough houses of detention. It provides three meals a day to a daily jail population that fluctuates between 12,000 and 17,000 inmates, plus one meal per shift for correction officers, and it provides cold meals at 16 court-based facilities for detainees awaiting court appearances.⁷

Department of Homeless Service (DHS) directly operates nine shelters and contracts with private, non-profit organization for the operation of 172 additional shelters. Ninety-six of these, including all of the city-run shelters and 72 additional adult shelters provide three meals a day. Families in approximately ten0 transitional shelters have access to kitchens and prepare their own food.

Department for the Aging (DFTA) contracts with 29 agencies to deliver meals to homebound elderly and disabled persons, and with 247 senior centers to provide congregate (group) meals along with cultural, recreational and educational activities. More than four million home delivered meals and seven million senior center meals were provided in 2013.⁸

New York City Health and Hospitals Corporation (HHC) serves meals to patients in its 11 acute care hospitals and residents of its five extended care nursing homes.^{9,10} With the exception of the Seaview extended care facility on Staten Island, all HHC patient and resident meals are prepared at a centralized facility at Kings County Hospital managed by a consortium led by the global food service management company, Sodexo.

Department of Health and Mental Hygiene (DOHMH) contracts with programs that provide mental health, substance abuse and developmental disabilities services. About 250 of these provide meals or snacks regularly or occasionally as part of their programming, primarily snacks and special occasion events such as holiday meals. About 55 programs serve regular meals.

Department of Parks and Recreation (DPR) serves snacks to youth in park-based afterschool programs, reimbursed through the federal CACFP. During the summer, the DPR obtains meals from SchoolFood for use in day camps.

Human Resources Administration (HRA) provides assistance in the form of commodities to soup kitchens and food pantries through its Emergency Food Assistance Program (EFAP). In 2012, EFAP aided 121 soup kitchens that served 3,291,027 meals. In addition the HRA HIV-Aids Services Administration (HASA) supports the provision of congregate meals to persons with HIV, about half a million meals in 2013.

Coordination

Is “system” the right word to describe this collection of agencies and activities? In some ways no: no one designed the NYC public plate and each program has its own history, target population, funding sources, authorizing legislation and set of regulations. No single person or agency directs or coordinates their activities. Nonetheless, they face common challenges and constraints; as a result these programs can benefit from opportunities to interact, share information, and cooperate. Three developments in recent years have promoted coordination and a degree of standardization that makes institutional food in New York City more like a system: the establishment of the Mayor’s Office of the Food Policy Coordinator in 2007, the creation of the New York City Food Standards in 2008, and the inclusion of data on Agency Compliance with the NYC Food Standards among the metrics on which the city is required to report by Local Law 52 of 2011.¹¹

Office of the Food Policy Coordinator Mayor Michael Bloomberg established the Office of the Food Policy Coordinator in January 2007. An Executive Order in 2008 provided a more formal basis, locating the Coordinator within the Office of the Mayor and mandating the Coordinator to report to the Deputy Mayor for Health and Human Services.¹² After the staff was expanded, the City began to refer to this office as the Mayor’s Office of Food Policy, or MOFP. An early review identified the functions of the new office: “to convene the Food Policy Task Force and to coordinate the array of City agencies that are involved in hunger prevention, the promotion of health and wellness related to nutrition and the provision of food across the City.”¹³ The MOFP is small, usually just the Coordinator and one additional staff person, but the Food Policy Task Force has grown quite large, including as many as ten city agencies, plus a representative of the City Council Speaker, and one from GrowNYC. Given its mandate to “promote access to and awareness about healthy food; combat food insecurity; and oversee the City’s work to improve the sustainability of its food system,”¹⁴ the responsibilities of the MOFP extend well beyond institutional meals, but it has provided, for the first time, a central place in city government where issues of public food service can be discussed.

New York City Food Standards One of the major initiatives of the MOFP is the creation of New York City Food Standards.¹⁵ An implementation guide prepared by DOHMH describes the purpose of the regulations: “These standards aim to increase the availability of healthier food and beverage options and reduce the risk of health

problems such as obesity, diabetes and cardiovascular disease.”¹⁶ The standards were promulgated by Executive Order 122 in September, 2008; they were revised and updated in October, 2011, with City agencies required to be in compliance by October, 2012. According to the Food Standards document, the “Standards for Meals/ Snacks Purchased and Served...apply to all food and beverages provided to clients as part of meals, snacks, or other occasions where food is served.”¹⁷ Specifically, the standards are designed to eliminate trans fat, to limit fat, especially saturated fat, sodium, and sugar, and to increase the intake of fiber-rich foods, especially whole grains, vegetables and fruits. In addition, they suggest that “when practicable” agencies should consider sustainability criteria for the food they procure. Box 1 provides a more detailed description of the standards.

Local Law 52 of 2011 Reflecting the notion that “what gets measured gets done,” the New York City Council passed a Food Metrics law in 2011, requiring the collection and annual reporting of data on a wide array of food related topics: expenditures on nutrition education, for example, and the number and acreage of farms participating in the Department of Environmental Protection’s Watershed Agricultural Program. Among the 23 metrics included, three are particularly relevant to institutional meals: the total DOE expenditure on local dairy and produce, the number of salad bars in public schools, and the rate of agency compliance with the New York City Food Standards.

Box 1: NYC Food Standards

The New York City Food Standards “aim to reduce the prevalence of chronic disease, such as obesity, diabetes and cardiovascular disease, by improving dietary intake.” In order to accomplish this, New York has adopted a dual strategy. First, there is a set of “Standards for Purchased Foods,” items that are used as ingredients or as components of a meal or snack. These rules limit sodium, exclude trans fat, restrict sugars and require some products to be whole grain or to have specified minimum amounts of fiber; for some beverages, they limit calories. For example, sliced sandwich bread must comply with three standards: it must have 180 mg or less of sodium per serving, it must have at least 2 grams of fiber per serving, and it must be whole wheat or whole grain. In addition to the requirements, there are also recommendations; yogurt, for example is required to be low fat or non-fat, and it is recommended that plain yogurt be served. If flavored yogurt is served, yogurt with 30 grams or less of sugar per 8 ounces is recommended.

Such product specifications can go a long way to reduce the presence of potentially harmful components such as saturated fat, but they can do little to assure inclusion of desirable foods. Further, limiting the sodium, for example, in a specific product will not necessarily yield an acceptable sodium level for the entire meal, if other products containing sodium are also served. Therefore, there is a second set of standards that applies to entire meals: the “Standards for Meals and Snacks Served”. These are derived from USDA’s 2010 Dietary Guidelines for Americans, and they are of two types. The first type comes from the “meal pattern” approach that has been part of federal programs for decades; it requires specified numbers of servings of fruits and vegetables per meal, or per day where multiple meals are served, and requires a minimum number of servings of non-starchy vegetables weekly. The meal pattern standards set limits on the frequency with which juice may be served, and require that water must be available at all meals. The other type is a set of nutrient standards; they specify maximum amounts for calories, sodium, total fat, and saturated fat, and minimum levels for fiber per meal and per day. Contracted agency sites that meet certain criteria are exempted from the nutrient standards. Programs can be approved for exemption if they meet all four of the following requirements:

- Meals are prepared on site or by another similar program; and
- Program does not have access to a City agency-employed nutritionist for regular menu review; and
- Program site regularly serves fewer than 200 people per meal; and
- Program is not part of a larger contract for food purchasing coordinated by a City agency.

In addition, the meal standards prohibit deep-frying as a preparation method.

A third set of rules includes agency and population-specific standards and exceptions. There are special standards for children. For example, milk served to children over two years of age must be 1% milk fat or less, and it is recommended that agencies phase out flavored milk over time. Maximum sodium quantities per day are specified for various age groups. While the standard for adults is 2,300 mg per day, for example, for children in the 1-5 age group the maximum is 1,700 mg per day, and there are limits for each meal. The sodium standards for seniors are more restrictive; agencies serving a clientele in which the majority of the population is 50 years old or older are required to limit sodium to 1,500 mg per day.

Some of the exceptions recognize the higher calorie needs of active groups; while the overall adult calorie standard is 2,000 per day, and calories are required to be no more than ten percent above or below that standard, agencies serving the adult correctional population may provide up to 2,200 calories for women and 2,800 calories for men.

Home-based childcare providers are exempt from the standards. Programs that allow clients to purchase and prepare their own meals are not required to comply with the standards. Food purchased by agencies to serve solely for response to a disaster is not required to comply.

Finally, there are Sustainability Recommendations. According to the Food Standards document, “New York City also recognizes the importance of promoting a healthy and ecologically sustainable food system that conserves natural resources and supports long term public health goals.” The NYC Food Standards do not mandate any single criteria for sustainability, but recommend that agencies consider, “when practicable and cost effective,” ecological criteria for the foods they procure and prepare. These may include giving preference to fruits and vegetables “that are local, seasonal, or are grown by producers using low or no pesticides or an integrated pest management system,” local dairy products, and seafood that is “sustainably raised or harvested.”

NYC Food Standards can be found at: www.nyc.gov/html/doh/html/living/agency-food-standards.shtm

Key Stakeholders in New York City’s Public Plate

In addition to the agencies listed above, and the many New Yorkers whom they serve, the key actors in this system include:

Mayor’s Office of Food Policy (MOFP) formerly known as the Office of the Food Policy Coordinator.

Food Policy Task Force which is composed of the ten agencies identified above plus a representative of the City Council Speaker and a representative of GrowNYC.

Department of Citywide Administrative Services (DCAS) which facilitates food procurement for some agencies

Department of Health and Mental Hygiene (DOHMH) which serves as a technical assistance hub for the NYC Food Standards

Mayor's Office of Contract Services (MOCS) which helps to ensure that procurement guidelines are followed.

Both the federal and state governments are also involved:

- **United States Department of Agriculture (USDA)**, through USDA Foods, provides commodity foods to such city agencies as DOE, DOC, and to day care centers and youth programs.
- **USDA Food and Nutrition Service (USDA-FNS)** provides funds for school meals, summer meals, afterschool snacks, and meals and snacks in child care settings.
- **Federal Administration on Aging** provides funds for senior center congregate meals and for home delivered meals for homebound elderly and disabled persons.
- **New York State Department of Education Child Nutrition Program Administration** oversees both school food and summer meals.
- **New York State Department of Health** oversees meals and snacks reimbursed through the CACFP.
- **New York State Office of General Services (OGS)** receives, stores and distributes federal donated commodities (USDA Foods) within the state of New York.
- **New York State Department of Agriculture and Markets** helps NYC connect with NY State farms, dairies, and other suppliers.

In addition to these key players within government, there are myriad organizations outside the government that are essential to the operation of this system.

- Non-profit organizations providing social services that include the provision of meals and snacks (See Box 5 for a description of one such program here);
- Distributors, private firms with which the city contracts for procurement, storage, and delivery of food supplies and non-profit distributors of local foods;
- Food manufacturers, farms, bakeries and dairies that supply food items to city agencies;
- Food service companies that provide prepared meals to city agencies or to the non-profit organizations with which the city contracts;
- Group Purchasing Organizations that help contracted agencies obtain discounts; and
- Food service management companies supplying management, procurement, and food preparation services to HHC.

The many organizational actors involved, each with its own agenda, resources and procedures, make the institutional food system enormously complex. It is difficult to generalize about so diverse an enterprise. Nevertheless, there are common challenges that confront every institutional meal provider. The sections that follow look at these common elements, first by reviewing the process of meal provision, and then by identifying the basic factors that shape and constrain that process.

Meal Provision: Stages of the Process

Whether it is a gigantic system providing meals for more than a million school children, or a day care home providing meals and snacks for a half dozen children each day, the process of meal provision has the same basic stages: menu planning, procurement, meal preparation, serving the meal and cleanup and waste management.

Menu Planning As an influential textbook in food service management declares, “the



3. Food service workers with a healthy side dish

menu is the single most important factor in the success of a foodservice operation.”¹⁹ The meals that NYC agencies serve to New Yorkers begin with the creation of a menu. Someone decides what will be served at each meal, guided (and constrained) by nutrition standards, the amount of money that can be spent, the tastes and preferences of consumers, the availability of desired foods in the quantities needed, the delivery schedules of suppliers and distributors, the kitchen equipment on hand, the skills of the cooks, the challenges associated with waste disposal, and sometimes by factors unique to the setting. DOC, for example, cannot plan menus that require inmates to use knives.

Procurement Food is ordered and purchased. For large quantities, specifically amounts over \$100,000 this may involve Competitive Sealed Bids (or CSBs), a process that may be administered directly by the agency concerned, for example, DOE or by DCAS as is the case for DOC. Smaller agencies that contract with the City may purchase directly from wholesale or even retail vendors. And while procurement comes after menu planning, opportunities and obstacles encountered in the procurement process may lead to revision of the menu.

Preparation Once the menu is planned and the food supplies are on hand, meals must be prepared. Some agencies use central kitchens: DOC prepares meals for inmates and staff of 14 correctional facilities with 200 “eating areas” at five kitchens, all following a uniform menu. Meals for patients at all HHC facilities except one are prepared in the Corporation’s Cook/Chill facility, which is located at Kings County Hospital. Others do preparation at the site of meal service. Most but not all New York City schools have kitchens; those without kitchens receive meals from the kitchens of nearby schools. Most day care centers and daycare homes have kitchens and meals that are prepared fresh, on site, though a few day care homes require parents to send food with their children. Issues in meal preparation reflect the available equipment, the skills of staff, the imperatives of food safety and the effort to promote health, specifically to reduce sodium, sugar, fat and saturated fat. As consciousness of the health risks of obesity has grown, deep fat fryers have been replaced with ovens and rethermalization units that return foods to specified temperatures and methods of cooking that lower fat have been encouraged.

Service Meals must also be served. Most public meals are served cafeteria style, but family style meal service is now a requirement in ACS EarlyLearn contracts. In this approach, children in early care and education programs sit together at tables at mealtime and serve themselves and each other from communal dishes of food. This family style service is important in building skills including fine and gross motor skills, conversation skills, etiquette and in establishing a positive relationship among eating, meal times and socializing. A crucial concern in meal service is food safety, and particularly the maintenance of proper temperatures; hot foods must be kept hot enough, and cold foods cold enough, to avoid the danger zone for the growth of pathogens, the range between 41 and 135 degrees Fahrenheit. Among the biggest challenges of meal service are those that have to do with schedule. In order to ensure that all students have a lunch period, schools often begin lunch service quite early in the morning, and continue it well past the normal lunch hour.²⁰ The challenge of scheduling, always demanding, has been increased for those schools now sharing cafeteria space with separate schools housed in the same building. Some schools, as indicated in the description of the Gotham family, serve breakfast in the classroom; other schools have begun experimenting with “grab-and-go” breakfasts distributed in hallways near the school entrances. Patient meals in hospitals are delivered to patient rooms, and Meals on Wheels are delivered to the homes of homebound elderly and disabled participants. In these settings, meal service becomes a significant labor cost—and job provider.



