



A Community Food Assessment of Trenton, New Jersey

**Community Development Studio
Urban Planning and Policy Development
Edward J. Bloustein School of Planning and Public Policy
Rutgers University**

Students

James Bennett, Erica Blake, Lori Cilino, Katie Holden, Miriam Latzer, Tanya Marione
Marika Milewska, Daniel Mott, Jeffrey Perlman, Paul Philps, Sarah Singer, Peter Van Den Kooy

Instructors

Norman J. Glickman and Kathe Newman

Spring 2005

TABLE OF CONTENTS

<i>EXECUTIVE SUMMARY.....</i>	<i>3</i>
Goals and Methodology.....	3
<i>ACKNOWLEDGEMENTS.....</i>	<i>7</i>
<i>INTRODUCTION.....</i>	<i>8</i>
Trenton in Brief.....	10
<i>FOOD ACCESS IN TRENTON.....</i>	<i>12</i>
Getting Food.....	12
Mainstream.....	13
Alternative Outlets.....	20
Food in Schools.....	27
Government Food Assistance.....	29
Making Healthy Food Choices.....	34
Knowledge.....	34
Behavior.....	38
<i>FINDINGS IN BRIEF.....</i>	<i>40</i>
Getting Food.....	40
Mainstream Food Provision.....	40
Alternative Food.....	40
Food in Schools.....	42
Food Assistance Programs.....	42
Knowledge.....	43
Behavior.....	44
<i>PATH TO A HEALTHIER FUTURE.....</i>	<i>45</i>
Recommendations for Short-Term Actions	45
Recommendations for Long-Term Actions	48
<i>BIBLIOGRAPHY.....</i>	<i>51</i>

EXECUTIVE SUMMARY

Isles, Inc. has worked with residents of Trenton for nearly a quarter century. This community development corporation provides training for at-risk youth, affordable housing, community planning, and community gardening to make families more self-sufficient. In recent years, the organization has taken on community health questions, in part because many residents of Isles' neighborhoods lack healthy diets. Some go hungry, while others suffer from diabetes and other diseases. Ironically, many also suffer from obesity. We examine how Trentonians eat and the barriers they face in obtaining healthy meals.

Trenton is one of many cities struggling to combat the effects of economic disinvestment and racial prejudice. Although it is New Jersey's state capital, the city has suffered greatly from the loss of its manufacturing base, white flight, and suburban sprawl to the surrounding area. Today's population of 85,000 is only two-thirds of what it was in 1950.

Today, Trenton and surrounding Mercer County sit on opposite sides of the income spectrum. The city's household median income (\$31,074) is \$20,000 less than that of Mercer County, which has the third highest income in the country. Thirty-three percent of Trenton's residents live with a household income of less than \$20,000, compared to only nine percent in Mercer County. Twenty-one percent of the city's residents live below the poverty line, including eight percent of people less than 18 years old. Approximately, half the population is black, one-fifth is Hispanic, and one-third is white.

Goals and Methodology

Isles asked Rutgers Community Development Studio to conduct a community food assessment to help it better understand food and nutrition in Trenton's low-income neighborhoods. We worked with Isles' staff to define a set of research questions:

- What is the nature of the local food delivery system?
- Where do people shop and what motivates their shopping preferences?
- Do residents get the food they need and want?

- What do people know about nutrition and how do they make food choices?
- How do public food assistance programs affect food consumption?
- What is the extent of hunger in Trenton?

We then used a variety of methods to analyze the food system. First, we carried out interviews with local food purveyors (including emergency food providers, food storeowners, and farmers) and conducted focus groups with adults, young adults, and schoolchildren to understand their knowledge of food and their eating patterns. Furthermore, we worked with a middle school to collect food diaries from seventh and eighth graders. We also made price comparisons for local supermarkets and independent grocers. We reviewed census data, previously conducted food assessments, and other literature to draw upon available research and information resources. Finally, we employed Geographic Information Systems techniques to map many food system phenomena (See appendix R for detailed methodology).

Our research showed that there is considerable hunger in the city. The evidence comes indirectly from data on the high level of poverty and from the number of people eligible for government food-support programs. First, about poverty: almost half of the residents have household incomes below \$20,000; 33 percent live below the federal poverty line. These figures are well above national levels and illustrate the seriousness of the gaps between income and the ability to buy adequate amounts of food. The level of hunger is also reflected in the demand for emergency food provision. Second, data show a high demand for food-support programs. The Mercer Street Friends Food Cooperative serves 17,000 thousand meals each month to hungry Trentonians—a large number relative to the size of the city. In addition, there are a large percentage of people eligible for food stamps and thousands of children getting free or reduced priced lunch at school. Together, these data indicate high rates of hunger or potential hunger in the city.

Several key findings emerged from our research:

- Overall, we found that there are few healthy food options in low-income neighborhoods. Many residents want to shop at large chain supermarkets that offer lower prices and better quality produce and products. However, supermarkets are not near inner-city neighborhoods, making it expensive and time consuming for many people to reach these stores. Residents can purchase food at neighborhood grocers, but they get higher priced and lower quality food there. Corner stores sell packaged goods and offer prepared foods; however, these foods tend to be high in fat and calories, with little nutritional content. Farmers' markets, roadside stands, and community gardening offer alternative means to get fresh produce. However, few residents of inner city Trenton access the farm markets and there are no roadside stands in the city of Trenton.
- Isles' gardening program is extensive offering more than 300 or more residents with the opportunity to grow their own produce.
- Many neighbors benefit from emergency food programs, but many more who qualify do not use these benefits. Food stamps can be used in many stores and at some vendors at the Trenton Food Market. Some corner stores accept food stamps for products that do not qualify making prepared foods accessible in place of potentially more healthful produce.
- Many people do not know how to cook, or simply prefer to eat meals prepared at the corner stores. This saves time and offers an opportunity to mix socially.
- Trenton public schools offer opportunities to provide youth with good food and nutritional instruction but they fall short. Lunch and snack menus include food that is not necessarily prepared in healthy ways, nor is it appealing to the students. By de-linking the lunchroom to the classroom, the public schools are missing an important opportunity to teach children about food and its relationship to their health.
- We found that few people were concerned about eating healthy and the difference was evident by age. Younger interviewees were less concerned with the negative health

effects of eating badly, while older interviewees were keenly aware of the need to eat well as per the instructions of their doctors.

We suggest a multi-tiered approach for Isles and other community leaders for healthier diets for Trentonians. Some strategies are relatively inexpensive and are easy to implement. Others require more significant investments of time, money, and commitment.

- To better educate residents about good eating habits and food preparation, Isles might develop a newsletter about healthy eating and form partnerships with local restaurants and organizations to provide nutrition advice and cooking courses. In addition, since children often do not have healthy diets, it would be useful to work with the Trenton public schools to emphasize nutrition in the curriculum.
- Isles could cooperate with schools and local farmers to introduce children to local agriculture and expose them to different types of meals. Isles is already working to educate children about fruits and vegetables by setting up seven community gardens on school grounds within the next year. The organization could enhance the program by advocating for science classes so students will be more likely to eat healthier food.
- Isles could also help increase the linkages between area farms and Trenton's neighborhoods. In doing so, local consumers could get healthier and fresher food and the farmers would have new markets for their fruits and vegetables. Isles could take advantage of Trenton's proximity to local farms by beginning an urban Community Supported Agriculture (CSA)¹ effort, providing transportation, and providing information to residents about locally grown products. Alternatively, Isles could consider working with farmers to create an urban distribution site for low-income CSA shares that already exist. Isles could also work with CSAs to accept food stamps for shares or offer partial payment plans to serve to low-income residents.

¹ See p. 26

ACKNOWLEDGEMENTS

We thank several people who advised us during the course of this project. Ralph Coolman (Urban Ecology, Rutgers University) and Anne Bellows (Food Policy Institute, Rutgers University) helped us shaped the research and gave us invaluable advice on food assessments. Both also spoke to the class early in the semester. Rick Van Vranken (Atlantic County Agricultural Agent) lectured in the class and shared useful information about food distribution. We also had very helpful conversations with Phyllis Stoolmacher (Director, Mercer Street Friends Food Cooperative) and Deb Keenan (FSNEP, Rutgers) about the emergency food distribution system. We worked with two groups associated with Isles, Inc: several YouthBuild students and community gardeners. Both sets of people participated in focus groups about their eating and shopping habits. We also interviewed a group of 7th and 8th grade students at a middle school as part of their science class with teacher Ed Butler. Finally, we thank the staff of Isles, Inc. our sponsor and client. We are especially grateful to Elyse Pivnick, Katherine Lee, and Clete Veler of Isles provided leadership and advice throughout the project.