4. School lunch served on Styrofoam trays

Clean Up and Waste Management

Once the meals are consumed, the tables must be cleared and the waste organized for disposal. As environmental consciousness has grown, the City has been under increasing pressure to separate organic waste for composting and to reduce waste headed for the landfill. The volume of activity in this system makes waste management a visible public issue. NYC public schools, for example, have been sending

more than three million Styrofoam trays to landfills each week of the school year.²¹ Box 8 describes efforts to reduce Styrofoam use in schools. Some schools and several shelters are now participating in a pilot composting project, and Rikers Island maintains a composting facility (See Box 7) that can serve as a model for other institutions, but waste management is an aspect of institutional food that is ripe for reform.

Meal Provision: Basic Parameters

Many factors influence the outcomes of primary concern: health, food security, sustainability and economic development. Among the most salient are the following.

Degree of Centralization The settings in which the City offers food vary widely as to both size and system of food service. Some, such as SchoolFood or DOC, are highly centralized, affording agency heads a great deal of control over menu planning, procurement, and meal preparation and service. In these agencies, the same lunch menu may reach hundreds of thousands of people. Making these menus healthier, even in small ways, has widespread impact. Others are decentralized with menu and preparation choices as well as procurement decisions made by hundreds of senior and day care center directors and cooks, day care homeowners, and youth-serving programs operated by non-profits. In these settings, changing one menu may affect only a single gathering of children, youth or seniors. These sites, however, may be able to make local preferences a priority in ways that more centralized systems cannot, thus increasing the appeal and consumption of foods.

Competition In some settings, such as DOC facilities, diners have few alternatives to the meals that are offered; in others, such as senior centers, they can easily take their business elsewhere. Thus, while all strive to prepare meals that are palatable and acceptable to their clientele, some face stronger competitive pressures than others.

Finance Meals and snacks served by NYC agencies may be funded by the City itself, by the state or federal government, by user fees, by charitable contributions, or by some combination of these sources. Each additional funding source adds a layer of accountability and complexity. See Box 2 on the financing of school meals.

Regulation All food service programs, like all restaurants in NYC, must meet food safety and food handling regulations of DOHMH. Since 2008, all have been required to comply with the New York City Food Standards, discussed previously, designed to promote healthier eating. In addition, programs generally have to comply with food-related regulations imposed by their various funding sources.

Infrastructure Kitchen and dining space, equipment, storage space, refrigeration, electrical wiring, plumbing, loading docks, parking spaces, all affect the types of meals and snacks that can be served. Similarly, the skills and knowledge of employees and even the recipes on file influence the ultimate impact of any food service program.

Consumer needs and preferences The age of a program's typical customers, their physical and dental health, their religious obligations and cultural traditions, their food habits and preferences all affect what can be served with confidence.

Box 2: Financing School Meals

The federal government provides the lion's share of the funds for school meals through programs administered by the USDA. The NSLP and SBP, the two school meal programs, are reauthorized by Congress every five years and create the financial and regulatory framework for school food.

Basically, Congress has established three levels of eligibility and reimbursement. Children qualify for free, reduced price, or full price meals based on their family income. Children from households with incomes at or below 130% of the federal poverty line – currently that would be \$25,389 for a mother and two children – are eligible for free meals. Those with incomes between 130% of poverty and 185% of poverty, up to \$36,131 annually for a family of three, are eligible for “reduced price” meals. Children from households with higher incomes must pay what is misleadingly called the “full price”; in fact the federal government provides a modest subsidy for each “full price” meal served. Children in foster care, homeless children, runaway youth and children of migrant laborers are “categorically eligible” for free school meals; so are children whose families receive SNAP or TANF. Eligibility can be established either by “direct certification,” a process in which HRA sends schools a list of children whose families receive SNAP or TANF, or by an income based application which parents must complete and submit.²² In NYC, students eligible for reduced price meals eat free, though the City is reimbursed at the reduced price rate, and not the free rate, and students above the reduced price cut off pay \$1.75 for lunch. Breakfast is offered free of charge to all students.

The reimbursement provided by USDA varies with the free, reduced price, or full price status of the individual child, by the overall need of the school as measured by the percentage of lunches served at the free or reduced price rate, and by whether or not the school food authority has successfully implemented the new federal nutrition standards. In the Breakfast program, “severe need” schools, in which at least 40% of the lunches are served free or at a reduced price, receive \$.30 more for each free or reduced price breakfast. In the lunch program, the difference is much smaller and the standard of need is higher. Schools in which 60% or more of lunches are served at the free or reduced rate get 2 cents more. In addition, there is a modest reimbursement from the State of New York. Schools may also be reimbursed for qualifying afterschool snacks, but in this program there is no distinction made between needy and non-needy schools. In NYC, where SchoolFood has achieved compliance with the new federal nutrition standards, schools receive the following reimbursements for each qualifying meal served.

BREAKFAST

	Federal non severe need	Federal severe need	State
Free	\$1.58	\$1.89	\$.1013
Reduced Price	1.28	1.59	.1566
Paid	.28	.28	.0023

LUNCH

	Federal less than 60%	Federal 60% or more	State
Free	\$2.99	\$3.01	\$.0599
Reduced Price	2.59	2.61	.1981
Paid	.34	.36	.0599

AFTERSCHOOL SNACKS

	FEDERAL
Free	\$.80
Reduced Price	.40
Paid	.07

In addition, schools receive a credit, currently \$0.2275 for each lunch served. These credits can be used to order USDA Foods, formerly known as surplus commodities. Taking full advantage of the available USDA foods helps schools to keep the price of paid meals down, and assists in breaking even.²³

Overall in 2011, the Independent Budget Office calculated that the federal government contributed \$404,815,000; the State of NY \$18,010,000; and the City \$73,068,000 to school meals.²⁴ The IBO did not provide figures on the amounts collected as student fees for paid and reduced price meals.

The complexity of this system is remarkable. Each child must be assigned to the correct eligibility category based upon either direct certification or income-based application, and then each meal must be assigned to the proper reimbursement category based on the status of the child who consumes it. A great deal of effort by the SchoolFood administration goes into the management of this cumbersome system, and at each school, principals, clerical staff and cafeteria personnel are all involved in establishing eligibility and “counting and claiming.” In NYC, breakfast has been served free of charge to any pupil since 2005 but SchoolFood must still account for the eligibility status of each child in order to obtain the appropriate federal and state reimbursements. Breakfast participation has increased by 58% since the universal free approach was adopted.

PART II: GOALS, CONSTRAINTS AND EMERGING SOLUTIONS

Institutional food in NYC can be conceptualized as an interacting system of goals and constraints, or opportunities and challenges. On one hand, the 260 million meals provided each year offer opportunities to reduce food insecurity, improve the health of New Yorkers, enhance local economic activity, and promote environmental sustainability. In attempting to maximize these outcomes, however, city agencies face a series of constraints including limited funds, regulations imposed by other actors in the system, especially state and federal agencies, deficits in existing equipment and infrastructure, limitations on labor force skills and expertise, and consumer preferences. The result is a process that is at once delicate and cumbersome. In this section, we will explore these goals and the tradeoffs that NYC agencies encounter in their efforts to pursue them.

Goals

Goal 1: Prevent hunger; reduce food insecurity. For most of the agencies providing meals in NYC, this is the oldest and perhaps the most basic goal. The City has addressed hunger in part through the provision of meals ever since it began subsidizing the Municipal Soup House, founded in 1802 to provide meals for the inmates of the debtors’ prison.²⁵ School meals in NYC started as a response to hunger (See Box 3) and even in the program’s current, more inclusive form, more than three quarters of the meals are served free to students from low-income families. Snacks in after school programs and meals in Headstart and daycare programs also play a crucial role in preventing childhood hunger. Meals provided in homeless shelters and HRA’s EFAP program that assists soup kitchens are clearly antihunger strategies. Meals at senior centers function as opportunities for socialization—and a lure to get seniors out of their homes and into the company of peers— but they also play a significant role in

preventing and alleviating hunger.²⁶ With 1.7 million New Yorkers trying to get by on incomes below the federal poverty level, and food prices in the city averaging 25 to 50% above the national average, it is no surprise that the alleviation of hunger remains a core objective of the City's meal programs.²⁷ Recent and impending cuts to SNAP, formerly known as Food Stamps, will intensify the challenges that the city faces in achieving food security for all; institutional meals can help to fill the meal gap.

Box 3: History of School Lunch in NYC



5. School Lunch in New York City, Circa 1908

School lunches in NYC, organized and sponsored by voluntary associations, began in the early 1900s as a response to hunger. The City assumed responsibility for the lunch program in 1918 in the wake of sensational claims of under nutrition. The program was expanded in the Great Depression, when the federal government began donating agricultural commodities and WPA labor for school meals, and further expanded after the National School Lunch Act made federal funds available in 1946. School Breakfast funding was provided by the federal government beginning in the early 1970s, but uptake in NYC was slowed by the resistance of school principals. It was made

available citywide in New York after advocates secured a bill in the New York State legislature mandating breakfast in all public schools in cities with populations above 125,000. The program was made free to all NYC school children, regardless of family income, in 2004.

Goal 2: Improve the health of New Yorkers. It was not the health effects of undernutrition, however, but rather the soaring rates of overweight and obesity and the rise in diet-related diseases that have focused the City's current attention on the nutrient quality of the meals served by city institutions. Diet-related diseases and their precursor of obesity kill an estimated 5,800 New Yorkers each year; obesity is second only to smoking as a leading cause of preventable death. Nearly three-fifths of NYC adults and two-fifths of children are overweight or obese, and one in three adult residents of the city has diabetes or pre-diabetes. As the Mayor's Task Force on Obesity has pointed out, obesity "is the only major public health crisis in America that is getting worse" instead of better, and the problem is costly for all members of the community. An estimated \$4 billion is spent annually in NYC on health care related to the consequences of obesity.²⁸ In response, the City has undertaken a whole menu of initiatives, including the establishment of standards for foods purchased and meals served by city agencies. According to the NYC Food Standards document, the "New York City Food Standards aim to reduce the prevalence of chronic disease, such as obesity, diabetes and cardiovascular disease, by improving dietary intake."²⁹ Standards for vending machines in city facilities furthered the agenda by reducing the availability of high calorie snacks and sugar sweetened beverages.

Goal 3: Protect the environment and promote sustainability. As environmental consciousness has grown, the ecological impacts of food service operations have come under increasing scrutiny. According to a recent entry in the Encyclopedia of Food and Agricultural Ethics, “Institutional food has the potential to influence environmental sustainability through the distance food travels, the types of transportation and routes that are used to deliver food, and the waste created in the production and serving of food, among other factors.”³⁰ Nationally, sustainability guidelines often come packaged with health promotion, as in the “Health and Sustainability Guidelines for Federal Concessions and Vending Operations” promulgated by the U.S. Centers for Disease Control.³¹ NYC is no exception; the final section of the NYC Food Standards contains “Sustainability Recommendations,” and states that “Agencies are encouraged to consider, when practicable and cost effective, sustainability criteria for the food they procure and serve.”³² Such criteria may include a preference for fruits and vegetables that are grown nearby and those that are produced using integrated pest management or otherwise with limited pesticide exposure, for dairy products produced in the region, and for seafood raised or harvested sustainably. Both procurement and waste management have substantial sustainability implications.

Goal 4: Enhance the local economy. Institutional meals create jobs for New Yorkers and business opportunities for vendors and suppliers. Procurement from local sources keeps NYC dollars circulating in the region, thus contributing to economic as well as environmental sustainability. Procurement from local suppliers and vendors creates jobs in New York and adds to the City’s tax base. Sourcing from nearby farms keeps the money in the region, and helps farms remain in business, contributing to the overall food security of the bioregion. Participation in federally funded meal programs draws in federal dollars to circulate in the NYC economy. By one estimate, increasing enrollment in the NYC School Lunch Program by 15% would create 883 new union jobs.³³

There is little disagreement on the value of these goals. Individual stakeholders may have different priorities, but most actors seem to recognize the importance of all of these aims, and there are significant synergies among them. Local procurement, for example, can reduce the environmental impacts of transport, help to create local jobs, improve health by giving vulnerable populations access to freshly picked vegetables and fruits that retain maximum nutritional impact, and, by increasing the palatability of food, increase participation and thus reduce food insecurity.

When implementation begins, however, programs seeking these goals encounter a series of challenges. The four most prominent are 1) financial constraints, (2) regulations, (3) infrastructure (equipment, kitchen facilities, transportation, skills) and (4) consumer preferences. In a sense, these are basic parameters of any food service system, private as well as public, but because of the high volume involved, they loom especially large on the public plate.

Constraints

FINANCE

Funding Streams A large proportion of the meals provided by NYC agencies are funded or subsidized by the federal government. There are basically four ways that federal funds flow to the public plate in NYC.

1. Federal per meal reimbursements. Several federal programs provide set amounts of reimbursement for each compliant meal or snack served. DOE is reimbursed for school lunches and breakfasts and for snacks in

school-based afterschool programs by the NSLP and SBP administered by the USDA. Lunches and breakfasts served to 16-18 year olds in the correctional system, and those provided to children in the shelters are also funded through the NSLP and SBP programs, as previously described in Box 2.

Meals served in schools in the summer or at city pools and parks or other sites supplied by SchoolFood are reimbursed through the federal Summer Food Service Program (SFSP). Meals and snacks in ACS-affiliated child care centers and those in DYCD operated afterschool programs not located in schools, including those in NYCHA projects, are subsidized by the Child and Adult Care Food Program (CACFP), also operated by the USDA, and also dispensed on a per meal reimbursement basis, and overseen by the State of New York. Meals in DYCD-affiliated summer camps are reimbursed through SFSP.

2. Federal insurance payments. Meals provided to Medicaid and Medicare eligible hospital and nursing home patients are part of the patient care for which medical facilities bill these two major federal programs.

3. Grants in aid or other general federal assistance. Congregate meals served at senior centers and home delivered meals are funded in part by the Senior Nutrition programs of the Administration on Aging. Federal funds from Housing and Urban Development (HUD) are part of the funding stream for shelters, as are federal grants from the Emergency Food and Shelter Program overseen by the FEMA national Board.

4. USDA foods (aka “commodities”). This assistance comes in the form of credits to be used to order federal donated commodities. The commodities are available to schools participating in the NSLP and to child care and recreational programs participating in CACFP. Some commodities are also available to senior centers. USDA offers more than 180 foods, including meats, dairy, legumes, grain products, and fresh, frozen and canned fruits and vegetables. It offers low sodium versions of canned goods and fruits packed in juices. States select the items they will distribute within the state. NYC DOE uses virtually all of its commodity dollars for beef, poultry and cheese that are diverted for processing into products like chicken tenders and meat balls.

The State of New York contributes a modest subsidy to both school lunch and school breakfast: just under six cents for each full price and each free lunch, and almost twenty cents for each reduced price lunch. All breakfasts in NYC are served free, but the City can claim reimbursements from the state based on the eligibility of students who consume them: about a quarter cent for students in the full price category, 15.66 cents for each reduced price eligible meal, and just over ten cents for each meal served free. The higher rates for reduced price meals reflect a New York State law limiting the charge for reduced price lunches in the state to 25 cents. In all, NYS contributes about \$18 million each year to the DOE, and another \$60,000 to the DOC for school lunches and breakfasts served to 16-18 year old inmates. The state contributes to the funding of many of the mental health programs overseen by DOHMH. The Office of Child Nutrition in the New York State Department of Education is also responsible for oversight of both the financial and meal quality aspects of the school food program, and of the Summer Food Service Program. The New York State Department of Health administers the federal CACFP program that provides reimbursements for meals and snacks served to children in day care and after school programs.

The City provides most or all of the funds for adult meals in correctional facilities, for meals in shelters, for assistance to soup kitchens, and for any costs not fully reimbursed by the federal and state government or covered by student fees in the school meal programs.

Budget limits Regardless of the source of the funding, budget is a constant constraint on food service operations, and the obstacle most frequently mentioned by respondents in our research. Many desirable products are simply out of reach for the public plate, and rising food prices frequently challenge overall budgets. Processed food, which tends to be high in fat, sugar and salt, is often less expensive than healthier food so the push for lower costs often results in purchase of less healthy products.

In school food, where the number of meals being served is enormous, even a single penny per serving in additional cost can be prohibitive; a one-cent increase for an item served at every lunch would cost an additional \$1.15 million a year. A one-cent increase in an item used at both lunch and breakfast would add a million and a half dollars annually. This is why the difference in price between Styrofoam trays and compostable sugarcane bagasse trays prevented conversion to the biodegradable product for so long, as shown in Box 8 below. Using data on food costs reported in the Consumer Price Index, advocates for the needs of seniors have waged periodic campaigns for raises in the rates used by DFTA to calculate senior center budgets, but complain that by the time an increase is secured and implemented, it is already out of date. Currently, centers are allowed \$2.20 per meal for food (not including labor). Senior centers have asked for an inflation adjustment to be built into the funding formula.³⁴ In general, the larger the number of meals, the lower the amount spent on food per meal. SchoolFood spent a total of \$145,228,000 for food (and equipment) in FY 2012, less than a dollar per meal, augmented by donated commodities. Health and Hospitals Corporation spent about \$1.90 per tray.

Financial constraints frustrate the accomplishment of all of the goals discussed earlier in this section. Clearly they limit the City's ability to achieve food security and healthy food objectives. The EFAP budget, for example, is not large enough to allow the program to aid all qualified emergency food providers. The DFTA senior center contracts are not large enough to fund a sixth weekly (take-home) meal which some centers have been requesting. In school food, the \$1.75 charged to students whose family incomes exceed the cut-off for free lunches means that some students in need cannot afford school lunches, even though they are a bargain. A family of three, for example, must have an income below \$36,131 annually to qualify; in Brooklyn, where the widely used Self Sufficiency Standard, developed by the Women's Center for Education and Career Advancement, for a family consisting of one adult, one preschooler and one school age child was \$63,166 in 2010, many families face a shortfall that puts the school lunch out of reach.³⁵ When programs try to cope with fiscal constraints by laying off workers or reducing hours, they end up contributing to the very food insecurity problem they are designed to relieve.

Several agencies reported trade-offs between health objectives and financial constraints. Staff at DOC indicated that the food budget had become tighter since the agency implemented the heart-healthy diet as the general food plan. Menu revisions must not increase overall costs, so any addition of a more expensive item has required savings elsewhere. In a 2010 survey, senior center directors reported that they believed that more funding was needed to meet the new regulations. Staff at DFTA, for example, reported that centers have had difficulty identifying breads that met the whole grain, fiber, and sodium requirements at prices they could afford. The EFAP program at HRA reported similar difficulty in finding products that met both nutrition and palatability standards at an acceptable price. The conflict between financial solvency and sustainability is well illustrated by the Styrofoam tray issue described in Box 8. And the conflict between budget constraints and stimulation of the local economy arises every time a distant supplier offers a cheaper price than a nearby source. Box 4 provides additional details on this issue.

Box 4. Geographic Preference

Procurement laws are generally designed to ensure fair and open competition. They do so by requiring agencies to solicit multiple bids and to accept the lowest priced offer from a responsive and responsible bidder. As interest in locally grown foods has increased, however, taxing authorities have devised a number of ways to enable procurement officers to establish a geographic preference. That is, they have authorized agencies to create an advantage in the bidding process for suppliers that source products from the local area. Typically, this involves a reduction of the price per unit of a specified amount or a specified percentage for those suppliers who agree to source locally. Just as a “veterans preference” adds points to the scores of honorably discharged veterans on civil service exams, a geographic preference deducts points from the bids of potential suppliers who commit to local sourcing.

Imagine, for example, that three distributors submit bids to provide an agency with tree fruits where the Request for Bid has specified a 5% geographic preference. One submits a bid of \$1.95, another \$2.00 and the third \$2.20 per crate. If none of these bidders can guarantee local sourcing, the first bidder would win the contract. If bidder number two can source locally, while the others cannot, the bid of \$2.00 would be reduced by 5% or ten cents, reducing the bid for competitive purposes to \$1.90. Bidder number 2 would win the contract. The firm would still be paid \$2.00 per crate – the reduction is for the purpose of comparing bids only. In this example, if bidder number 3 were the only firm that could source locally, its price of \$2.20 per case would be reduced for purposes of comparison by 5% or 11 cents. This would make its price \$2.09, still above the other two bidders even after geographic preference is applied. Again, bidder number 1 would win the contract. A specified percentage is only one of several options that can be used to establish a geographic preference. Agencies can also craft solicitations in which points are awarded on a sliding scale for various percentages of products to be sourced locally, or where the inclusion of locally sourced products is one of several factors used to assess value.³⁶

Regulations governing geographic preference exist at the federal, state and local levels, and in any given solicitation of bids, an agency must abide by the most restrictive law that applies. In NYC, agencies that are reimbursed for meals through the Federal Child Nutrition Programs (NSLP, SBP, SFSP, CACFP, the Fresh Fruit and Vegetable Program and the Special Milk Program) may apply a geographic preference in procurement of unprocessed locally grown or locally raised agricultural products.³⁹ Federal law permits such a preference but does not require it. The specification of “local” is left to the discretion of the purchasing authority. Federal law does not define the meaning of local, and local may be defined, for example, as a specified number of miles from the school or child care facility, as a particular county or set of counties, or as a particular state or set of states. The preference may be applied only to the products themselves—fruits, vegetables, milk and meat, for example-- and not to the location of the firm submitting the bid. The federal law does not permit school districts or child care sponsors to issue bids that specify only local produce--a requirement, not a preference. Finally, the federal geographic preference may be applied only to products that are unprocessed or so minimally processed that they retain their inherent agricultural character. It may not be applied to products that are cooked, heated, or canned nor to products that have additives or fillers. Thus, for example, USDA has ruled that a geographic preference may be applied in the procurement of individual portion sized bags of carrots or apple slices, but not in the procurement of canned carrots or applesauce.³⁷

In NYC, agencies that are not participating in the Federal Child Nutrition Programs are covered by Local Law 50 of 2011. The MOFP has developed guidelines providing that “where practicable, City agencies should afford a preference to New York State food products in their purchasing decisions.”³⁸ Thus the City law is more directive than the federal, imposing an obligation rather than simply granting permission. Further, NYC guidelines apply to some processed foods as well as to unprocessed agricultural products. The guidelines, based on the relevant sections of the State of New York Local Law 103, apply to any solicitation valued at more than \$100,000 for food or food-related services and to any solicitation for social services through which more than \$100,000 worth of food will be purchased to fulfill an annual contract. They permit a price preference of ten% for New York State food products, and they allow agencies to mandate that a particular product must come from New York State. They also permit agencies to solicit bids for bundles of goods that contain at least 30% NY State products, and bundles that do not have sourcing restrictions and then to award the contract to the low bidder in either category. Finally, under the recently enacted best value provisions of the Local Law 103, agencies may incorporate provisions that consider freshness or other desirable qualities such as the number of days between harvest and delivery, without regard to state of origin.

REGULATION

Like the need for financial solvency, regulation is a fact of life for institutional meal service. Regulations govern all of the phases of meal provision: menu planning, procurement, food preparation, meal service and waste management. Despite their necessity and rationality, the regulations can seem overwhelming. The 29 pages of DFTA Performance Standards for congregate meals contain 39 separate standards, each with several specifications of compliance attached.⁴⁰ The more complex the array of funding sources, the more complex the regulatory environment is likely to be. Sensible regulations protect consumers and workers but they can also add to the costs –finding the right balance between safety and cost is always a challenge.

Food Safety Regulations DOHMH is responsible for the enforcement of New York Food Safety Regulations, which constitute Article 81 of the NYC Health Code.⁴¹ The regulations are extensive, exceeding 35 pages; basically, they govern the receiving, storage, cooking, cooling, warming, portioning, and serving phases of meal production in restaurants and institutions and the handling of food in food processing establishments. They focus on food temperature, personal hygiene, and vermin control. Most institutional food providers follow a set of conventions called HACCP, Hazard Analysis and Critical Control Points, devised originally for use in the US space program and now internationally recognized and widely used.⁴² All institutions that prepare or serve food are required to have on staff a person with a Certificate of Food Protection which can be obtained by successfully completing a course and passing an exam in safe food handling.

Nutrition Regulations The NYC Food Standards (Box 1), as we have seen, cover all meals and snacks served by NYC agencies, but they are not the only nutrition standards that apply. Federally funded child nutrition programs all prescribe both meal patterns and specific nutrient standards. The recent federally mandated update of school food standards, required by the Healthy Hunger Free Kids Act of 2010, has generated press coverage of school food around the nation, as schools have reduced some portion sizes, increased use of whole grains in pastas and breads, increased the amounts of fruits and vegetables required and limited the reliance on starchy vegetables such as corn and potatoes to meet the vegetable requirement.⁴³ Because schools in NYC had been required to increase whole grains and vegetables to comply with the NYC Food Standards the city has found the transition to the new federal standards easier than have many communities. Nevertheless, the implementation of the new rules occasioned the end of a practice called “menu flexibility” that had permitted managers at the local neighborhood level to adjust menus to suit local preferences.

On the whole, while the various sets of nutrition standards are compatible they are not identical. Thus, the NYC Food Standards for purchased foods for child care facilities provide that cereal must contain six grams of sugar or less per serving, a regulation that accords with those of the Child and Adult Care Food Program and the Head Start Program, but CACFP adds that sweet grains may be served at breakfast and snack no more than twice per week. The Head Start and CACFP regulations both provide that a minimum of two servings of fruits and vegetables is required at each lunch or dinner; the NYC Food Standards add the requirements that a minimum of five servings of fruits and vegetables must be served per day for programs serving breakfast, lunch and dinner, and a minimum of three servings of non-starchy vegetables must be served weekly per lunch and per dinner for programs serving meals five days per week or less.⁴⁴ The point is not that any of these regulations is ill-conceived but that a day care center must make sure to comply with all three sets of regulations, plus those of Article 47 and Article 81 of the Health Code of

the City of New York. In order to facilitate compliance, the Health Department has issued a guide, *Growing Healthy Children*, which provides helpful tips on complying with nutrition standards, developing wellness policies, and building support and capacity for these policies among children, families, and staff.⁴⁵

In addition to the regulations themselves, agencies also have to comply with reporting requirements. For the NYC Food Standards, the Food Metrics law requires agencies to report the number of programs in compliance, the number of programs out of compliance and the number of programs for which the standard is not applicable for each of 74 separate standards. The resulting grid has nearly three thousand cells, a kind of data fog from which it is difficult to extract useful information. The accuracy and reliability of the data are also an issue. The centralized agencies have comprehensive records of foods purchased and use uniform menus, but the decentralized agencies face substantial challenges. Some send monitors to perform site visits; some rely on a combination of site visits and self-reports, and some rely solely on self-reports.

Eligibility Regulations Food safety regulations and food and nutrition standards seem obvious components of the food service environment, but they are not the only regulations with which NYC meal providers must comply. Eligibility regulations prescribe both the content—the income standards—and the process that must be used to establish eligibility. In order to receive reimbursements through the School Lunch and Breakfast programs, schools must distribute and collect applications from parents, verify a 3% sample of applications, certify students to one of three reimbursement categories based on family income, communicate this information to the cashiers in the cafeteria, who must in turn assign each meal to the proper reimbursement category. The instructions governing the application process in the Chancellors regulations are 11 pages, single-spaced. The weekly data must be aggregated and sent to SchoolFood, which must then collate the data and transmit it to the State Department of Education Office of Child Nutrition for reimbursement.

The current three-tier eligibility system substantially reduces the ability of school meals to address both diet-related disease and food insecurity. The system imposes a stigma on school food, deterring many students from participating.⁴⁶ Only 22% of registered students eat breakfast, and only 60% eat lunch. On an average school day, nearly one third of the students eligible for free meals do not eat lunch.⁴⁷ When these students fail to participate, they are missing out on needed nutrition and placing an unnecessary burden on their household finances—and they are depriving the City of New York of important federal revenues. It is no surprise that participation rates are lowest among students in the “paid” category; 61% fail to purchase the healthy school lunch available at \$1.75.⁴⁸ Unfortunately, the options that many students choose instead—chips and a soda from the corner store, a slice of pizza, a fast food meal, or skipping lunch altogether-- do not provide the nutrition that students need to make full use of their educational opportunities, and in many cases contribute to obesity, diabetes and general ill-health.