INTRODUCTION

Even though the United States is a very wealthy country, some people experience “food insecurity,” which the United States Department of Agriculture defines as failing to consume “enough food for an active, healthy life” (USDA, 2004). Food insecurity disproportionately affects people in poor and minority neighborhoods, in turn hurting health, education, and economic security. To better understand how residents of inner city communities get food and what barriers they face to doing so, many communities across the country have conducted food assessments.² Food assessments are “a collaborative and participatory process that systematically examines a broad range of community food issues and assets, so as to inform change actions to make the community more food secure” (Siedenberg and Pothukuchi, 2002). These studies provide information about the availability and price of healthy food, public and private food assistance programs, and recommendations to improve diets. For many communities, food assessments are a first step in thinking about the problem of food security. Importantly, food is rarely included in traditional neighborhood planning or community development, so we were extending standard community development analysis. By gathering data, community partners can consider strategies to improve diets and use the data to develop a broader understanding of community development.

Our client was Isles Inc, a community organization that has worked in Trenton since 1981 to foster healthy, sustainable communities and self-reliant families.³ Isles asked us to conduct a community food assessment for the city. The organization began by working with neighborhood residents to create community gardens and gradually expanded their programmatic reach to include at-risk youth job training, affordable housing development, and community planning. Given the tremendous health disparities in inner city communities, Isles expanded its efforts to address issues that adversely affect resident health, including initiating a brownfield clean-up,

² For examples of food assessments and related analyses, see Pothukuchi, 2004; Pothukuchi, 2003; Siedenburg and Pothukuchi, 2002; Stevens and Raja, 2001; Ecumenical Ministries of Oregon, 2001; Pothukuchi and Bickes, 2001; Varela, Johnson, and Percy, 1998; Johnson, Percy, and Wagner, 1996; Ashman et al, 1993.

³ For more information on Isles, see <http://isles.org/>

participating in Trenton Moves—an exercise program—and addressing the issue of healthy eating.

By collaborating with students and faculty at the Bloustein School of Planning and Public Policy at Rutgers, Isles hoped to learn more about the ways residents get their food and to identify barriers to healthy eating. Isles' staff asked us to develop a report that would help them better understand food availability and consumption. Isles also asked for a set of policy recommendations that it could act on, either alone or in cooperation with other organizations.

We began the project by collaboratively identifying a series of research questions:

- How do food distributions work and how does food reach Trenton?
- Where do families shop?
- Do residents get the food they need and want?
- What do people know about good diets and how do they choose what to eat?
- How do public food assistance programs influence the consumption of healthy food?
- What is the extent of hunger in the city?

We used a variety of methods to answer these questions: We interviewed local food providers (including storeowners, emergency food workers, and farmers) and conducted focus groups with adults, young adults, and schoolchildren to better understand their knowledge of food and their food choices. We collected food diaries from seventh and eighth graders and talked with them about their food preferences and choices. In addition, we conducted a price comparison survey of food at local supermarkets and independent grocers. In addition, we reviewed census data, existing food assessments, and academic literature to draw upon available research and information resources (See appendix R for detailed methodology).

Trenton in Brief

Trenton, New Jersey's state capital and the largest city in Mercer County, is home to 85,000 residents.⁴ It has a high concentration of minorities and low-income people; the city has been losing jobs and population for decades. More than half of the residents are African-American, 33 percent are white, and 22 percent are Hispanic. In 2000, Trenton's household median income, \$31,074, was \$20,000 less than that of Mercer County.⁵ Sixty-one percent of students are eligible for free or reduced lunches and all students are eligible to receive federal snacks. Many of the city's jobs have disappeared. In the first half of the 20th century, the city employed thousands in steel, wire, and ceramics. Today, state office workers, most of whom commute into the city, hold most of the jobs.

To better understand food security at the community level, we focused on the Canal Banks, Old Trenton, and Magic Marker neighborhoods where Isles works most. These neighborhoods have a higher proportion of minority populations and are more financially insecure than other areas of the city. More than three quarters of the residents of these neighborhoods are African American; 20 percent are Hispanic. Almost half of the residents have household incomes below \$20,000; 33 percent live below the poverty line. Seventy-seven percent of the residents are renters. Nearly half (45 percent) of residents do not have cars and 10 percent do not have complete kitchen facilities (U.S. Bureau of the Census, 2000). The poverty, high housing costs, lack of private vehicles and complete kitchen facilities suggest some of the barriers residents face in getting healthy food.

⁴ In 1950, there were 128 thousand residents of Trenton.

⁵ Thirty-three percent of Trenton's residents live with a household income of less than \$20,000 in comparison to only nine percent in Mercer County. Twenty-one percent of Trenton residents live below the poverty level, including eight percent of those less than 18 years old. More than one-quarter of all households are headed by women. Thirty percent of the residents have no private vehicle and must rely on public transportation or someone outside of their household (U.S. Bureau of the Census, 2000).



FOOD ACCESS IN TRENTON

Getting Food

We first identified the ways Trenton residents get their food. We grouped food providers into four categories: mainstream, alternative, schools, and emergency food agencies (see Chart 1). Mainstream providers include supermarkets, independent or specialty grocers, corner stores, and restaurants. Alternative providers include farmers' markets, farmstands, community gardens, and community-supported agriculture. Students eat at schools; low-income students may qualify for subsidized breakfast, lunch, and snack programs. Finally, some get food from emergency food providers such as soup kitchens and food pantries.

Chart 1

Mainstream food providers			
<u>Supermarkets</u> <ul style="list-style-type: none"> • Aldi • Shop Rite • Super G 	<u>Independent/Specialty Grocers</u> <ul style="list-style-type: none"> • Halo Farms • Murray's Meats • Neighborhood Grocers 	<u>Corner Stores</u>	<u>Restaurants</u>
Alternative food providers			
<u>Farmers' Markets</u> <ul style="list-style-type: none"> • Trenton Farmers Market • Capitol City Farmer's Market 	<u>Farmers' Stands</u> <ul style="list-style-type: none"> • 23 road side markets in Mercer County • Youth Farmstand Program 	<u>Community Gardens</u> <ul style="list-style-type: none"> • 43 Community Gardens • Plans for 10 more gardens 	<u>Community Supported Agriculture</u> <ul style="list-style-type: none"> • Honey Brook Farms
School food programs			
<u>National School Lunch Program</u>	<u>School Breakfast Program</u>	<u>Summer Food Service Program</u>	<u>Farm To School Program</u>
Emergency food programs			
<u>The Emergency Food Assistance Program</u>	<u>Emergency Food and Shelter Programs</u>	<u>Private Food Donations</u>	

Mainstream

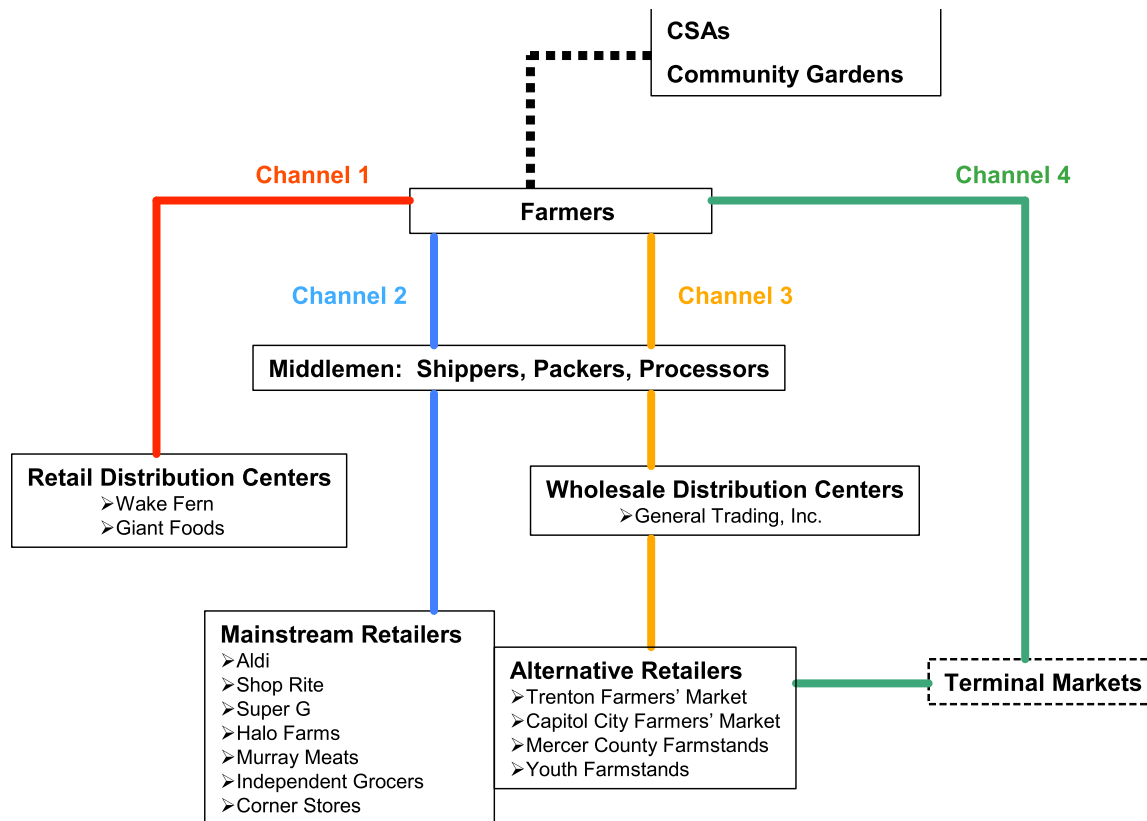
Most people in the Isles' neighborhoods shop at mainstream food outlets such as:

- *Supermarkets*- grocery stores with a full range of food departments
- *Neighborhood markets*- small, independently-owned grocery stores with a wide range of foods with less variety than a supermarket
- *Corner/convenience stores*- neighborhood “mom and pop” grocery stores offering limited food staples and nonfood items
- *Specialty Stores*- food stores primarily engaged in the retail sale of a single food category, such as meat and seafood markets, dairy stores, candy and nut stores, and retail bakeries

Supermarkets

Figure 1 shows the various channels of food distribution. Because supermarket chains (Channel 1) control their own distribution facilities and are the largest food purchasers in the wholesale market, they wield considerable market power throughout the distribution network. They can use this power to dominate others in negotiations over price, supply, and quality standards all the way down the chain. The dynamics of the retail food industry directly affect the choices available to people; these options, in turn, influence their nutrition and health. Consumers' dependence on supermarkets has increased because economies of scale in purchasing and distribution make their prices low.

Figure 1



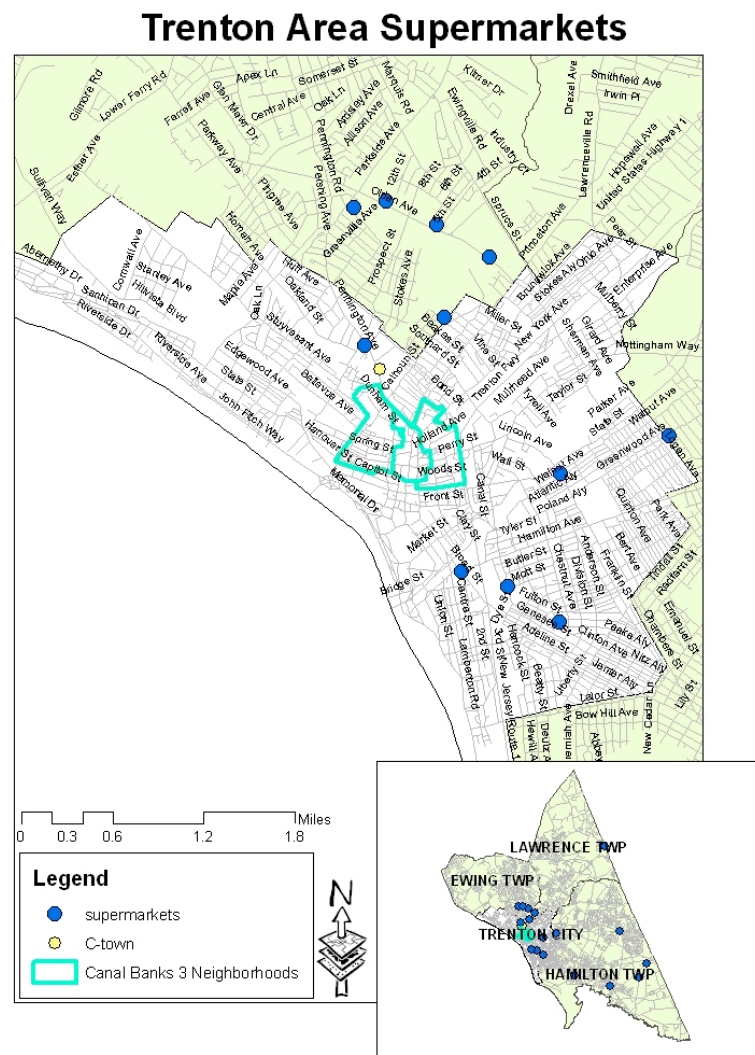
*Adapted from Tat Keh and Park, 1997.

Through our adult focus groups, we found that residents use chain supermarkets for much of their shopping. Many go to Shop Rite, Aldi, and Super G. Super G and Shop Rite are well-known chains in New Jersey.⁶ Aldi is a discount supermarket chain, which uses a high volume, low-margin model; it sells many of its own-label products in cartons. Trenton-area supermarkets are located primarily on high-traffic transportation corridors near the city's edges and outside of Trenton (See Figure 2). Residents of Isles' target neighborhoods—Canal Banks, Old Trenton, and Magic Marker—have no nearby supermarkets.⁷

⁶ In July, 2005 after we completed this study, Super G announced that it would close its Trenton store and one in nearby Hamilton. This substantially reduced the options available to Trentonians. See (Smith,2005).

⁷ There was a C-town close to these neighborhoods; however, it closed in 2004, removing a major food outlet for inner-city residents.

Figure 2. Trenton Area Supermarkets

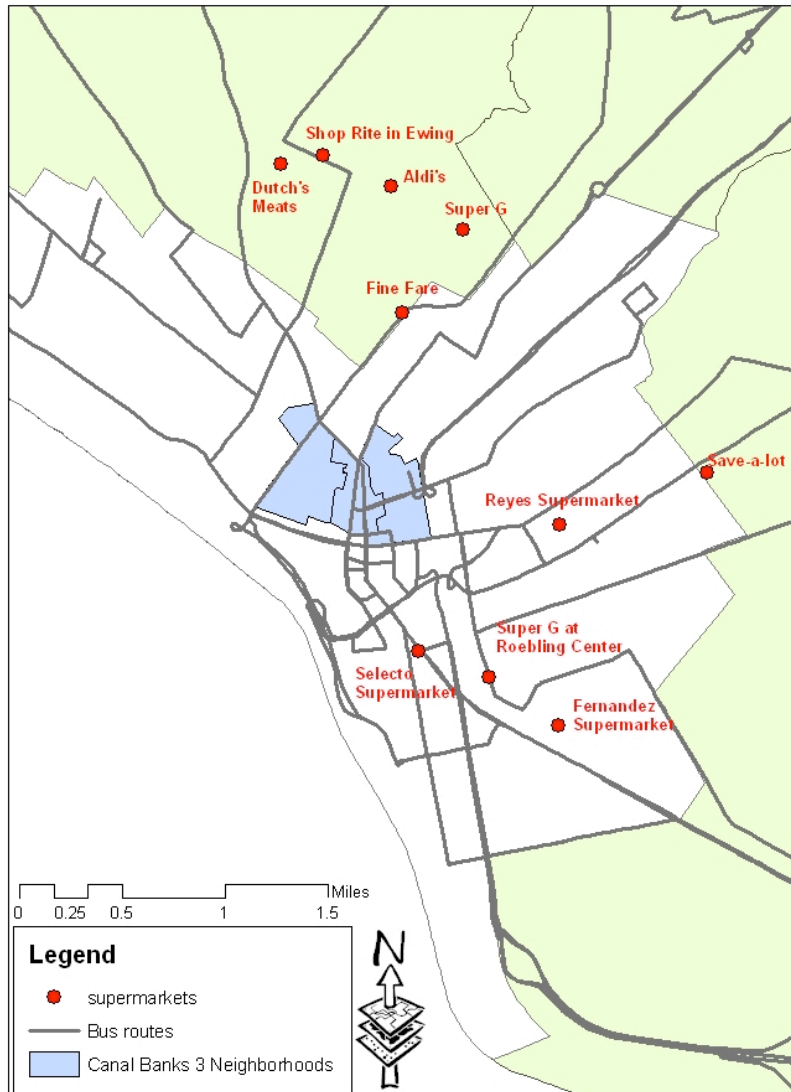


Many of the residents are not within walking distance of the supermarkets and many of the supermarkets are not close to convenient bus routes. Of the nine bus lines in the area, five serve the Old Trenton and Magic Marker neighborhoods. Aldi, Shop Rite, and Super G, are located along North Olden Avenue; only one bus line (601) travels along North Olden Avenue, passing two of these supermarkets (See Figure 3). Residents in our focus groups explained that

they could not walk to supermarkets and, instead, use cars for shopping trips. Those without cars depend on neighbors or family for rides or spend \$5-\$7 for a one-way on cab fare.