Income based eligibility regulations also apply to some meals reimbursed through CACFP. Stigma is generally not an issue with pre-school age children, but the paperwork and accounting burden is still a challenge for some providers.

Procurement Regulations Most of the regulations governing procurement are designed to ensure fair and open competition. Competitive bidding procedures were developed in the late 1800s in many cities in response to scandals and revelations of corruption in the purchase of goods and services. These procurement procedures are designed to guard against fraud, waste, kickbacks and favoritism, to establish a fair and open

process for the expenditure of public funds and insure that the public gets good value for its dollar.⁴⁹ In New York as in other cities, the extent of competitive bidding required depends upon the size of the contract (measured in dollars). For contracts above \$100,000, a fully competitive process is required, either through competitive sealed bids (CSBs) or through a Request for Proposal (RFP) process. City agencies are required to take the lowest bid from a reliable and responsive bidder for CSBs, and the lowest bid from a qualified bidder for RFPs. Contracts between \$20,000 and \$100,000 require a simplified competitive process; at least five vendors randomly selected from a database of relevant registered vendors maintained by the City must be invited to submit prices, with the lowest price from a responsive and responsible vendor winning the contract. “Micropurchases” of less than \$20,000 can be made without any competitive process as long as the price is deemed “reasonable” and is documented.⁵⁰

INFRASTRUCTURE

The space, storage capacity, equipment, furniture, even the availability of parking spaces for delivery trucks all affect the institutional meal process.

Cooking equipment and space The equipment available constrains cooking and serving techniques and thus menu choices. At the most fundamental level, organizations that lack cooking kitchens are often dependent on deliveries as “satellite sites” from a central kitchen or another institution, or must rely on a prepared meal vendor. Some day care centers, after school programs, schools, shelters, and senior centers fall into this category. DOC prepares meals for 200 eating areas in 14 correctional facilities in five central kitchens. Even where kitchens are available, budget constraints may drive service toward a central preparation facility.

In 2004, HHC decided to outsource the management of its food service and centralize preparation of patient meals in a 40,000 square foot food production facility, then underutilized, at Kings County Hospital. A consortium composed of Sodexo, a major global food service management company, Nexera, a for-profit affiliate of the Greater New York Hospital Association, and US Foods, a major food distributor submitted the winning proposal. A substantial investment in upgrading the Kings County facility, installing state-of-the-art cook-chill equipment, and purchasing complementary rethermalization units, generally called “retherms,” to bring the food to appropriate temperatures at the individual hospital sites insures that the central kitchen approach, which is credited with saving HHC about \$5 million per year, will remain the basic approach in the public hospital system for some time to come.

Institutions that do cook on site are still constrained by infrastructure. For example, an institution cannot make frequent use of frozen vegetables unless it has adequate freezer space. It cannot make roasted potatoes, a popular replacement for french fries now that deep fat frying is banned, without an oven. Salad bars have become a popular strategy for increasing fruit and vegetable consumption in schools, but salad bars require very specific equipment in order to meet health and food safety regulations. NYC used a substantial part of its stimulus money under the American Recovery and Reinvestment Act to purchase salad bars, particularly “low-riders” for use in elementary schools. Since 2004, the City has installed more than 1,300 salad bars in its schools; it is on track to offer a salad bar in every school by 2015.⁵¹

Dining room furnishings are also part of the infrastructure. Many school cafeterias still have the long tables reminiscent of movie scenes of prison meals. The physical and sanitary conditions inside school and other cafeterias have an important influence on whether or not potential patrons use the facilities and how much of the food they actually consume.



6. Food service worker preparing a salad

Delivery infrastructure New York City presents an exceptionally challenging environment for the delivery of food and supplies. SchoolFood is perhaps the best illustration. While the DOE is able to negotiate very low prices for the food items it buys in large quantity, much of the saving is eaten up by “conveyance charges”, charges that vendors add to compensate for the time or effort needed to deliver food to the site. The infrastructure of procurement includes loading docks, parking spaces, and refrigerated and unrefrigerated storage space. Most NYC schools have only enough storage space for a few days food; they require delivery 2-4 times a week for basic items, and daily for bread and milk.

While distributors supplying grocery stores and restaurants sometimes make deliveries between midnight and six a.m. in order to minimize traffic delays, deliveries for school food need to be made between 8:00 a.m. and 2:00 p.m. when staff are there to receive them, and these are the most difficult—and thus the most expensive-- hours for driving trucks around the city. DOE has divided the city into four regions, each to be served by a different distributor; in trying to make the four contracts comparable, it had to take into account not only the numbers of students at each of the city’s more than 1,200 sites, but also the presence or absence of loading docks, the location of the kitchens (deliveries are made to the kitchen or storage area—some are on the sixth floor), the number of toll bridges to be crossed, the availability of parking.

A study conducted by graduate students at Columbia University noted that a majority of food distribution personnel interviewed “identified inadequate parking as a major roadblock for profitable and efficient food supply.” They went on to report:

Narrow congested streets and limited parking opportunities define the urban space and leave very little room for large delivery trucks. The removal of designated loading zone parking in many neighborhoods of the City has exacerbated the problem. Many truck drivers are forced to park illegally at the risk of receiving expensive parking tickets... One truck driver estimated his typical parking fines to exceed two hundred dollars per delivery. Parking fines for food deliveries are so prevalent that it has become a budgeted cost of business—a cost that is passed on to consumers.⁵²

SKILLS

Skills, especially cooking skills, constitute another constraint on institutional food service operations. Over the past half-century, a combination of financial pressures, changing food preparation technologies, concern about liability and changing consumer preferences have led to a “de-skilling” process in many institutional food settings. Experienced cooks preparing meals with fresh ingredients have been replaced in many institutions with less skilled labor, often working part time, whose meal preparation has consisted largely of defrosting and reheating industrially prepared entrees or even complete meals. As interest in food quality has grown, and stakeholders have become vocal in demands for less pre-packaged food and more fresh preparation, many institutions have found that the skills of the foodservice workforce were urgently in need of upgrading.⁵³

CONSUMER AND STAKEHOLDER PREFERENCES

No matter how carefully menus are planned and meals are prepared, if the end consumers—the patients, the students, the inmates, the seniors, the shelter residents--won't eat them, they will not deliver any nutrition at all. A regard for the preferences of the diners is required, but some consumer preferences may be problematic. Senior Center directors surveyed in 2010 said that they welcomed the city's new food standards but that "seniors should be allowed to eat food they are familiar with and like if they want."⁵⁴ Sometimes consumers want their favorite brands. According to its website, SchoolFood "offers an array of branded food products in our food service program...Our branded products are healthier alternatives of popular items that children enjoy eating."⁵⁵ Where diners have the option to leave the institution to eat elsewhere, attention to their preferences is an economic imperative, but public agencies and their food service departments are "mission-driven." They want to provide healthy meals that their diners will enjoy. Consumer needs and preferences include religious obligations, health considerations, and issues of capacity as well as simple preferences.

Religious obligations Hospitals, shelters and correctional facilities must offer Kosher and Halal meals to observant diners. To facilitate this, the DOC menu is now completely pork-free. Many day care and senior centers also offer these options; those that are operated by religious institutions follow their own dietary rules as well as the relevant NYC food standards; requirements that milk be served at every meal in child care programs are waived for programs serving kosher meals. NYC public schools, however, do not offer either Halal or Kosher meals, relying upon the ubiquitous peanut butter and jelly sandwich to suffice for observant children.⁵⁶

Health Concerns/Therapeutic Diets Many institutional meal consumers suffer from health conditions that necessitate special provisions, sometimes referred to as therapeutic diets. People with hypertension, for example, need to restrict sodium. Hospital patients in NYC public hospitals receive therapeutic diets only if these are ordered by physicians. Inmates entering the correctional system are given a physical exam and medical screening and may be prescribed a special diet based on the findings: a carbohydrate controlled diet for diabetic inmates, for example. Residents of shelters can obtain low sodium and other therapeutic diets with a doctor's note and approval through the social service department. Federal law and the regulations of the NSLP and SBP require school food programs to make accommodations for children who are unable to eat the school meal because of a disability, provided that the school has on file a statement from a licensed physician indicating the nature of the disability, the foods that must be omitted and the foods that should be substituted.⁵⁷ CACFP has a similar rule. Most accommodations are in the form of substitutions, though sometimes modification of texture (i.e., pureeing foods) may be required. SchoolFood offers a Special Needs Menu that accommodates most disabled students, but it does not attempt to establish "peanut free" or other anti-allergy menus.

Stakeholder preferences In addition to consumers, other groups also seek to influence meal provision. The pressure for more vegetarian options and more reliance on plant-based menus reflects the agendas of animal welfare groups as well as health concerns. The demand for more local food is based in part by a desire to preserve small and mid-sized farms and "working landscapes." Thus the farmland preservation organization Scenic Hudson has been a vocal advocate for local and regional purchase by NYC agencies. Nudged by the New York Coalition for Healthy School Meals, which promotes plant-based diets, SchoolFood has increased the number of vegetarian and vegan options. In 2013, PS 244 in Flushing Queens chose to become the first NYC public school to choose a completely vegetarian menu.⁵⁸ DOC is also looking into vegan options.



7. Children in line at a school salad bar

Emerging Solutions

Achieving the multiple goals of institutional meals while living within the budget and coping with the other constraints is not easy, but NYC public agencies are making progress. We have identified seven types of emerging solutions to the challenge of providing healthy, appealing meals.

1) Menu and Recipe Innovation, and Related Training Ever since the mid-1990s, when USDA launched the School Meals Initiative for Healthy Kids, known as SMI, a great deal of effort and creativity have gone into developing menus and recipes that simultaneously meet nutrition standards and appeal to school children. In New York, SchoolFood underwent a major overhaul in 2003, which included the appointment of an Executive Chef and the creation of the Culinary Concepts Team, charged with creating new healthier menus and recipes. As the team developed the new menus, it quickly became apparent that staff training would be an essential ingredient. Chef Jorge Collazo and five Chef Instructors worked with school staff to establish the necessary skills. As Collazo has recalled, they needed to teach “basic things like how to roast vegetables, how to defrost properly or how to batch-cook vegetables rather than cook them all at nine o’clock for your lunch service time.”⁵⁹ In 2010, SchoolFood established a SchoolFood Culinary Academy for the “purpose of establishing and maintaining culinary standards for the New York City Department of Education’s school meals program.” According to the website, “the SFCA offers our cooks, assistant cooks, and kitchen support staff focused culinary building modules so that they can hone their culinary skills”.⁶⁰

The efforts of city agencies are supplemented by non-profit organizations. In NYC, an organization founded by a celebrity chef and a public school parent, called Wellness in the Schools (WITS), has taken on the challenge of teaching culinary skills to food service staff while developing new menus and engaging students with classroom food demonstrations. According to its website, “WITS trains culinary school graduates who partner with cafeteria staff to prepare daily scratch-cooked meals and educate families about the importance of eating healthy food.” An innovative menu developed by WITS has become the “alternative menu” offered by SchoolFood. WITS currently has culinary school graduates working in 45 NYC school kitchens, and another five schools are in the “alumni” program, meaning that they continue to use the alternative menu and receive some support and guidance from WITS but no longer have a WITS chef on site. WITS is affiliated with First Lady Michelle Obama’s “Chefs Move to Schools” initiative, a part of “Let’s Move!” and is now active in two additional states, Kentucky and Florida.⁶¹

Though the national concern about childhood obesity has focused great attention on K-12 institutions, schools are not the only settings in which efforts to improve menus and upgrade cooking skills have been undertaken. For example, the Children’s Aid Society has developed healthy recipes and pioneered in training cooks and other food service workers and staff, first at its own child care and afterschool programs and later through the provision of training to other agencies. Box 5 describes this program. In 2009, New York State overhauled its CACFP requirements, creating a “Healthy Child Meal Pattern” in advance of the federal revised standards that came several years later. The state provided training to centers and sponsors, and developed a DVD for sponsors and providers who experienced staff turnover between the trainings.⁶²

Culinary and nutrition training for soup kitchen staff is provided in conjunction with the City’s Emergency Food Assistance Program (EFAP) through a contract with Cornell University Cooperative Extension (CUCE). CUCE created an eight-week curriculum in which teams of soup kitchen volunteers and paid staff learned the basics of food safety, label reading, nutrition and healthy food preparation. Starting with the familiar menus that are the favorites of participating kitchens and their guests, kitchen representatives and CUCE instructors work together to adjust menus, tweak preparation techniques, and cook and taste-test recipes. For senior centers and home delivered meals, DFTA has a Nutrition Services Unit (NSU) staffed by nine nutritionists who provide support, oversight and technical assistance to centers and homebound meal contractors. Each nutritionist is responsible for ensuring “nutrition quality and customer satisfaction” for a subset of the contracted agencies.⁶³ Currently, the team is working on the development of “diabetic friendly” meals with reduced carbohydrate content to help seniors manage their diabetes. The meals are currently being piloted with both congregate and home delivered programs and will be evaluated for consumer satisfaction, feasibility, cost and sustainability.⁶⁴ If the pilot is successful, DFTA hopes to incorporate the diabetic friendly principles into online menus.

Box 5: Go!Healthy Meals at the Children's Aid Society

Since 2007, the Children's Aid Society (CAS), a citywide nonprofit agency that provides services to children and their families in Manhattan and the Bronx, has worked to revolutionize the way we think about "kid-friendly" food and institutional cooking with their Go!Healthy Meals program. Led by Stefania Patinella, Director of Food and Nutrition Programs at CAS, the Go!Healthy Meals program offers meals throughout CAS's early childhood and afterschool programs that are, in Patinella's words, "made from scratch; based on whole and fresh foods, and which emphasize fruits, vegetables, and whole grains; and mirror the cultural diversity of the families we serve." The agency feeds approximately 1,500 children daily through these programs, the vast majority of whom are eligible for free meals through New York State's CACFP.