Figure 3. NJ Transit Bus Service to Trenton Area Supermarkets

NJTransit Bus Service to Trenton Area Supermarkets



After identifying where people shopped and how they got there, we compared food prices and availability to determine if healthy food is available and how much it costs. Specifically, we wanted to know if the availability of healthy food differs between large and small supermarkets and if healthy foods are costly. We limited our analysis to Trenton and the adjacent New Jersey communities of Hamilton and Ewing Townships. Based on the results of the focus groups, we selected five stores. Three are located in Trenton and one each in Ewing and Hamilton. Each store⁸ surveyed will be referred to as:

- Neighborhood Grocer A-Trenton
- Neighborhood Grocer B-Trenton
- Super G-Trenton
- Shop Rite-Hamilton
- Aldi-Ewing

To conduct the survey, we divided food items into several categories: fresh produce, carbohydrates, proteins, packaged and frozen foods, and condiments. Collectively, these foods satisfy basic daily nutritional requirements. We selected categories similar to those in other food pricing, including a study completed by the University of Wisconsin-Madison (Stevens and Raja, 2001). We surveyed both the store brands and the least expensive national brands to allow for comparisons across brands, within the same store, and between stores. Aside from price, we collected additional data about produce diversity and freshness, store cleanliness, atmosphere and lighting, and store layout (See appendix C for survey and detailed results).

We found that supermarket quality, cleanliness, and availability of healthy foods vary. Neighborhood Grocer A, Shop Rite, and Super G offer a diverse selection of fresh fruits and vegetables. Neighborhood Grocer B and Aldi's offer a limited selection of fruit and vegetables that did not look very fresh and were available primarily in pre-packaged form. Neighborhood Grocer A, Shop Rite, and Super G were clean and well lit; Neighborhood Grocer B and Aldi were less so. The aisle layouts for supermarkets Neighborhood Grocer A and Super G were well organized and food was easy to find. Shop Rite, Aldi, and Neighborhood Grocer A were confusing to navigate. Aldi displays junk food prominently at the store's entrance where other

⁸ Neighborhood Grocers A and B are neighborhood grocery stores located in Trenton. They agreed to participate but asked to remain anonymous.

stores place fresh produce. The large supermarket chains, Shop Rite and Super G, offer a variety of healthy food products, including fresh meat and dairy products. Aldi has a poor selection of healthy foods. It does not offer skim milk, has a limited selection of basic staples like rice and bread, and markets primarily canned goods and frozen ready-made meals.

We limited the price comparison survey to three stores: Super G, Shop Rite, and Aldi. Shop Rite and Aldi were cheaper than the Super G in the Roebling Center. A basket of similar goods at Super G costs \$13.42 and \$9.98 at Shop Rite. We found that Aldi has the lowest prices for produce; Super G has the highest (See Table 1).

Table 1: Comparison of Prices at Supermarket Chains

Food Item	Super G	Shop Rite	Aldi
Apples/lb	1.29	.84	.63
Bananas/lb	.69	.69	.29
Grapes/lb	2.98	.79	1.50
Tomatoes/lb	1.79	1.69	1.27
Broccoli	1.99	1.99	1.7
Collard greens	.79	.99	N/A
Iceberg lettuce/ each	1.69	.99	1.99
Romaine Lettuce	2.49	1.49	N/A
Potatoes/5lb	2.99	2.99	1.00
TOTAL	13.42	9.98	8.38

We compared the prices of store brands, recording the prices of dairy, meat, canned and frozen goods, and condiments at each store. As shown in Table 2, the Super G store brand is more expensive than Shop Rite's. Aldi carries only a few of the items we surveyed.

Table 2: Comparison of Store Brand Prices

Food Items	Super G	Shop Rite	Aldi
Ground Beef 75 percent lean	2.99	2.59	
Ground Beef 93 percent lean	4.59	3.99	
Skim Milk, gallon	3.49	3.79	
2 percent Milk, gallon	3.69	3.79	2.69
Butter, sticks 16oz	3.99	1.49	
Margarine, sticks 16oz	.79	.89	
American Cheese, 16 slices	2.79	1.49	
Canned Corn	.69	.76	.33
Canned Mixed Vegetables 15oz	.59	.45	.33
Canned Tuna Fish 6oz	.69	1.19	.45
Macaroni & Cheese, 16oz	3.21	.99	
Frozen Corn /lb	2.59	1.00	
Frozen Mixed Vegetables /lb	1.50	1.00	.89
Ketchup 24oz	1.29	1.35	.66
Mayonnaise, 16oz	1.39	1.59	.99
Vegetable Oil 16oz	1.29	.99	1.19
Coffee, Instant /lb	9.96	7.98	
Coffee, Ground /lb	3.19	2.45	

Neighborhood Food Outlets

Despite often-higher prices, we found that many people shop at neighborhood grocers and corner stores close to home. Families shop locally because of convenience and personal ties to stores. They also shop in those stores because they carry ethnic, prepared foods, and specialty items like fresh meat and ice cream. To learn more about these stores, we visited two neighborhood grocers and talked with residents in focus groups about where they shop and why.

Many residents, especially younger people, purchase food at neighborhood grocers and corner stores. Neighborhood grocers offer specialty food items like ethnic products, fresh meats, produce, and convenience items. Neighborhood grocers also offer services such as check cashing

and money wiring. Corner stores are primarily used for one-product shopping—milk, bread, cigarettes, candy, and snacks. We found that residents buy prepared foods such as cheesesteaks, French fries, rice and beans, and cold sandwiches at corner stores. The young adults said that they often buy prepared foods at corner stores because they can get a filling meal for less than five dollars, they don't have time to cook at home, and or they choose not to eat at home. We also learned that residents develop personal relationships with corner storeowners, which, in some cases, enable informal transactions, such as using food stamps to pay for unqualified foods like cheesesteaks.

Neighborhood grocers and corner storeowners purchase food differently than supermarkets. There are three distribution channels available to local storeowners, exhibited as Channels, 2, 3, and 4 in Figure 1. One source is direct-service delivery (DSD), in which a packer or processor delivers food directly to the store rather than working through a wholesale distributor (Channel 2). DSD is used for products where freshness is critical, such as dairy and meats or large-volume products (e.g., beer and soda) (Hegazy, et al 1997). Other foods come through wholesale distributors that deliver a variety of products to stores (Channel 3). Some purchase produce at terminal markets in the Bronx and Philadelphia (Channel 4). The two storeowners we interviewed procure food differently. One works with approximately 100 different distributors—including produce, meat, and wholesale distributors that deliver products directly to stores. Much of the produce purchased through distributors is sold pre-packaged in Styrofoam and plastic, perhaps masking the quality of the produce. The other works with a handful of distributors and purchases produce at the Terminal Market in Philadelphia once a week. We found that produce purchased through the Terminal Market was fresher and of better quality than that purchased through a produce distributor.

Alternative Outlets

We identified a variety of “alternative” sources of food in and around Trenton including farmers' markets, roadside farmstands, youth farmstands, community gardens, and community-

supported agriculture (CSA)⁹. Alternative food sources minimize distribution intermediaries and take advantage of local resources (See Channel 4 in Figure 1). Food available at alternative outlets is usually fresh, produced locally, and minimally processed. For these reasons, alternative providers are often important sources of healthy foods—although many of these sources are available only during the summer growing season.

Farmers' Markets

Trenton is home to two farmers' markets, although neither is close to Isles' neighborhoods. The Capital City Farmers' Market, a relatively new market, is at the Trenton War Memorial, in the heart of the state government complex. It is targeted to state workers and is

Institutional Food Distribution: NJ Café

NJ Café is the restaurant at the Trenton State House. It serves as the cafeteria to state employees and caters food for events held by legislators. Greentree Food Management, Inc, operating under a contract with the state government to provide food services, owns NJ Café. Greentree buys produce through a national food distributor, Novick. Greentree is a large and steady customer base for Novick; in return, Novick assures Greentree low prices. However, in addition to working with Novick, NJ Café works with a number of local food purveyors, including City Beef, P&G Seafood, and Halo Farms. The manager and purchasing agent at NJ Café makes decisions about where to get food to satisfy the demands of the restaurant's patrons. If the State House constituents expressed an interest in purchasing NJ produced fruits and vegetables, NJ Café indicated that they would be willing to provide such products.

open once a week from mid-July through late-September. We asked focus group participants about this market, but very few knew about it. The Trenton Farmers' Market (TFM) is located between the Mercer County Extension Service office and Halo Farms (not affiliated with the TFM), within walking distance of Olden Avenue, and near many supermarkets. The TFM¹⁰ is only one of three year-round farmers' markets in the state.¹¹ According to Jack Ball, TFM manager since the 1980s, the more than 40 vendors that rent space at the TFM sell produce, meats, baked goods, seafood, clothing, gourmet food, and ethnic products.

⁹ See the section on CSAs below for a definition and description.

¹⁰ The TFM, which has been open since the early 1900s, is owned by a farmers' co-op and managed by an elected Board of Directors.

¹¹ Princeton Packet Online www.pacpublisher.com/new/news/8-9-00/farmersmarket.html.

Specca Farm (Mercer County), for example, specializes in fresh collard greens. Sandy Acres Farm (Atlantic County) sells a variety of peppers used in Latin American cuisine.¹²

Eastern Europeans are the major ethnic group located near the TFM, though the area has historically had a higher concentration of Italian Americans. The customers at the TFM reflect the community's ethnicity, though on busy days it is a melting pot of cultures. In our focus groups, we learned that some residents of Isles' neighborhoods shop at the TFM, but many do not. When asked about the Trenton Farmers' Market (TFM), several stated that they go there for fresh vegetables. Another complimented the meat store there. Some of those that do not shop at the market think it only sells large quantities—although this is not true. Others think it is too inconveniently located, which is somewhat surprising because it is next to Halo Farms where many Trenton residents shop for ice cream and milk. Some pointed out that only a few vendors accept food stamps and identified limited business hours. Participants felt that the farmers' market needed to advertise more in their communities. Several participants thought that if their neighborhoods had a lot of unhealthy food, residents would tend to eat poorly and that more should be done to attract residents to the fruits and vegetables sold at the farmers' market.

The TFM has received NJDA "Jersey Fresh" grants since the program's inception¹³. The TFM uses the funds to sponsor yearly events that coincide with the availability of agricultural products grown in New Jersey and mounts this and similar events to attract more customers. TFM sponsors "Senior Day" (last year attended by 700-800 seniors), where eligible seniors were able to pick up food assistance coupons on-site¹⁴ (Ball, 2005). The TFM frequently hosts school trips from all over the area, including Isles' target neighborhoods. In addition, the Mercer County Extension Service sets up information booths for nutrition and health information and the County

¹² Nine of the forty businesses are classified as "farm vendors," which means that they are only allowed to sell what they grow on their commercial farms. The exception is O'Hara's County Market, which is the primary vendor during the winter months.

¹³ Jersey Fresh makes matching grants to agricultural organizations, which use the funds to promote food and wine festivals, rural tourism guides, and other efforts.

¹⁴ Food assistance coupons are part of the Seniors Farmers Market Nutrition Program (SFMNP) established by USDA's Commodity Credit Corporation (CCC). The CCC makes grants to States and Indian tribal governments to provide coupons to low-income seniors that may be exchanged for eligible foods at farmers markets, roadside stands, and community supported agriculture programs. (<http://www.newrules.org/agri/wic.html>).

Master Gardeners have held programs at the market.¹⁵ Farmers associated with the TFM sell at the Stokes Building (a senior housing center) during the warmer months either on Mondays or Tuesdays (to coincide with the down days at the TFM). Jack Bell, the market's manager, mentioned that he would be open to facilitating more of these ventures if the vendors were interested. Isles may want to consider expanding direct marketing opportunities for farms within target neighborhoods using the TFM as a partner. These markets present opportunities for residents to get fresh, locally grown produce if they can overcome transportation problems.

Regional Farm Roadside Stands

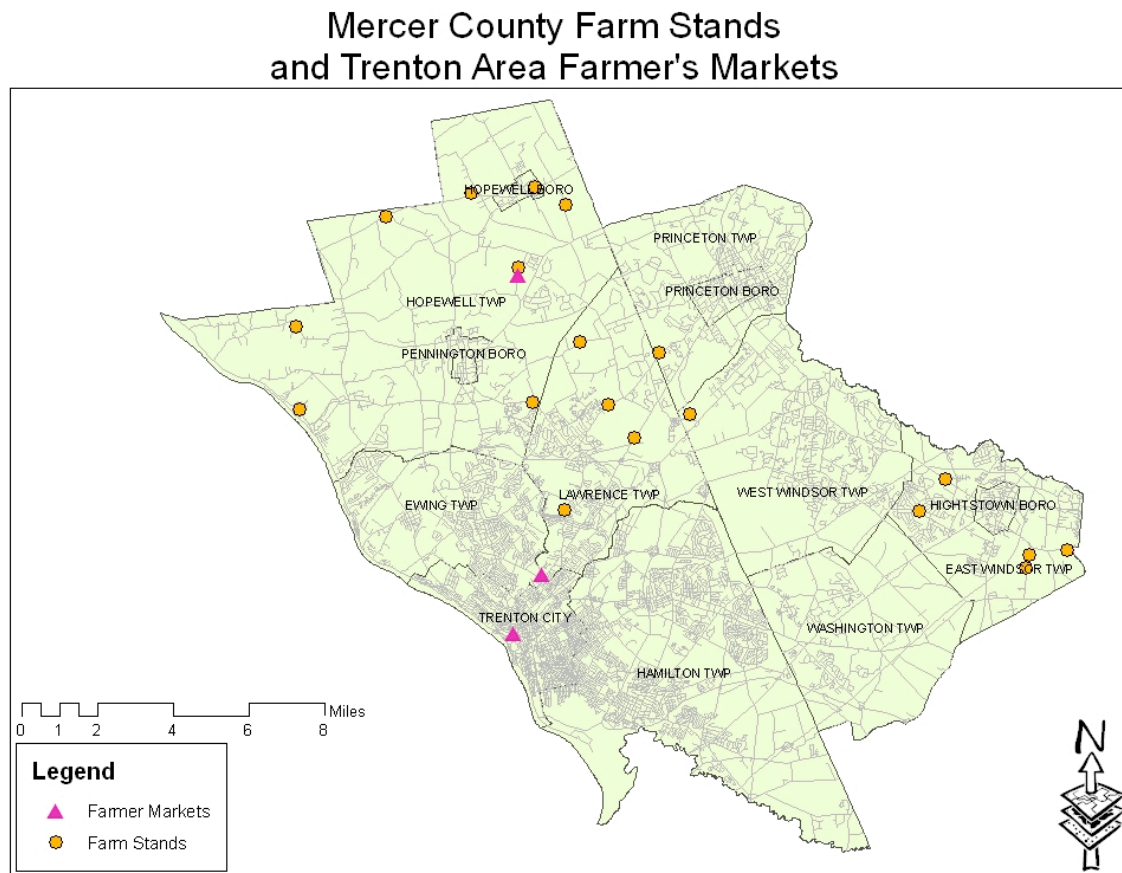
Roadside stands provide additional opportunities to get locally grown fresh produce. According to the New Jersey Department of Agriculture's (NJDA) Jersey Fresh Program, there are 23 roadside markets in Mercer County (See Figure 4). Six of the markets accept some form of food assistance payments, but none of them are near downtown Trenton.

Youth Farmstands

The Rutgers Youth Farmstand Program runs two farmstands within the city, operated by youth with adult supervision. These stands are open three days per week during the summer. They are important because they serve inner city neighborhoods that the farmers' markets do not. Customers generally come from the area immediately surrounding the farmstand, within approximately six blocks in any given direction (Blalock, 2004). In addition, these farmstands were set up in close proximity to WIC offices to encourage the use of WIC coupons at these stands.

¹⁵ Community Master Gardeners are individuals who have completed a master gardening course offered through the state extension agencies. These people are then certified to train others in horticulture (http://liberty.ifas.ufl.edu/mg_desc.htm)

Figure 4: Roadside Markets and Farmers' Markets



Community Gardens

Isles, the only Trenton group engaged in community gardening, currently supports 43 community gardens and plans to open three new community gardens and seven new school gardens in late 2005 (See Figure 5). The organization also provides education to gardeners about gardening methods and nutrition. More than 700 people work in Isles' gardens. About half are adults between the ages of 26 and 59 and nearly all come from low-income families. Residents grow flowers and vegetables, including collard greens, bitter melon, pigeon peas, collaloo, and tomatoes. The gardeners give unused food to family members or donate it to others. For example, Isles' Academy Street Garden donated more than 500 pounds of produce during the 2004 growing season.

Figure 5: Community Gardens Map



One woman in our adult focus group reported that she and her husband regularly gardened and that they often shared some of the food with neighbors. The community gardens are popular because they provide a cheap way to get fresh vegetables and offer residents an outdoor, communal activity. They also said that community gardens are not always successful and that each one's success relies on the garden's neighborhood. Gardens tend to thrive in communities where residents are older rather than where there are young people. In addition, community gardens may be more successful in areas of high homeownership than in areas with a high number of renters because homeowners may be more inclined to take ownership of the

surrounding environment. Participants suggested that Isles hire a bilingual organizer for the community since many of their neighbors only speak Spanish.

Community Supported Agriculture

Isles is interested in Community-Supported Agriculture (CSA) a movement that has been gaining momentum since its introduction to the United States from Europe in the mid-1980s. In a CSA, consumers purchase “shares” of the farm or garden in advance to cover the costs of the farm operation and farmer's salary. In return, they receive a portion of the farm's harvest as well as the satisfaction of participating directly in food production. Members share in the risks of farming, including poor harvests due to unfavorable weather or pests. Through direct sales to community members who have provided the farmer with working capital in advance, growers receive better prices for their crops, gain some financial security, and are relieved of much of the burden of marketing. In concept, a CSA grower can receive profits by selling low-cost memberships to customers who can then harvest crops at below-retail store prices.