To implement Go!Healthy Meals, CAS created a set of original, healthy recipes that meet CACFP regulations and that are rotated seasonally. Since many cooks working in institutional food settings may be unfamiliar with some of the ingredients and techniques used in these recipes, Go!Healthy Meals also provides ongoing hands-on training for CAS's approximately 20 cooks and assistant cooks. The trainings initially cover basic information about the relationship between food and health, the differences between whole foods and more processed foods, as well as practice with knife skills and other kitchen skills. Additionally, every session includes an introduction to the recipes for that season and to any new products the cooks will be using. Cooks prepare all of the recipes together in teams, so they can practice and taste them before cooking the meals at their sites. Cooks seem to enjoy the opportunity to learn, to improve the food they serve, and to take the knowledge back home with them. As one head cook said, referring to the tastings, "[The] trainings are very good and you enjoy them. And you eat, oh! Because you eat one thing, then another, and another!" Recipes are continually revised and improved, often based on feedback from the cooks, site staff, and program participants. Several of the cooks have also contributed successful recipes – now named after them – that are mainstays of the CAS menus.

Other community service agencies are now benefiting from this initiative as well. By 2010, word about Go!Healthy Meals had spread, and CAS had the opportunity to share the model with other NYC-based agencies. With the support of the United Way and United Neighborhood Houses, CAS trained just over ten⁰ food service staff across 55 community-based organizations, which included not only Head Start centers and youth programs, but also senior centers, homeless shelters, and other community institutions. The four, day-long workshops offered were similar to those implemented at CAS, though these sessions also addressed healthy menu development and goal-setting so that staff has the skills to carry on the program independently once trainings are completed. An evaluation found that these trainings resulted in increased from-scratch food preparation, increased variety and frequency of whole grains, and increased fruits and vegetables served.⁶⁵ This effort reached more than 8,500 additional eaters and 1.9 million meals in one year.

Go!Healthy Meals is part of an integrated health strategy at CAS, which seeks to prevent obesity and diet-related disease among young New Yorkers through a wide range of activities. These activities include Go!Chefs, a healthy cooking, gardening and nutrition education program for kids participating in afterschool programs, a Food Justice program for middle and high school students, and Go!Kids, a 24-week food and fitness program for preschoolers.



8. Go!Chefs learning to chop

2. Market Power

Agencies that serve many meals, like the DOE or the DOC, have enormous market power. They can use it to obtain favorable prices, clearly an asset in the effort to stay within tight budgets. And where the market power of a single city is not sufficient, they have the option of banding together with similar agencies in other locations. NYC DOE has recently entered into an agreement with the school food service departments of Chicago, Los Angeles,

Miami, Orlando and Dallas to try to obtain an affordable price for compostable tray/plates.⁶⁶ The move has already galvanized environmentalists who are foreseeing a nationwide conversion from Styrofoam to biodegradable products. SchoolFood is also a participant in School Food FOCUS, a national alliance of large urban school districts, which works to promote healthy, sustainable and socially just food service with an emphasis on the preparation of whole, unprocessed or minimally processed foods.

High volume meal providers can also use their market power to persuade vendors to formulate products to their specifications, thus creating healthier versions of the ingredients and menu items they use most. SchoolFood contracted with a dairy in upstate New York to produce a yogurt that contains no high fructose corn syrup. Such product redesign is not a simple process. Not only must products meet the USDA and NYC Food Standards, they must come in sizes appropriate to K-8, Junior High/Middle School, and High School, what federal school food regulations refer to as “age-grade groups.” As SchoolFood explains on its website,

Developing food products that stand up to the mandated requirements while remaining superior in taste, requires creativity and customization. Therefore, we invest a considerable amount of time in product conversion; reformulating food items to guarantee that our product line enables us to create citywide menus that are specific to the various school divisions, support recipe development, offer balanced choices, and meet the needs of our students.⁶⁷

Similarly, DOC has worked with a manufacturer to create a Jamaican beef patty that is lean enough for use in its heart healthy menu. Once such products are created, they become available to other purchasers as well. This market impact helps smaller agencies find the products they need to comply with the NYC Food Standards, makes healthy meal provision easier for agencies and programs that are not required to conform to the standards, and eventually shifts the entire food supply in the direction of better health.

On their own, the hundreds of individual child care centers and senior programs do not have such market power. They are not able to negotiate the very advantageous prices offered in the competitive bidding process to the centralized agencies, even though they must meet the same NYC Food Standards. To help enhance the purchasing power of these smaller groups, in the fall of 2011 the City partnered with a Group Purchasing Organization (GPO) called Essensa, a company owned by the for-profit arm of the Greater New York Hospital Association, that makes available food and other products that smaller service providers may need at lower, bulk prices.⁶⁸ The City required all of its contracting agencies to sign up with Essensa, though it did not require them to make their purchases through this GPO.

Senior centers also have the option of making purchases through another GPO, Marketplace, sponsored by the Council of Senior Centers and Services. For DFTA funded centers, purchases through Marketplace are a one-bid process, enabling centers to avoid the multiple-bid process in order to take advantage of the lower prices that the GPO has already negotiated. Recently, Marketplace offered its services to non-profits that serve groups other than seniors. Similarly, the Federation of Protestant Welfare Agencies offers a non-profit GPO, called Group Purchasing Service (GPS), available to any non-profit agency with 501(c) (3) status. Both Marketplace and GPS have websites filled with testimonials from satisfied participants.^{69,70} By requiring all contracted agencies to sign up with Essensa, the City appeared to be providing an endorsement, and both of the other GPOs report that some of their regular customers believed they were being directed to purchase through Essensa.

3. Buying Local Buying locally (or regionally) grown produce and dairy products can contribute to the sustainability of the food system, help to preserve farms in the NYC “foodshed,” keep dollars circulating in the local economy, provide employment for local workers, help programs obtain fresh produce at its peak of nutrition and palatability, and, some would argue, reduce total, though not local emissions associated with transport. It is, however, easier said than done. Large programs have trouble finding suppliers who can provide the volume needed, and small programs have trouble arranging for deliveries and even locating suppliers.

Once again, intermediate organizations are helping. Greenmarket Co, a program of GrowNYC acts as a distributor of locally grown fresh produce; its institutional share is growing and includes several senior centers and some EFAP assisted soup kitchens. See Boxes 6 and 7 for more details. For larger purchasers, DCAS incorporated a preference for foods produced in New York State in requests for bids on behalf of DOC and the Division of Youth and Family Justice at ACS. As a result, DOC purchased a quarter million dollars of fresh NY grown fruits and vegetables, and New York State dairy products were more than four fifths of the dairy items purchased for the two agencies. DOE does its own procurement. In FY 2013, it spent \$24.6 million, excluding distribution costs, on produce, milk and yogurt that were locally or regionally raised. The figure for produce, \$3.8 million, represented a 22% increase over the previous year.⁷¹

Box 6: Greenmarket Co.

Greenmarket Co., is a “wholesale distribution service designed to bring the freshest, highest-quality farm products to New York City’s wholesale buyers, making locally produced food available to New Yorkers by delivering this food to grocery stores, bodegas, restaurants, caterers, public institutions, and other retail outlets throughout the city.”⁷² A program of non-profit GrowNYC, a privately funded 501c3 nonprofit organization created in the Office of the Mayor and home of the internationally acclaimed Greenmarket farmers’ market program, Greenmarket Co. reduces barriers for buyers and farmers by providing delivery and brokering services, in addition to infrastructure to bring local food straight from the farm to wholesale channels throughout the city.⁷³

Greenmarket Co. liaises with the regional farmers whose primary business model is wholesaling, rather than selling direct to customers at Greenmarkets. As mid-sized farms are the most rapidly disappearing sector in agriculture in our region, providing opportunities to these businesses is crucial to their survival. Greenmarket Co. determines the product farmers have available, and then sends this information to their clients twice weekly. Based on this list, clients place orders with Greenmarket Co., which then places bulk orders with the farmers. Products are then delivered to Greenmarket Co.’s warehouse, where Greenmarket Co. packs individual client orders for distribution to their ultimate destination.

In the beginning, the team anticipated that restaurants and specialty retailers would drive sales, but increasingly much of their business is derived from sales to institutions (this year institutional sales are expected to surpass orders to restaurants). This shift can be attributed to the outreach Greenmarket Co. engages in over the winter months to promote the program, the high volume of food required by institutions, in addition to the consistency of their ordering. Public and private institutional clients include eight DFTA-funded senior centers, soup kitchens, food pantries and other nutrition assistance programs. In all, since launching the program in 2012, Greenmarket Co. has distributed more than 115,000 pounds of food to 19 institutions – purchases that account for more than \$70,000 in income for regional farmers

“It’s been so great for us to work with (institutions) because it seems as though we got in on the ground floor. Recently there’s been a real emphasis on switching from canned and frozen product to fresh, and that seems to have happened at the same time as a legislative push for operators to purchase locally and increased awareness of local food in general” says Olivia Blanchflower, Program Manager at Greenmarket Co. Lenox Hill Neighborhood House on the Upper East Side was among their first senior center customers; this center accounts for the second highest institutional sales just below Citymeals on Wheels.

One of the primary challenges Greenmarket Co. currently faces is space. Warehouse space is limited, and though they are in the process of identifying a new site, rent isn’t cheap and it has been difficult to find refrigerated space that will allow room for growth. The very nature of local food – its seasonality – is also a challenge in a marketplace where consumers have come to expect tomatoes in February. Sales tend to drop after the holidays in the winter. Some centers have found winter bargains. Lenox Hill, for example, purchases locally milled polenta at only four cents more per serving than their conventional cornmeal. The higher fiber content helps the center better meet DFTA’s nutrition requirements for the elderly. Though in the past local foods have been thought of as difficult to procure and cost-prohibitive, logistical efficiencies such as those created by Greenmarket Co. help institutional buyers incorporate local foods into their existing menu planning and budgets.

Greenmarket Co. offers higher quality, highly nutritious and cost effective foods- and seniors have noticed the difference. Some products may be slightly more expensive, but many products are highly competitive in peak season. While it may be difficult for some centers to change their ordering patterns – from one vendor to two – the pay-off is tangible. The learning curve may be steep, but it’s possible to make the transition to fresh, local produce.

The City currently encourages agencies to purchase locally, and to Greenmarket Co.’s Olivia Blanchflower, there’s no reason to send public money elsewhere – why not keep it in the city and state? Currently, there is no requirement that agencies purchase locally, it is simply a recommendation. A mandate to purchase a percentage of local food, she suggests – say 20% – could have a huge impact on revenue for local farmers, the city and the state because of the buying power of these institutions. Legislation to encourage and incentivize local purchasing is important, but just as critical to the success of such a mandate is education and guidance for organizations to help them actually achieve this goal- toolkits, recommended partners and support would help organizations procure more local produce, grain, dairy and other products.



9. Greenmarket workers unloading produce

4. Technology While DOE responded to the issues of limited cooking skills and inadequately equipped kitchens by investing in training and gradually replacing outmoded equipment, HHC opted for a different model entirely. Its response was to centralize the actual cooking in a tightly controlled facility where skilled cooks mass-produce the basic components of meals, with bread, fruit and milk added at the individual sites. The cook-chill facility at Kings County relies on up-to-date technology to reduce costs and standardize quality. People sometimes confuse cook-chill kitchens with the industrial plants that produce frozen pre-packaged meals of the “TV dinner” variety, but cook chill is a

far more sophisticated operation. Food produced by the “cook-chill” method is never frozen; it does not result in the common complaints about frozen meals: incomplete thawing or “icy centers,” freezer burn and loss of flavor.

DFTA’s Nutrition Services Unit (NSU) also makes use of technology to aid its decentralized contractors. Programs must submit their menus to the NSU for approval and are required to notify the agency and obtain permission if they substitute items for those on the menu. The NSU is developing an online menu-planning tool for contractors with a system of “swappable items” that can be substituted without requiring a full menu approval process.

5. Consumer input To assure consumer satisfaction, many agencies employ surveys, taste tests or other means of customer feedback. Senior centers often have food committees that provide consumer input, and DFTA recently completed a Client Satisfaction Survey for its contracted home delivered meals programs, reporting that 89% of those surveyed reported overall satisfaction with the meals, compared to 84% in 2009.⁷⁴ At DOC, a menu committee made up of administrators and field staff critiques and tweaks any new recipes, and then the new item is served by one of the five kitchens and inmate reactions are assessed before it is introduced to the larger population. In schools, “all new and reformulated products are tested and rated by our students,” SchoolFood reports. “If a product does not meet their satisfaction, it is not approved.”⁷⁵

Health and Hospitals Corporation has perhaps the most extensive system for monitoring consumer satisfaction. HHC revises its menus at least twice a year, a process that is led by an internal committee of employees who taste the possible additions and revised recipes. After the internal committee settles on new menu offerings, a committee of residents from the Coler-Goldwater Specialty Hospital and Nursing Facility on Roosevelt Island offers opinions. Coler-Goldwater was chosen because it is an extended stay facility, the largest in the system. In addition, HHC has entered an agreement with International Point of Contact (IPC) to conduct a yearly survey. A face-to-face survey is conducted with a sample of 800 patients, and the results are compared with those of a baseline survey conducted before the conversion to the cook-chill model in 2006, and with the prior year. In March 2013, Sodexo and IPC reported to the Strategic Planning Committee of the HHC Board of Directors that all of the results for surveys of both acute and long term care facilities have been above the satisfactory level.⁷⁶

6. Outreach and Innovation As part of a wider effort to combat hunger, NYC meal programs have expanded outreach and developed innovations that help to overcome barriers to participation. On-line applications have been established for school food programs, and the City has pursued data matching to facilitate enrollment. In the 2012-2013 school year, more than 480,000 students were directly certified on the basis of their family's participation in SNAP or the Temporary Assistance for Needy Families Program. In addition, NYC successfully applied for a federal pilot program to begin data matching with Medicaid, directly certifying 70,000 additional students through this approach. The City has undertaken vigorous outreach for the Summer Meals program and has outfitted two mobile units to serve summer meals at beaches and parks.

Although participation in the school breakfast program has risen by 58% since breakfast was made free to all students beginning in the 2003-2004 school year, it is still the lowest of the nation's large cities. Breakfast in the Classroom (BIC) is a proven strategy for ensuring that children eat. Other approaches that have worked in some schools are grab-and-go breakfasts, (bagged or boxed meals distributed in school lobbies or at doorways), and grab-and-stay breakfasts in which meals can be eaten in a designated area such as an auditorium near the distribution point. All of these methods are designed to overcome the barriers associated with the more typical pattern of serving breakfast only in the cafeteria, thirty minutes before the start of the school day: school buses and students who arrive too late, a lingering perception among older students that school breakfast is for poor children, and the inconvenience of getting to the cafeteria in the basement or on the top floor. The decision about whether to offer one or more of these alternative breakfast delivery approaches rests with the principal, and most NYC principals have thus far rejected the idea, or left the choice with the classroom teacher. At least one classroom was participating in 334 schools when the Citizens Committee for Children conducted a survey in December 2011, but only 64 of the city's 1,700 schools were offering BIC in every classroom.⁷⁷

7. Reducing and Reusing Food Waste

Food waste management in NYC is evolving rapidly, and the separation of food scraps from other garbage is becoming increasingly mainstream. By separating these scraps and other biodegradable, carbon-based waste, and treating them in a process in which the breakdown is controlled, what was once landfill-bound becomes reusable, nutrient-rich compost that can be used to naturally fertilize public and private green spaces around the city. Composting initiatives are on the rise, and both public institutions and private-sector organizations are devoting time and resources to this alternative, sustainable waste-disposal method. For example, as described in Box 7, DOC has created a composting program at Rikers Island.