A Successful Urban CSA:

Greensgrow, Philadelphia, PA

Greensgrow Farm is a non-profit experimental farm in a mixed industrial/residential neighborhood of Philadelphia. In 2002, the farm began a CSA as the first step in developing an inner-city coalition of farms that purchase products from rural farms and distribute these items along with urban-grown produce. The farm also began hosting a farmers' market, through which Greensgrow Farm's and rural farmers' produce is sold.

Isles' Community Garden Specialist Jody Veler told us that a CSA within the neighborhood might work if a relationship could be structured to integrate a higher income component (such as city employees and state workers) and low-income residents. She noted that Suburban Organics is supporting this CSA model in Southern New Jersey. The CSA offers low-priced shares for lower income customers supported by higher priced shares for those that have higher incomes.

Ms. Veler said that Isles established a CSA at Mercer County Community College, but it failed for two reasons. First, its suburban location made it inconvenient to neighborhood residents. Second, many people could not afford the upfront membership costs and thus could not participate. Mrs. Veler felt that any CSA in Trenton must accept labor as payment for shares, or a

combination of WIC and senior coupons; poor people also need a flexible payment schedule. Isles might consider partnering with the Honey Brook CSA located in nearby Pennington, Mercer County. Honey Brook offers two types of shares – shares that people pick up at the farm and “boxed shares” that are delivered to an established drop-off point. Isles could eliminate the transportation problem by offering to become a drop – off location for boxed shares. Isles could also solicit funding to assist residents in purchasing shares.

Overall, we found that because of Trenton’s proximity to local agriculture (mostly in South Jersey), there is the potential to link urban residents to fresh produce, at least during the summer. Based on information from focus groups and interviews, residents in Isles’ target neighborhoods do not often shop at alternative outlets such as farmers markets. Except for community gardens, for the most part, these resources are not available within walking distance of neighborhoods. We see great promise through models like TFM’s partnership with the Stokes building and the Youth Farmstand Program. In addition, we believe that there is an opportunity to increase residents’ opportunities by increasing the acceptance of alternative payment options like food stamps.

Food in Schools

Schools are a critical and often overlooked point in the food distribution system. The Trenton School District includes 24 schools with an enrollment of 12,430 students. Sixty-one percent of students are eligible for free or reduced lunches and all students are eligible to receive snacks (See appendix N for a description of Federal school food programs).

To learn more about what children eat and what they know about food, we asked students in two seventh grade classes and two eighth grade classes to keep food diaries for 10 days. Ninety-seven students recorded what they ate—in and out of school—and shared the results with us. They also completed a survey with additional information about how they get their food. We think that these students are probably more aware of healthy foods and excited to learn more about nutrition than average students did because their science teacher chooses to

enthusiastically teach them about nutrition (See appendix Q for New Jersey curriculum standards).

When we met students during their science class to discuss their diaries, we found that most students said that they know what vegetables and fruits are and know the rudiments of cooking. Thirty percent of students reported that they ate home-cooked meals more than five times a week and half eat fruits and vegetables three or more times a day. Almost half of the students eat fast food once a week but few eat it five times or more.

We asked students to rate the food in their school cafeteria. Fully 85 percent rated it as fair—the lowest category in our survey. Fourteen percent rated it good and one percent said that was it very good. In focus groups, some students described the food as “nasty.” However, 40 percent of students said that if more fruits, vegetables, and healthier food choices were available, they would eat them and another 37 percent responded to that question with “maybe.” When asked what stops children from eating healthy food, more than a quarter of them said a lack of choices—only 9 percent said that they don’t like healthy food. Even though students can eat food in the schools, and many can receive it for free or at

low cost, they are not excited about eating it. School staff said that many students skip breakfast. They also mentioned that students have to pick up a set number of items from the lunch line for the free and reduced cost lunches, but many do not eat all of the items (See appendix A for in-class survey results).¹⁶

Case Study of a Trenton Middle School Cafeteria

Food in Trenton elementary schools is not prepared on site. However, middle and high schools do have on-site preparation of all meals. This distinction means that while elementary schools serve food that is ready-to-eat and pre-plated, middle and high schools primarily prepare foods from cans (only 5% of cafeteria food ingredients is not from cans). Preparation includes adding water to canned soups, adding butter and milk to mashed potatoes, and adding vegetables and mayonnaise to canned tuna.

A Trenton middle school offers mostly canned fruits and vegetables, but also provides fresh apples, pears, and bananas. Snacks sold during lunch include pudding, Jell-O, cookies, potato chips, and Tasty Cakes. Menus at the school change on a monthly basis (See appendix L for menus).

School breakfast, lunch, and snacks come from the vendors that offer the schools the lowest bid for their products. The Commissary acts as the warehouse and distribution center for all schools, catering activities and eighteen outside contracts (primarily child day-care centers). Some of the vendors include Cream-O-Land Dairy Inc., Licciardello Bros. Inc., International Produce, Five-Star, and Harrison.

*Source: Interview with cafeteria staff

¹⁶ Students also may purchase snacks that are available on the lunch line and include pudding, Jell-O, cookies, chips, and Tasty Cakes. Students can also buy Twisters, Gatorade, and Snapple Iced Tea.

Even though the food schools offer may meet USDA guidelines, it may not be very healthy or appetizing. A quick look at some of the Trenton school food offerings for breakfast, lunch, and snack suggest potential for improvement. A sample lunch menu includes popcorn chicken, cheeseburgers, Dominos pizza, barbequed wings, and tacos. Many of the breakfast, lunch, and snack items likely contain trans fats. Instead of offering fruit as snacks, children are offered crackers (See appendix L for menus).

Existing programs could form a base from which advocates can work to transform school food programs. In New Jersey, there are programs that link farms with schools. The New Jersey Urban Ecology Program at Rutgers University is part of the United States Department of Agriculture's Initiative for Future Agriculture and Food Systems' (IFAFS) From Farm to School: Improving School Meals and Small Farm Viability program, otherwise known as the Farm to School Project. In FY2003, the program provided 400,000 pounds of locally grown produce to New Jersey schools from September through October. Seasonality requires that most of the purchasing for the program occur in the fall. In FY2004, more than 600,000 pounds of locally grown produce was distributed. The program is offered statewide and any school district that participates in the National School Lunch Program is eligible to receive locally grown produce. The produce is integrated into the salad bar and regular meals. Many food service directors are unaware that they are receiving locally grown produce, which in NJ includes peaches, potatoes, tomatoes, watermelon, peppers, and salad mix.

Government Food Assistance

Emergency Assistance Programs

Some residents receive food through emergency food assistance programs. Food for these programs comes from The Federal Emergency Food Assistance Program (TEFAP) and Emergency Food and Shelter Program, private donations and nonprofit providers. We conducted interviews with emergency food providers to better understand the city's emergency food resources.

Under TEFAP, the USDA purchases food commodities and ships them to states that distribute the food to poor families and local emergency food providers (Food Research and Action Center, 2005). States are allocated TEFAP commodities based on a formula that weights the number of low-income residents by 60 percent and unemployed residents by 40 percent. Eligibility is determined at 185 percent of the federal poverty level or participation in Temporary Aid to Needy Families, Food Stamps, Supplemental Security Income, Women, Infants and Children or Medicaid. States then work with Emergency Feeding Organizations (EFOs) to disperse TEFAP foods to local agencies, such as food pantries, soup kitchens, religious organizations, and other groups that provide meals and food supplies to the public (NJDA - TEFAP program, 2005). Seventy different kinds of food staples, including canned beans, meat, fish, cereal, rice, juice, and peanut butter are distributed to seven EFOs throughout New Jersey (NJDA - Food Distribution, 2005). The kinds of foods distributed by the program vary, due to economic circumstances, time of year, and other conditions (Food Research and Action Center - Food Programs, 2005; TEFAP, 2005).

The Mercer Street Friends Food Cooperative (MSFFC) is Trenton's local EFO. We spoke with Phyllis Stoolmacher of Mercer Street Friends about the food cooperative and its work providing emergency food. The USDA is the MSFFC's biggest supplier. TEFAP food is free for the food cooperative and their member organizations (aside from staff time, storage, and local transportation, which amount to considerable costs). Other major sources of food include private donations, food drives, and grants that help purchase food not provided by the other sources (i.e. frozen meat). MSFFC has more than 50 member organizations that provide food and meals to low-income residents. Seventeen thousand people receive food from all the member organizations in Trenton per month. Because some of the recipients of this food are repeat customers, this number does not reflect seventeen thousand different people; it is the total number of clients served. MSFFC distributes 1.5 million pounds of food per year (Mercer Street Friends, 2004).

Phyllis Stoolmacher asserted emphatically that there is poverty in Trenton. In speaking further about hunger and poverty, Mrs. Stoolmacher emphasized the reasons why people in the city (and elsewhere) are not receiving enough to eat. First, the capacity of charitable food

organizations like MSFFC is limited. Food pantries and food banks would love to have longer hours and greater presence in needy communities, but they are not well funded. Another constraint is that they rely heavily on volunteers and have few staff; some pantries and soup kitchens have no paid staff at all. Moreover, pantries can only give out a couple of day's worth of food at a time. Such short-term relief does not address problems of hunger and poverty. Government programs, such as food stamps, are a poor family's first line of defense against hunger, but these programs do not go far enough to alleviate hunger, either. Hence, there is a need for more emergency food sources. The non-profit sector cannot possibly feed all the hungry in this country because they do not have the ability to cure poverty. Mrs. Stoolmacher thinks that organizations have been successful in outreach to residents regarding federal programs, like food stamps.

Participants in our young adult focus group agreed that there is hunger in the city. Some said that people visit pantries and other local resources to obtain food donations. However, more than one participant mentioned that people who needed food preferred to ask the help of a neighbor or friend rather than visit a pantry or soup kitchen. From this, we can surmise that the seventeen thousand clients served food through MSFFC member organizations every month does not reflect all of the residents who might experience a need for emergency food.

Food Stamps

In Mercer County 7,503 families participated in the Food Stamp program in 2003. We were not able to obtain participation rates for the city of Trenton but we did learn that the participation rate in 1999 was between 44-58 percent (Economic Research Service - Food Stamps Data, 2005; Food Stamp Nutrition Education Program, 2005). An estimated 53 percent of eligible people participated in New Jersey's Food Stamp program in 2000. The number of people eligible in the state was 593,000 in 2000. That means that about 278,710 eligible people in New Jersey did not receive food stamps that year (Schirm and Caster, 2002; Rosso and Weill, 2005).

Like many other states, New Jersey's food stamp participation rates dropped between 1998 and 2000, from 59 percent to 53 percent (Schirm and Caster, 2002). The drop was

attributed in part to the five-year time limits for Temporary Assistance for Needy Families (TANF) imposed by the Welfare Reform bill (PROWA). Food Stamps were de-linked from TANF benefits. Before TANF, which was implemented in 1997, people applied for and received TANF and Food Stamps together. Due to PROWA, many people who moved off welfare also thought that they were no longer eligible for Food Stamps. Many agencies have acknowledged this problem and have taken steps to reduce the red tape that makes it harder to use these programs. New Jersey has made improvements, including shortening the Food Stamp application and enabling people to apply for benefits online.

Food Stamps provide households with flexibility because households can buy bread, cereals, fruits, vegetables, meat, fish, poultry, dairy, seeds, and plants that provide food. Households cannot use food stamps for alcohol or tobacco products, nonfood items such as pet food, soap, or household supplies, vitamins, medicines, hot food or food that will be eaten in the store (Food and Nutrition Service, USDA- Food Stamp Program FAQs, 2005). Most food vendors accept Food Stamps. Food Stamps are an enormous source of income for food retailers. From the Trenton Regional Office of the USDA Food and Nutrition Service, we received a list of more than 150 area food retailers that can redeem food stamps. With food stamps, people can purchase healthy food from many providers but the benefits are not generous enough to prevent people from going hungry. A single, low-income adult receives \$149 as a maximum monthly benefit.

We interviewed an employee at the Mercer County Board of Social Services (MCBSS) who had worked with Food Stamp recipients for more than 20 years. She told us that she thought Mercer County residents were very well informed about the Food Stamp program. The MCBSS has been pro-active in collaborating with community organizations about spreading the word about the program. MCBSS received a grant to employ an outreach worker to go to local food pantries and help residents fill out applications. She noted that with welfare reform, renewed efforts had to be taken to let people know that there is no time limit on Food Stamps and that Food Stamps and welfare are separate. She thought that the greatest obstacle to receiving Food Stamps was the bureaucratic regulations that govern the program. People become frustrated with program regulations such as having to meet with Social Service representatives every six months

and reporting even small changes in income. She believed that people who are homeless, mentally ill or have substance abuse problems have little tolerance for the requirements one needs to meet to get benefits.

The Special Supplemental Nutrition Program for Women, Infants, and Children

Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) Program is provided by the Food and Nutrition Service (FNS) agency of the USDA. The primary function of this program is to “safeguard the health of low-income women, infants, and children up to age 5 who are at nutrition risk by providing nutritious foods to supplement diets, information on healthy eating, and referrals to health care” (Food and Nutrition Service, 2005). In New Jersey, the average monthly number of participants was 133,946 in 2002. Participation in WIC grew by 38 percent nationally from 1992-2002; in New Jersey, it grew 7 percent (Hess, 2003).

Benefits provided by the program include nutritious foods, nutrition education, and counseling at WIC clinics, screening, and referrals to other health, welfare, and social service programs. Program participants receive checks or vouchers to purchase particular nutritious foods at participating retailers. WIC foods must contain a nutritionally significant amount of one or more of the following nutrients: protein, iron, calcium and vitamins A and C, as these nutrients are frequently lacking in the diets of the program’s target population. The following foods are available through the WIC program: iron-fortified adult cereal, iron-fortified infant formula and infant cereal, vitamin C-rich fruit or vegetable juice, milk, eggs, cheese, peanut butter, tuna fish, carrots and dried beans or peas (Food and Nutrition Service, 2005). WIC stickers are used to identify products eligible for purchase with WIC vouchers. WIC stickers appear on shelves next to the price of the product and the WIC program approves only certain brands of products for purchase within most food categories. For example, Juicy Juice is an approved juice product. From a nutritional perspective, some of the approved products are not the healthiest on the shelves.

WIC services are provided in places like hospitals, county health departments, community centers, mobile health centers, public housing site, schools, Indian health service facilities and migrant health centers and camps (See Appendix O for Trenton WIC locations). In addition, participants in the WIC Farmers' Market Nutrition Program (FMNP) can redeem WIC vouchers at farmers' markets. More than 13,000 farmers received more than \$20.8 million in revenue from FMNP in 2002 (Food and Nutrition Service, 2005).

Not everyone who qualifies for WIC uses it. Our field research suggested that some people are not aware of the programs; others know about it but do not want to depend on the government. Therefore, it appears that there is an opportunity for Isles to act as an information conduit; it could distribute WIC program information and encourage the use of farm market coupons. Isles may also be able to show that participation in the program is a wise economic decision for women, infants, and children and that participation is something that should be respected.

Making Healthy Food Choices

To learn more about what people know about nutrition and the choices they may make about food, we conducted focus groups with adults, young adults, and middle school children. We conducted the first group study at Isles' main office; it included eight adults from the Canal Banks and Old Trenton neighborhoods. The second group study consisted of 25 young adults between the ages of 16 and 24 who participate in Isles' YouthBuild job training program. We held the last focus group with seventh and eighth grade students from a middle school.

Knowledge

We sought to better understand whether people are interested in eating healthy foods, what people consider healthy foods, where they learn about food, and whether they read nutrition labels. We found that attitudes toward food differed among age groups. Adults cared about nutrition in the context of health-related problems—especially when receiving a warning from their doctor. The young adults did not seem to value healthy eating at this point in their lives. The middle school children were interested in learning about nutrition and healthy eating. This may

be due in part to the exposure to nutrition they received from their science class, which was the setting of our focus group.

Adults

The adults we interviewed had a prior affiliation with Isles through its community gardens program and seemed educated about nutrition and healthy eating—probably more so than other residents. Some of their favorite foods included fried fish, salmon, fresh vegetables, lamb, baked and fried chicken, bananas, yogurt, collard greens, potatoes, and chocolate ice cream. This list indicates some degree of healthy food consumption. In addition to offering information about their own lifestyles and eating habits, this group shared observations about those of friends, family, and other residents. Participants seemed to be informed about the importance of eating foods such as fruit and vegetables to promote good health; however, many stated that their eating habits had been influenced later in their lives by some form of direct exposure to the negative effects of poor diet. For example, one woman stated that she had eaten ice cream regularly, until her job as a health aid exposed her to the ill health effects caused by unhealthy eating. This led her to change her eating habits and give up ice cream.

Participants indicated that most of their family members and neighbors frequently eat greasy foods. They seemed to be aware that fast foods are not healthy. However, some still stop at McDonald's nearly every day because it is convenient and a good place to meet friends. One woman who is attending school goes to McDonald's every day and typically orders salads.

Focus group members' knowledge had clearly been influenced by outside factors and many made an effort to incorporate that knowledge into their daily lifestyle. They regularly buy vegetables, cook them in a healthy fashion, and participate in Isles' community gardens programs. They also seemed to try to educate those around them about good eating practices. For example, one man expressed that he was trying to modify his diet after an ex-girlfriend exposed him to healthful eating. He, in turn, tried to show his son good eating habits through his own example and by talking to his son about healthy eating.

Participants felt that knowledge played an important part in influencing eating decisions. Price and accessibility also emerged as key factors. While participants may not have ideal diets, they were trying to improve their eating habits. They also favored more education in their neighborhoods. When asked who they thought most needed to be taught about the benefits of healthy eating, the group stated that all age groups would benefit.