10. Curb recycling and organics bin

In June 2013, based on the early success of pilot compost programs throughout the city, Mayor Bloomberg unveiled a plan to introduce city supported residential composting on a voluntary basis; then-candidate DeBlasio expressed his support of such initiatives⁷⁸ and in November 2013 Mayor Bloomberg also proposed a bill that would require restaurants generating over a certain tonnage of food waste weekly to dispose of food waste separately.⁷⁹ In December 2013 the NYC Council passed a bill requiring large

restaurants, caterers, grocery stores and other food establishments to have food waste separately hauled to composting facilities beginning in July 2015.⁸⁰ Smaller cities such as Seattle and San Francisco have already begun mandatory composting programs, and this may not be far on the horizon for NYC.⁸¹ NYC Department of Sanitation (DSNY), Bureau of Waste Prevention, Reuse and Recycling now operates several pilot organics programs that include residences, schools, homeless shelters and Rikers Island, spanning the boroughs of Brooklyn, Manhattan and Brooklyn. GrowNYC's composting program,⁸² working closely with the City as well as community partners, has also increased individual composting rates and provides resources and education in conjunction with many of DSNY's efforts. Here we highlight how some city agencies currently handle their food waste and note that there are no requirements beyond typical disposal rules and regulations that apply to food waste at the time this report was written. The distinction between centralized and decentralized procurement and menu planning plays a large role in how waste is managed.⁸³

Box 7. Food Waste and the Riker's Island Compost Facility

In the process of making and serving meals, staff members indicate that the DOC food system generates relatively little food waste. In the kitchen, the use of standardized recipes and many pre-cut products reduces on-site waste. Kitchen area waste is composted by DSNY. Plate waste is not returned to the kitchens, but food service administrators watch which items are not being consumed to the degree they should be and make menu suggestions in light of these observations. A recent 30% reduction of the amount of hot cereal available is an example of such a change.

DOC also offers an innovative and sustainable system for food waste from correctional facilities, the Rikers Island Food Waste Composting Facility. This facility was constructed and became operational in 1996, funded primarily by the state and built and managed by DSNY. Composting was established at Rikers Island due to its unique physical and logistical characteristics. The island houses approximately 20,000 inmates and correction officers in ten detention centers, generating between 30 and 40 tons of food waste daily. This high concentration of organic (i.e., carbon-based, biodegradable) waste in a relatively small area, coupled with the potential cost savings of an on-site facility, initially prompted DOC to collaborate with DSNY on the project.⁸⁴ On-site compost also minimizes security risk due to a reduction of garbage truck traffic on and off the island. Finished compost is primarily used on-site at Rikers for landscaping and inmate gardening projects.^{85,86,87} The facility was designed to minimize the release of odors and boasts the largest installation of a translucent photovoltaic panel roofing system in the world. Installed with support from the New York Power Authority, these solar panels provide 40 kilowatts of power to the facility.⁸⁸

An outside evaluation study concluded that the Rikers Island Composting Facility has demonstrated cost effectiveness and feasibility in large institutions such as hospitals, schools, and military bases. Private sector investment in new technologies and effectiveness of in-vessel compost facilities can facilitate the development of similar systems in these settings.⁸⁹

DOE

During school year 2012-2013, DSNY operated an organics collection pilot program, collecting food and cafeteria waste in approximately 90 NYC public schools (in about 50 school facilities) across Manhattan, Brooklyn and Staten Island. That number is expected to reach more than 300 participating schools by spring 2014.⁹⁰ The pilot program is modeled after the Community School District 3 Green Schools Group, a completely volunteer-run food scraps collection and off-site composting operation led by a small group of Upper West Side Manhattan schools that took place in the 2011-2012 school year. Schools that have been selected to participate represent the diversity of DOE school programs, buildings and ages (pre-K through 12). Also considered are current compost activities, support from local politicians, the administrative district, transportation logistics, and processing facility proximity. Box 8 describes how DOE SchoolFood is looking to minimize waste through the modification and elimination of trays in school meals service.

DSNY provides tip sheets, signage and an instructional video, in addition to directions and support for initial set up and maintenance.⁹¹ Bins are provided by the agency. Currently all food scraps (including meat and bones), pre-approved bagasse trays, paper boats (on “Trayless Tuesdays” citywide), and paper products (including soiled napkins) are accepted for collection (with the exception of the Staten Island program which is currently only collecting kitchen waste). DSNY picks up these food scraps and organic materials curbside every week night. The pilot program is financed through both public funding and private donations, and a large-scale evaluation is forthcoming.⁹²

DHS

Two DHS-operated shelters are participating in DSNY’s composting pilot program: the Atlantic Avenue Men’s Shelter and Kingsborough Men’s Shelter. These shelters do not prepare their own meals; they are catered by Whitsons, a local company. Shelters separate out their food waste for separate collection by DSNY, which is then taken to the composting facility on Rikers Island. DHS has seen this pilot project as a success in reducing waste and rodent issues.

Box 8. Styrofoam Trays

Currently SchoolFood uses expanded polystyrene (Styrofoam) trays for meal service to children – 830,000 trays each day. These trays present both environmental and health cause for concern. Recycling foam trays is not possible in NYC- it is not environmentally responsible or economically feasible



11. A compostable bagasse food tray

due to transportation costs, limitations in the infrastructure of schools and of recycling plants that can process expanded polystyrene, and the pollution caused by increased utilization of trucks to transport the trays to and from schools and recycling plants.⁹³ Styrene foam trays may also present a potential source of harm to the children eating meals from them each day.⁹⁴ Styrene is currently classified as possibly carcinogenic to humans, and there is evidence that chronic exposure can have deleterious effects on the central nervous system. Even if recycling Styrofoam were feasible, it would do little to address these concerns raised by parent groups and advocates.

In 2010, DOE introduced “Trayless Tuesdays”, an initiative in which schools substitute paper “boats” for Styrofoam trays one day per week. This has resulted in a 20% decrease in the number of trays used each week, or a total of 2.4 million trays each month diverted from landfill.⁹⁵

Another solution that is currently being explored is the compostable lunch tray. These trays may soon become a feasible alternative thanks to a new alliance formed between the public school systems of Chicago, Dallas, Los Angeles, Miami, Orlando, and New York.⁹⁶ The comparatively high cost of compostable bagasse trays – 15 cents each, compared to just 4 cents for a styrene tray – make it cost prohibitive for most public schools to embark on such a program. In forming this alliance, these cities are hoping to leverage their group purchasing power to influence the market, incentivizing manufacturers to develop and sell more cost effective and less harmful trays.

These new sugarcane, or, “bagasse” based trays are produced using the fibrous waste of the sugarcane extraction process. They take longer and are more complicated to produce at such volume, but they are environmentally friendly in that they utilize a waste product that would otherwise end up in landfill,⁹⁷ and save energy costs in production compared to paper and Styrofoam alternatives.⁹⁸

In December 2013 NYC SchoolFood expanded its initial 4-school compostable tray pilot program to more than 30 schools.⁹⁹ Also in December, the NYC Council voted unanimously to establish a ban on plastic-foam food service containers, to take effect July 1, 2015 if private industry cannot prove that it is economically and environmentally viable to recycle and re-sell “dirty foam”.¹⁰⁰ It is unclear how this ban will affect SchoolFood. As of early 2014, DOE has received bids for potential suppliers for its tray contract but has not yet made public the results. Questions of composting capacity remain a concern moving forward – will NYC or any other city be able to handle compostable waste on such a scale? As mentioned in our look at Food Waste initiatives, DSNY is at work developing compost pilot programs and building the capacity for this type of waste.

The implications of this transition to compostable, sustainable and healthier food service products are great. Prioritizing sustainability in food service marks a new chapter in how cities tackle the problems of waste on a large scale. In actively pursuing new ways to address waste management, and through exploring the power of group purchasing to address the needs of municipal food systems, NYC works toward setting new standards for cities across the country.

BEYOND THE PUBLIC PLATE



12. Soup kitchen staff and volunteers prepare a meal

Although the NYC Food Standards apply only to public agencies and private groups contracting with the city, DOHMH has been leading a Healthy Hospital Food Initiative designed to improve the profile of food available to hospital staff and visitors as well as patient meals in both public and private hospitals.¹⁰¹ Participating institutions are urged to use the standards for foods purchased in cafeterias and hospital dining rooms, to increase the availability of salads, and to implement the city's vending machine standards for both foods and beverages. Thirty four hospitals, including the 15 HHC institutions, have already signed on. The number of salad bars in HHC hospitals is among the food metrics mandated by Local Law 52. Private hospitals that sign on adopt the various standards at their own pace, but can receive technical assistance from DOHMH. Even where organizations do not formally

adopt aspects of the NYC Food Standards, the reformulation of products to meet agency specifications has the effect of making healthier products available to organizations that want them, and the overall emphasis on healthier eating has certainly raised consciousness throughout the food service sector. Similar efforts could be introduced at other quasi-public agencies such as the City University of New York and nonprofit universities and agencies that serve meals. By considering the city's "public plate" and its "nonprofit plate" as two intersecting systems and developing policies that develop the capacity of both sectors to better serve their customers, NYC has the potential to improve nutritional quality, reduce costs, support the local economy, and protect the environment for millions of city residents.

PART III: A BAKER'S DOZEN

Each year NYC spends more than \$500 million dollars on its public plate and in the last few years, the Food Standards, Food Policy Coordinator and new Group Purchasing Organizations have significantly strengthened the reach and quality of its institutional meals programs. The City now has an opportunity to ensure that these investments reach their full potential to reduce food insecurity and diet-related diseases and promote economic development and environmental sustainability. To achieve these goals, based on our assessment of New York City's public plate, we recommend that the Mayor, City Council and other parts of city government consider the following steps:

1. Strengthen the Mayor's Office of Food Policy. The Office has accomplished a great deal with limited resources. It has created an opportunity for agencies engaged in serving meals to exchange ideas and information and support each other while confronting the challenges associated with providing healthier food in institutional settings. It has raised consciousness about the public plate and ignited conversations about using institutional food to promote health and the power of public procurement to enhance sustainability. To maximize these benefits and ensure that public dollars are spent wisely, the Mayor should add at least two full-time staff persons to the Office, one of whom would coordinate and provide oversight of the public plate. If NYC establishes a Food Policy Council, an idea currently receiving wide discussion, such a body might usefully serve as a citizens' advisory to the MOFP on institutional food and other matters.

2. Update the NYC Food Standards and continue to assist agencies to achieve full compliance. The Food Standards have served as a major step toward improving institutional food in NYC. They have resulted in the formulation of healthier products by food manufacturers and the selection of healthier items by distributors. They have raised consciousness among both agency staff and vendors and suppliers. They have been emulated by other localities, both in the U.S. and beyond. The NYC Food Standards should be periodically reviewed and updated based on experience and new evidence. The city should also expand the technical assistance it provides to agencies required to comply with the standards and continue to invite and assist other public and nonprofit organizations to implement the standards voluntarily.

3. Improve the data collection, analysis and reporting required for NYC Food Standards Compliance and food expenditures.

A. Compliance data. Local Law 52 of 2011 requires the city to report "the total number of programs... that are in full compliance with each such standard and the total number that are not in full compliance with each such standard, sorted by agency." The result is a data fog, in which each agency reports these numbers for each of 74 standards. There is no analysis to show which standards are least frequently met (and therefore most difficult to meet) nor any discussion of the barriers to compliance experienced by agencies, both of which seem potentially useful steps towards improving meals. The current form is not user friendly, nor does it serve effectively to guide policy. The data vary in quality and reliability with some agencies sending monitors for site visits, while others rely heavily on

program self-reports. While completing the self-report undoubtedly serves to focus attention on the standards, it is also time consuming. We urge the new administration to convene a discussion on the potential uses of the food metrics data on compliance and to consider seeking a revision in the wording of Local Law 52. The ultimate goal of reporting should be to provide data that both participating agencies and the Mayor's Office can use to guide further improvements in institutional food.

B. Aggregate data on food expenditure and food service costs. Most of the agencies we interviewed were not able to tell us how much was spent on food, nor the total cost of meal provision. Nor were they always able to identify the federal and state funding streams that contributed to their meal programs. This information would be useful to administrators, advocates and community organizations that work on food policy issues. The City should revise the food metrics to require the reporting of this information and commission a cost study by the Independent Budget Office. Such data should be available to the public annually with total spending on institutional food both by agency and for the city as a whole.

4. Expand participation in federally funded child nutrition programs in order to increase food security for NYC children, generate additional food service jobs, and stimulate the NYC economy. Vigorous action to expand participation to include all children in need is especially urgent in light of recent reductions in benefit levels in SNAP, formerly known as Food Stamps, and additional cuts that the new Farm Bill will impose.

A. School Lunch. NYC should take full advantage of the Community Eligibility Option (CEO) and Provision 2 to provide school lunch free of charge to all children. By reducing the stigma and paperwork burden, universal free meals will eliminate important barriers to participation. Because school meals have been stigmatized so long as “welfare food,” NYC should undertake a youth-led campaign to make school food “cool,” increase its appeal to student opinion leaders and trendsetters, and solicit youth input and opinion in menu planning and food service. Some of the same creativity that went into DOHMH’s “Pouring on the Pounds” advertising campaign might be harnessed for this effort.

B. School Breakfast. In 2012-13, NYC ranked dead last in school breakfast participation rates among 63 large urban and suburban districts recently studied.¹⁰² Although breakfast is available without charge to all children, advocates attribute the low breakfast participation rate to the practice of scheduling the meal 30 minutes before the start of the school day. Breakfast in the Classroom solves this problem and has dramatically increased participation in schools that have implemented this system school-wide. NYC should make Breakfast in the Classroom the norm by making it an “opt out” rather than an “opt in” program for schools.¹⁰³ If NYC were to serve breakfast to 70 per cent of the students who eat a free lunch each day, a participation rate achieved or exceeded by the seven best performing districts in the study, 194,518 more breakfasts would be served each day, and more than \$53 million additional federal dollars would flow into the NYC economy annually.¹⁰⁴ At the union contractual rate of 2 labor hours per ten0 breakfasts, this would mean an additional 648 6-hours a day jobs.

C. Summer Meals. Eligibility for free lunches and breakfasts under the federal Summer Food Service Program (SFSP) is based on “area eligibility.” The program operates in neighborhoods where at least 50% of public school children are eligible for free or reduced price meals. In NYC, where about three quarters of all public school students are eligible for free or reduced, almost all neighborhoods meet the area eligibility test. All children through age 18 are eligible to get both breakfast and lunch in the program regardless of family income residence, or immigration status. Advocates report that more than one million children are potentially eligible, but daily participation in lunch in July, the busiest month, has been less than 150,000.¹⁰⁵ Most of the meals are prepared by SchoolFood, which serves them in school buildings and delivers them to pool, parks, housing projects, libraries, and community based organizations. NYC should continue its efforts to publicize the availability of summer meals and should increase access by making sure that at least one open school site is located near every housing project and in every low-income neighborhood. Creating summer jobs for youth to serve as summer meals ambassadors could help with outreach and publicity.

5. Advocate for improvements in federal and state food assistance programs. Given that more than four-fifths of the City’s institutional meals are partially or wholly federally funded, and that the State of New York also contributes significant sums, the City administration should continue to advocate for improvements in these programs and the reimbursement they provide. Federal Child Nutrition programs are scheduled for reauthorization in 2015. The City should begin now to plan its strategy and to consult with other large cities to define an agenda. It should also consult with advocacy groups to elicit their suggestions. Specifically, the City should work for a cost-of-living differential in eligibility thresholds and reimbursement rates, a change that would benefit NYC where food costs in particular and cost of living in general are well above the national average.

6. Conduct systematic assessment of the discrepancies between published menus and actual offerings in a variety of institutional settings, and assess the palatability and appeal of meals as served. Such research should assess and compare the performance of various vendors and distributors. The goal of these observations is to inform modifications that can increase the uptake of institutional food by eligible participants.

7. Conduct a careful comparison of prices obtained by contractors using group purchasing organizations such as Essensa, Marketplace, and GPS. Senior centers, child care centers, shelters and other decentralized programs have several options for group purchasing, and the City should provide a careful and systematic cost and quality comparison among them and make available the results.

8. Foster a culture of consumer participation in menu planning and decision making. Participation in taste-testing and similar activities can be a powerful form of nutrition education as well as a way of ensuring that investments in new food items will be well spent. Existing taste-testing and related activities should be expanded, and other means devised to elicit the active participation of consumers. In school food, the restoration of menu flexibility would help empower parents and students to take a more active role.

9. Build the capacity of foodservice workforce, especially in more decentralized foodservice systems, to make good purchasing and production decisions that favor the health and well-being of the populations served. This kind of training could build on the skills and relationships that supervisors and foodservice staff already have with clients at many institutional sites. Such training could improve the quality of

food for the populations served by these workers directly, as well as the clients at satellite sites without kitchens (e.g., some child care and senior centers) where they also serve food. Offering new training programs to upgrade the skills of institutional food workers and adding a pay increment for cooks who have completed such training creates incentives for new skills and builds a new rung on the food service career ladder.

10. Increase the proportion of local food served on the public plate. NYC should shift the dominant paradigm for local and regional purchasing so that local purchasing is the default option. The goal is to have menu planners and procurement officers ask not only “here is our menu; what can we obtain from local sources?” but also “here is what is produced in our region; let’s incorporate more of these items into our menus.” Expanding the work begun by MOCS and DCAS to build geographic preference into city procurement can facilitate this process.

11. Build the market for healthy, fresh local produce by continuing and expanding efforts to integrate food with the curricula of schools, day care centers, after school programs, continuing education, and other institutional settings. Build upon and expand the successful models that have already been developed, and foster continued innovation. Advocate for the inclusion of “food education” in New York State curriculum standards.

12. Facilitate and nurture the establishment of local, mission-driven, community based catering and food processing organizations. Such organizations can provide meals for shelters, home-bound elderly and disabled meal delivery programs, senior centers, after school programs and child care providers that are unable to prepare meals on site. Such mission driven organizations might become alternatives to underperforming vendors identified through the research described in recommendation 6 and also create new employment opportunities for city residents.

13. Conduct a survey of kitchen facilities and equipment needs and work with CBOs and public agencies to secure the funds necessary for expansion of capacity. Schools, in particular, appear to have substantial unmet needs. Some schools have reported that a conversion to universal free school meals or school-wide breakfast in the classroom would require expanded kitchen capacity.¹⁰⁶ Other schools and some senior centers indicate that lack of adequate kitchen facilities and equipment is a barrier to increasing reliance on fresh, whole foods, which take up more space in a kitchen than canned or frozen products.

In the last seven years, NYC has made substantial progress in improving its institutional food programs and weaving them into a system that can achieve health, economic, environmental and social justice goals. By building on these successes and taking coordinated action to address the problems we have described, NYC can set a standard for institutional food for the nation.

References

1. Morgan K. Greening the Realm: Sustainable Food Chains and the Public Plate. *Regional Studies* 2008;42:9: 1237-1250.
2. New York City Food Policy Center. Jobs for a healthier diet and a stronger economy: Opportunities for creating new good food jobs in New York City. 2013. Available at: http://nycfoodpolicy.org/research/jobs_wholereport/.
3. The New York City Council. Foodworks: A Vision to Improve NYC's Food System. 2010. Available at: council.nyc.gov/downloads/pdf/foodworks_fullreport_11_22_10.pdf
4. The City of New York. New York City food policy: 2013 food metrics report. 2013;25,Table ii. Available at: <http://www.nyc.gov/html/nycfood/downloads/pdf/1152-food-metrics-report-2013.pdf>
5. The City of New York. New York City food policy: 2013 food metrics report. 2013;25,Table ii. Available at: <http://www.nyc.gov/html/nycfood/downloads/pdf/1152-food-metrics-report-2013.pdf>
6. Correspondence: Ronnie Lowenstein, Director, Independent Budget Office, to City Council member Brad Lander., May 30, 2012. Available at: <http://www.ibo.nyc.ny.us/iboreports/earlylearn53012.pdf>. * Figures are for fiscal year 2012.
7. City of New York Department of Correction. About DOC: Facilities Overview. City of New York Department of Correction website. Available at: http://www.nyc.gov/html/doc/html/about/facilities_overview.shtml
8. The City of New York. New York City food policy:2013 food metrics report. 2013. Report available at: <http://www.nyc.gov/html/nycfood/downloads/pdf/1152-food-metrics-report-2013.pdf>
9. New York City Health and Hospitals Corporation. Long Term Care. New York City Health and Hospitals Corporation website. Available at: <http://www.nyc.gov/html/hhc/html/about/About-HospServices-LongTerm.shtml>.
10. The City of New York. New York City food policy: 2013 food metrics report. 2013. Report available at: <http://www.nyc.gov/html/nycfood/downloads/pdf/1152-food-metrics-report-2013.pdf>
11. The City of New York. New York City food policy: 2013 food metrics report. 2013. Report available at: <http://www.nyc.gov/html/nycfood/downloads/pdf/1152-food-metrics-report-2013.pdf>
12. New York City Government. Executive Order No. 122: Food Policy Coordinator for the City of New York and City Agency Food Standards. 2008. Available at: http://www.nyc.gov/html/om/pdf/eo/eo_122.pdf.
13. NYC Center for Economic Opportunity. Opportunity, "Office of the Food Policy Coordinator (FPC):(FPC), CEO Internal Program Review Summary.2008. Available at:Summary," http://www.nyc.gov/html/ceo/downloads/pdf/fpc_prr.pdf.
14. NYC Food. About NYC Food. NYC Food website. Available at: <http://www.nyc.gov/html/nycfood/html/about/about.shtml>.
15. New York City Department of Health and Mental Hygiene. New York City Food Standards: Meals/Snacks Purchased and Served. Available at: <http://www.nycgov/html/doh/downloads/pdf/cardio-meals-snacks-standards.pdf>.
16. NYC Department of Health and Mental Hygiene. New York City Food Standards: Meals/Snacks Purchased and Served. Implementation Guide For Programs Serving Adults.. Available at: <http://www.nyc.gov/html/doh/downloads/pdf/cardio/nyc-meal-implementation-guide.pdf>. n.d.
17. NYC Department of Health and Mental Hygiene. New York City Food Standards: Meals/Snacks Purchased and Served. Implementation Guide For Programs Serving Adults.. Available at: <http://www.nyc.gov/html/doh/downloads/pdf/cardio/nyc-meal-implementation-guide.pdf>
18. NYC Department of Health and Mental Hygiene. New York City Food Standards Part I: Standards for Meals/Snacks Purchased and Served. Revised October 2011. Available at: http://www.nyc.gov/html/dfta/downloads/pdf/community/food_standards.pdf
19. Panell-Martin D. School foodservice management for the 21st century. 5th ed. InTEAM Associates; 1999:90. Panell-Martin. p.90.
20. For example, Richmond Hill High School in Queens, due to severe overcrowding, began its first lunch period at 8:59 a.m.. See:Freedman SG.A Queens High School With 3,600 Students, and Room for Just 1,800. New York Times. January 16, 2008. Available at: <http://www>.

nytimes.com/2008/01/16/education/16education.html.

21. In December 2013 the NYC Council passed a bill banning Styrofoam containers in many food service locations. See: Gregory K. New York Council Votes to Ban Foam Food Containers and to Curb E-Cigarette Smoking. New York Times. December 19, 2013. Available at: <http://www.nytimes.com/2013/12/20/nyregion/new-york-council-votes-to-ban-foam-food-containers-and-to-curb-e-cigarette-smoking.html?>
22. Food Research and Action Center, "Income Guidelines and Reimbursement Rates for the Federal Child Nutrition Programs," <http://frac.org/wp-content/uploads/2010/08/fedrates.pdf>.
23. New York State Department of Education, Child Nutrition Division, 2013-2014 Reimbursement Rates, available at http://portal.nysed.gov/portal/page/pref/CNKC/Reimbursement_pp/2013-14%20rates.pdf
24. New York City Independent Budget Office, "New York City Public School Indicators: Demographics, Resources, Outcomes Annual Report, 2011, Table 3.2, p.13.
25. Burrows EG, Wallace M, Gotham: A History of New York City to 1888.(Oxford: Oxford University Press; 1998:381-382.
26. Gotbaum B. "Just Getting By": New York City Nutrition Services for Seniors. New York City Public Advocate, 2002. Available at: http://publicadvocategotbaum.com/policy/pdfs/Senior_hunger.pdf
27. Roberts S. Poverty Rate is Up in New York City, and Income Gap Is Wide, Census Data Show." New York Times September 19, 2013, p. A24.
28. Bloomberg M. Press Release 200-12: Mayor Bloomberg, Public Advocate DeBlasio, Manhattan Borough President Stringer, Montefiore Hospital CEO Safyer, Deputy Mayor Gibbs and Health Commissioner Farley highlight health impacts of obesity. June 5, 2012. . Available at: http://www.nyc.gov/portal/site/nycgov/menuitem.c0935b9a57bb4ef3daf2f1c701c789a0/index.jsp?pagelD=mayor_press_release&catID=1194&doc_name=http%3A%2F%2Fwww.nyc.gov%2Fhtml%2Fom%2Fhtml%2F2012a%2Fpr200-12.html&cc=unused1978&rc=1194&ndi=1
29. NYC Health. New York City Food Standards: Meals/Snacks Purchased and Served. Implementation Guide For Programs Serving Adults.. Available at: <http://www.nyc.gov/html/doh/downloads/pdf/cardio/nyc-meal-implementation-guide.pdf>.
30. Tsui EK, Deutsch J, Patinella S, Freudenberg, N. Missed opportunities for improving nutrition through institutional food: The case for food worker training. Am J Public Health. 2013;103(9):6.
31. National Center for Chronic Disease Prevention and Health Promotion. Health and Sustainability Guidelines for Federal Concessions and Vending Operations. Atlanta, GA: 2012. Available at: <http://www.cdc.gov/chronicdisease/pdf/qa-for-employees.pdf> Q&A for HHS Employees 2010.
32. NYC Health. New York City Food Standards: Meals/Snacks Purchased and Served. Implementation Guide For Programs Serving Adults. ten. Available at: <http://www.nyc.gov/html/doh/downloads/pdf/cardio/nyc-meal-implementation-guide.pdf>
33. New York City Food Policy Center. Jobs for a healthier diet and a stronger economy: 2013. Available at: http://nycfoodpolicy.org/research/jobs_wholereport/
34. Council of Senior Centers and Services."Proposal for City Trend Factor Legislation for Senior Congregate and Home-Delivered Meals." October 26, 2011. www.cscs-ny.org.www.cscs.org.
35. Center for Women's Welfare. The Self-Sufficiency Standard. Available at: <http://www.selfsufficiencystandard.org/pubs.html#addpubs>
36. For further discussion and examples see USDA, Geographic Preference: What It Is and How To Use It, available at http://www.fns.usda.gov/sites/default/files/F2S_geo_pref.pdf and School Food Focus, Geographic Preference: A Primer on Purchasing Fresh, Local Food for Schools. Available at http://www.fns.usda.gov/sites/default/files/FOCUS_GP_Primer.pdf.
37. Food And Nutrition Services, U.S. Dept Of Ag., Policy Memo Sp_18-2011, Procurement Q&A (2011), at <http://www.fns.usda.gov/cnd/Governance/policy.htm>
38. Mayor's Office of Contract Services, New York State Food Purchasing Guidelines. www.nyc.gov/MOCS.
39. For a list of NY products developed by the State Department of Agriculture and Markets, see <http://www.nyc.gov/html/mocs/>

40. NYC Department for the Aging, Performance Standards for Contracted Services. pp. 22-51. Available at: www.nyc.gov/html/dfta/downloads/pdf/publications/standards-for-contracted-services/web.pdf
41. New York City Board of Health. New York City Health Code. Article 81 Food preparation and Food Establishments. Available at: <http://www.nyc.gov/html/doh/downloads/pdf/about/healthcode/health-code-article81.pdf>
42. Tsui EK, Deutsch J, Patinella S, Freudenberg N. Missed opportunities for improving nutrition through institutional food: The case for food worker training. *Am J Public Health*. 2013;103(9):e14-20.
43. United States Dept of Agriculture. Healthy Hunger-Free Kids Act of 2010. Available at: http://www.fns.usda.gov/cnd/Governance/Legislation/CNR_2010.htm
44. NYC Department of Health and Mental Hygiene. Growing Healthy Children: A guide to Enhance Nutrition and Physical activity in New York City Group Child Care Centers. 2011; 5-8. Available at: <http://www.nyc.gov/html/doh/downloads/pdf/cdp/growing-healthy-children-policy-guide.pdf>.
45. NYC Department of Health and Mental Hygiene. Growing Healthy Children: A guide to Enhance Nutrition and Physical activity in New York City Group Child Care Centers. 2011; 5-8. Available at: <http://www.nyc.gov/html/doh/downloads/pdf/cdp/growing-healthy-children-policy-guide.pdf>.
46. For a discussion of stigma and the other reasons why students do not participate in school meals, see: Poppendieck J., *Free For All: Fixing School Food in America*. Berkeley, University of California Press; 2010.
47. Participation figures from 2011-2012 school year. Data from: Community Food Advocates , “Universal School Meals For New York City in 2013. 2013:10. Available at: <http://www.communityfoodadvocatesnyc.org/#!universal-school-meals-in-nyc-2013/c1hh6>.
48. Community Food Advocates. “Universal School Meals For New York City in 2013. 2013:12. Available at: <http://www.communityfoodadvocatesnyc.org/#!universal-school-meals-in-nyc-2013/c1hh6>.
49. Anderson RF, Municipal Procurement: Procurement Process Improvements Yield Cost-Effective Public Benefits. Washington, D.C.: United States Conference of Mayors; 2013:7-8. Available at: <http://www.usmayors.org/publications/media/2013/0422-waterprocurementWP.pdf>
50. NYC Procurement Policy Board. Rules. Available at: www.nyc.gov/ppb.
51. The City of New York: New York City food policy: 2013 food metrics report. 2013. Available at: <http://www.nyc.gov/html/nycfood/downloads/pdf/ll52-food-metrics-report-2013.pdf>
52. Understanding New York City's Food Supply: A Report Prepared for the New York City Mayor's Office of Long Term Planning and Sustainability by Columbia University. 2010. Available at: http://mpaenvironment.ei.columbia.edu/news/documents/UnderstandingNYCsFoodSupply_May2010.pdf.
53. For an account of the deskilling process and the economic considerations that underlie it, see: Poppendieck J. *Free For All: Fixing School Food in America*. Berkeley, CA: University of California Press, 2010; pp. 89-91.
54. Council of Senior Centers and Services of New York City. 21st Century Senior Centers: Changing the Conversation. February, 2010:25. Available at: <http://cscs-ny.org/files/FINAL-WHOLE-REPORT.pdf>. 2010. P.25.
55. NYC School Food. NYC School Menus. NYC School Food website. Available at: <http://www.schoolfoodnyc.org/menusandrecipes/menus.htm#brands>
56. Advocates estimate that between ten and twelve per cent of NYC public school children are Muslims. Taher A.Push, “Push to Bring Halal Food to Schools Tests Candidates.” *Voices of New York*, Available at: <http://www.voicesofny.org/2013/06/push-to-bring-halal-food-to-schools-tests-candidates-%C2%AD%C2%AD/>.
57. United States Dept. of Agriculture. Accommodating Children with Special Dietary Needs in the School Nutrition Programs. 2001 Available at: http://www.isbe.state.il.us/nutrition/pdf/special_dietary.pdf
58. Lestch C, Chapman B. School 244 in Flushing, Queens, becomes first public school in nation to serve only vegetarian meals: officials. *Daily News*. April 30, 2013. Available at: <http://www.nydailynews.com/new-york/queens/queens-school-serves-all-vegetarian-fare->

- article-1.1331690.
59. Food Management. Big Changes in the Big Apple. Food Management. 2006. Available at: <http://food-management.com/onsite-leaders/big-changes-big-apple>.
 60. NYC School Food. School Food Culinary Academy and School Food Culinary Academy. NYC School Food website. Available at: <http://www.schoolfoodnyc.org/chefs/excutivechefs.htm#culinaryacademy>
 61. Wellness in the Schools. About WITS. Available at: <http://www.wellnessintheschools.org/index.php/cook-for-kids>
 62. Food Research and Action Center, "Improving CACFP in New York State through Education and Policy Change," CACFP Best Practice Case Study. n.d. Available at www.frac.org
 63. New York City Department for the Aging. Nutrition Program Resources. No date. Available at: <http://www.nyc.gov/html/dfta/html/community/nutrition.shtml>
 64. The City of New York: New York City food policy: 2013 food metrics report. 2013:25. Available at: <http://www.nyc.gov/html/nycfood/downloads/pdf/1152-food-metrics-report-2013.pdf>
 65. Wexler-Robock S. United Way of New York City and Administration for Children's Services: Healthy Eating for a Healthy Start Demonstration Project: 2011-2012 Year Two Evaluation Report. New York, NY: United Way of New York City; 2012.
 66. Wines, M. Urban Schools Aim for Environmental Revolution. New York Times. December 1, 2013. Available at: http://www.nytimes.com/2013/12/02/us/urban-schools-aim-for-environmental-revolution.html?nl=todaysheadlines&emc=edit_th_20131202&r=1&
 67. NYC School Food. Our Products. Available at: <http://www.schoolfoodnyc.org/menusandrecipes/menus.htm#ourproduct>
 68. Essensa Group Purchasing Organization. Essensa Partners with the City of New York: Big Savings for the Big Apple. 2013. Available at <http://essensa.org/nyc>
 69. Federation of Protestant Welfare Agencies. Group Purchasing Service. FRWA website. Available at: <http://www.fpwa.org/cgi-bin/iowa/group/article/198.html>
 70. Council of Senior Centers and Services of New York City, Inc. Cost Saving Solutions through Group Purchasing. Available at: <http://cscs-ny.org/marketplace/index.php>
 71. The City of New York. New York City food policy: 2013 food metrics report. 2013:11. Available at: <http://www.nyc.gov/html/nycfood/downloads/pdf/1152-food-metrics-report-2013.pdf>
 72. GrowNYC. Greenmarket Co. No date. Available at: <http://www.grownyc.org/greenmarketco>
 73. GrowNYC. Greenmarket Co. No date. Available at: <http://www.grownyc.org/greenmarketco>
 74. NYC Department for the Aging. Press release: "Bon Appetit: Seniors Like Their Healthy Meals Better, Says Latest Survey On Home-Delivered Meals." September 3, 2013. Available at: <http://www.nyc.gov/html/dfta/downloads/pdf/press>
 75. NYC School Food. Our Products. NYC School Food website. Available at: <http://www.schoolfoodnyc.org/menusandrecipes/menus.htm#ourproduct>
 76. Health and Hospitals Corporation, Board of Directors. Minutes of the March 12, 2013 Strategic Planning Committee Meeting "Dietary Operations Update. Available at: <http://www.nyc.gov/html/hhc/downloads/pdf/board-packets/2013/2013-04-strategic.pdf>
 77. Citizens Committee for Children. The School Breakfast Program in New York City Public Schools: Results from a Parent Survey Concerning Student Participation. May 2012. Available at: http://www.cccnewyork.org/wp-content/publications/CCCReport_SchoolBreakfast.May-2012.pdf
 78. Navarro, M. Bloomberg Aims to Require Food Composting. New York Times. June 16, 2013. Available at: <http://www.nytimes.com/2013/06/17/nyregion/bloombergs-final-recycling-frontier-food-waste.html>
 79. Gregory, K. Bloomberg Wants Restaurants to Compost. New York Times. November 22, 2013. Available at: http://www.nytimes.com/2013/11/23/nyregion/bloomberg-wants-restaurants-to-compost.html?_r=0
 80. Gregory, K. New York Council Votes to Ban Foam Food Containers and to Curb E-Cigarette Smoking. New York Times. December 19, 2013. <http://www.nytimes.com/2013/12/20/nyregion/new-york-council-votes-to-ban-foam-food-containers-and-to-curb-e-cigarette->

smoking.html

81. Navarro, M. Bloomberg Aims to Require Food Composting. New York Times. June 16, 2013. Available at: <http://www.nytimes.com/2013/06/17/nyregion/bloombergs-final-recycling-frontier-food-waste.html>
82. GrowNYC. Compost Food Scraps at Greenmarket. GrowNYC website. Available at: <http://www.grownyc.org/compost>
83. Navarro, M. Bloomberg Aims to Require Food Composting. New York Times. June 16, 2013. Available at: <http://www.nytimes.com/2013/06/17/nyregion/bloombergs-final-recycling-frontier-food-waste.html>
84. New York City Department of Sanitation. Bureau of Waste Prevention, Reuse and Recycling. Rikers Island Food Waste Composting Facility. NYC Recycles. 2013. Available at: http://www.nyc.gov/html/nycwasteless/html/compost/operations_rikers.shtml.
85. New York City Department of Sanitation Bureau of Waste Prevention, Reuse and Recycling. Rikers Island Food Waste Composting Facility. NYC Recycles. 2013. Available at: http://www.nyc.gov/html/nycwasteless/html/compost/operations_rikers.shtml.
86. Martin D. Rikers Island Learns to Recycle; Behind Razor Wire, Gardens and a Composting Plant. The New York Times. <http://www.nytimes.com/1999/01/19/nyregion/rikers-island-learns-to-recycle-behind-razor-wire-gardens-and-a-composting-plant.html?pagewanted=all&src=pm>. Published January 19, 1999.
87. Spencer R. Food Waste Composting In-Vessel Compost System Review Presentation to NYDEC Food Waste Webinar. March 31 2010. Available at: http://www.epa.gov/region2/webinars/pdfs/3-24-10_2.pdf.
88. New York City Department of Sanitation Bureau of Waste Prevention, Reuse and Recycling. Rikers Island Food Waste Composting Facility. NYC Recycles. 2013. Available at: http://www.nyc.gov/html/nycwasteless/html/compost/operations_rikers.shtml.
89. Tellus Institute. Rikers Composting Project Final Summary Report.; July 2003. Available at: <http://www.tellus.org/publications/files/rikersislandfinalsummary.pdf>.
90. NYC Recycles. About NYC Organics Collection. NYC Recycles website. Available at: http://www.nyc.gov/html/nycwasteless/html/compost/collections_ocp.shtml.
91. NYC Recycles. Organics Collection for Public Schools. NYC Recycles website. Available at: http://www.nyc.gov/html/nycwasteless/html/compost/collections_ocp_school_public.shtml
92. New York City Department of Sanitation Bureau of Waste Prevention, Reuse and Recycling. Recycling in Schools. No Date. Available at: <http://www.nyc.gov/html/nycwasteless/html/recycling/schools.shtml>
93. NYC Recycles. All about Foam Plastics. NYC Recycles. Available at: http://www.nyc.gov/html/nycwasteless/html/resources/plastics_styrofoam.shtml
94. Styrofoam out of Schools. Health Impact. SOS NYC. Available at: <http://www.sosnyc.org/HealthIMPACT.html> <http://www.sosnyc.org/HealthIMPACT.html>
95. NYC Recycles. All about Foam Plastics. NYC Recycles. Available at: http://www.nyc.gov/html/nycwasteless/html/resources/plastics_styrofoam.shtml
96. Wines, M. Urban Schools Aim for Environmental Revolution. New York Times. December 1, 2013. Available at: http://www.nytimes.com/2013/12/02/us/urban-schools-aim-for-environmental-revolution.html?nl=todaysheadlines&emc=edit_th_20131202&r=1&
97. World Centric. Frequently Asked Questions: General Questions. World Centric. Available at: <http://worldcentric.org/about-us/faq#general1>
98. World Centric. Making Bagasse. World Centric website. Available at: <http://worldcentric.org/sustainability/manufacturing/bagasse>
99. Wines M. Urban Schools Aim for Environmental Revolution. New York Times. December 1, 2013. Available at: http://www.nytimes.com/2013/12/02/us/urban-schools-aim-for-environmental-revolution.html?nl=todaysheadlines&emc=edit_th_20131202&r=1&
100. Gregory, K. New York Council Votes to Ban Foam Food Containers and to Curb E-Cigarette Smoking. New York Times. December 19, 2013. Available at: http://www.nytimes.com/2013/12/20/nyregion/new-york-council-votes-to-ban-foam-food-containers-and-to-curb-e-cigarette-smoking.html?_r=0
101. NYC Department of Health and Mental Hygiene. Healthy Hospital Food Initiative. NYC DOHMH website. Available at: http://www.nyc.gov/html/doh/html/about/healthy_hospital_food_initiative.shtml

gov/html/doh/html/living/cardio-hospital-food-initiative.shtml.

102. Food Research and Action Center. School Breakfast: Making it Work in Large School districts January 2014. Available at: http://frac.org/pdf/School_Breakfast_Large_School_Districts_SY2012_2013.pdf
[pdf/School_Breakfast_Scorecard_SY_2012_2013.pdf](http://frac.org/pdf/School_Breakfast_Scorecard_SY_2012_2013.pdf)
103. Stampas T. Testimony of Triada Stampas, Prepared for the Committee on General Welfare, Women's Issues and Health on Int. 1194-2013 and Hunger in New York, November 25, 2013, on behalf of the Food Bank for New York City. Available at: <http://www.foodbanknyc.org/files//dmfile/HungerHearing20135.pdf>.
104. Food Research and Action Center, School Breakfast: Making it Work in Large School Districts, January 2014. p.8.
105. Community Food Advocates. Summer Meals 2011: low participation (Again) in New York City. February, 2012. Available at: http://www.communityfoodadvocatesnyc.org/#!summer-meals-2011/c1plq.media.wix.com/ugd/008c07_a32a882f779fdf52a322b67091289d6e.pdf
106. Stampas T., Testimony prepared to the Committee on General Welfare (see note 85).

Photo Credits

1. Cover photo, Children's Aid Society
2. Cornell University Cooperative Extension
3. Wellness in the Schools
4. Wellness in the Schools
5. www.shorpy.com/node/4723?size=_original
6. Wellness in the Schools
7. Wellness in the Schools
8. Children's Aid Society
9. Greenmarket Co.
10. NYC Department of Sanitation
11. www.BGreenToday.com
12. Cornell University Cooperative Extension