Young Adults

This group of young adults (from Isles' YouthBuild program) talked candidly about food access and nutrition in and around their neighborhoods. Most did not worry about nutrition. Those who seemed to pay some attention to health focused mostly on "eating a balanced diet" a few days a week. This seemed to mean incorporating some bread, meat, vegetables, and fruit into a couple of meals a week. However, the fruits and vegetables discussed during the focus groups included juice, corn, and sandwich fixings such as lettuce and tomatoes. They did not mention vegetables and fruit with higher nutritional value. Many ate cheesesteaks, fries, and rice and beans regularly. Participants in this group seemed to believe that if they ate from more than one food group, it would be sufficient to satisfy requirements for a healthy meal. YouthBuild participants indicated that they do not eat breakfast in the morning because "they don't have an appetite" at that time of day.

The level of nutritional knowledge among the young adult focus group was noticeably lower than those of the older group. Their ideas about what constitute nutritious foods were alarming. One participant considered a cheeseburger with everything on it a balanced meal. Another felt any meal prepared at home was healthy. Yet another was confident that Subway sandwiches are nutritious. Some of the seemingly more knowledgeable individuals among the group referred to the fact that apples were always in the household and that a nutritious meal would include meat, vegetables, rice and juice or milk. Other comments of interest came out when asked about thoughts about how foods affect their health. They made the following statements: "Eating hamburgers clogs your arteries," "You shouldn't eat McDonalds and Wendy's if you are overweight, but if you're average weight you can eat them every night," and

“Vegetarians might just become anorexic.” Another stated that he gets headaches and feels tired when he eats a lot of fast food, so he opts for other choices. Three days out of the week, he eats something homemade with all of the food groups.

The young adults’ knowledge about nutrition comes from informal sources. Many pointed out that they learned what was good and bad for them from television. Some stated that schools attempted to teach about good nutrition, but that such efforts were fleeting and provided no long-term impact. One participant suggested that the schools should offer nutrition classes to students and residents. Another said, “You can’t change someone’s mind about what to eat just by talking to them.” This group did not seem to care much about what they eat; in their view, they do not need to. If there is no immediate health threat and their weight remains stable, they do not worry. Even when asked if they knew about the correlations between their eating patterns and their health, the participants responded that this did not concern them now and likely would not be a concern until later in life when health problems arise. This underscores our findings from the adult focus group study described above.

There were several references to the fact that older people within the community place much greater emphasis on nutrition. It was also interesting to observe that this group of young adults seemed to accept the limited food options available in their neighborhoods. Furthermore, they believed in some of the negative stereotypes about their neighborhoods. They felt that the better food options were in suburbs “where white people live.” They thought that if supermarkets were to open in their own neighborhoods that they would be robbed and vandalized. In expressing such thoughts, they seemed to be justifying any inadequacies or limitations in local food options.

Ultimately, we found that a lack of education leads to poor eating habits. As one participant stated, the young are invincible and can eat whatever they want. The tendency to think this way is worrisome when combined with the ideas expressed by the adult group. The participants in both groups seem unwilling to change their eating habits until they develop health problems. Educational efforts should be made to convince younger (and older) people *before* the onset of diet-related health problems, that eating healthy is always important – no matter one’s age or relative health.

Behavior

In addition to food distribution and knowledge, behavior is the third major element that influences access to healthy food. Even if all residents can get good food and everyone had a top-notch education about nutrition, many would still eat unhealthy foods. Our focus group participants told us that price and convenience are top priorities for adults; the young adults valued convenience and taste; the middle school students emphasized taste. The following sections provide a summary of our findings.

Adults

In general, the primary factor influencing this group's food choices is price. It even overshadows convenience. Most said that they would not pay more for food items even if they were more convenient. Sometimes, participants will go out of their way for a particular food item that they really like. For example, many go to Murray's for a particular brand of mayonnaise. They mentioned purchasing specialty foods from Rice n' Spice and kosher foods from a vegetarian market in Quakertown, PA. All of the participants identified Halo Farms, located next to the Trenton Farmers' Market (TFM), as the place to buy dairy products and ice cream in particular. The large number of stores that this group shops at for different items was striking.

Some stated that they ate fast food occasionally. Others ate fast food frequently, attributing convenience and social interaction as the reasons why. Some do not have time to cook or do not know how to cook very well. Others mentioned that varying schedules within a household make cooking for all members difficult. We also discussed food assistance and how programs such as WIC and food stamps influence what people eat. Some stated that those individuals on WIC are restricted to only healthy food choices, while those on food stamps are given more flexibility to buy whatever foods they want. One woman said that people do not receive enough money to buy fresh vegetables and opt for canned foods instead. Some mentioned that WIC does little in the way of educating people in the program. This was a grey area for the group: some thought that education was provided and others said that the health

education materials were no longer included in WIC mailings. In the end, the group concluded that many people are not knowledgeable enough to know what foods to choose or what questions to ask.

Young Adults

The young adults also buy prepared foods near home several times a week. Neighborhood corner stores offer food popular with younger people, such as ready-to-eat lunches and dinners. The young adults made it clear that they chose to walk to the corner stores and this did not reflect the availability of food in their homes. When asked what kinds of foods they bought at corner stores, the young adults told us that they eat cheesesteaks and fries, rice, beans and chicken and daily necessities, such as milk and bread. Lastly, this group suggested that WIC and food stamps are widely used, understood, and easy to get. The young adults talked about relationships with storeowners. They developed understandings that exist with local corner storeowners that enable them to use their public assistance to get prepared foods instead of the regulated staples. They also mentioned being able to negotiate prices for certain foods.

Middle School Students

To capture information about the eating habits outside of school, we administered surveys and asked the 7th and 8th grade students to fill out diaries of all the food consumed (food diaries) during their spring break (For complete food diary results, See appendix B). Many students said that they do not eat the vegetables served with their dinners at home. Only a few are actually forced to eat their vegetables at dinner. Children frequently go to corner stores and fast food restaurants. When given money from their parents, many go to the local corner store to get candy and salty snacks. Children cannot drive to the grocery store or the local farmers' market. Because of this groups' young age, their parents or guardians make many food choices for them.

FINDINGS IN BRIEF

Getting Food

Mainstream Food Provision

Most Trentonians depend on big chain supermarkets for items they purchase in large quantities, such as canned and frozen foods. Since these large retail stores are located far from Isles' inner-city neighborhoods, families must rely on cars (either their own, or a friend's) or cab services that typically charge \$5-7 each way. Moreover, price, convenience, and diversity of selection vary. Consumers have to shop at more than one store to save money while maximizing nutritional content. For example, while one store may have fresher, more reasonably priced meats, another store may have fresher produce, and still a third store has the cheapest prices for canned goods and dry goods. In addition to large markets and independent grocers, neighborhood corner stores and fast food eateries are also popular. Unfortunately, the corner stores have less healthy food, although they may provide other services (e.g., money transferring, check cashing, and convenience items) and prepared foods. We found that the more centrally located stores such as Super G and the neighborhood grocers had higher prices than the suburban stores. Aldi had the least expensive food but it also had the most limited choices and fewer healthy foods. In fact, even the layout of the store was less "healthy," with the placement of junk food at the store's entrance. While large store chains rely exclusively on wholesalers, independent grocers are more likely to use a variety of distribution channels, including terminal markets. Independent grocers' greater flexibility, with respect to purchasing power, is an important prerequisite for increasing the flow of locally grown foods into urban outlets.

Alternative Food

Farmers' markets and farmstands that offer locally grown produce are routes to better eating. Unlike foods that have traveled thousands of miles, locally grown foods harvested at the

height of freshness have far greater nutritional value. In addition, local distribution often means that crop varieties are selected for taste rather than their ability to withstand the rigors of long distance shipping. There are two Farmers' Markets in Trenton, only one of which is used regularly by Isles neighborhood residents. The Trenton Farmers' Market (TFM) offers some ethnic produce, including greens, hot peppers, specialty herbs, and even a squash typical in Asian cuisine. Most of the TFM vendors accept both the Senior Farmers Market coupons as well as those issued to young mothers, through a similar program funded by WIC; some accept food stamps. Even though some residents use the farmers' market, many do not. Focus group participants thought that there are opportunities to increase local use of the farmers' market. Roadside food stands are another affordable source of locally grown produce. Of the 23 food stands located in Mercer County, six accept some form of food assistance payment, but none are located in Trenton.

Finally, community-supported agriculture (CSA) also connects people with locally grown produce at relatively low prices. Despite these benefits, few inner-city residents participate in CSAs. CSAs usually require full payment at the beginning of a growing season that can exceed a few hundred dollars and many low-income people cannot afford these up-front fees. Moreover, they are often located outside the city, making access difficult. Finally, some require participation of the share members in some aspect of farming. Despite the challenges, there are CSA models that can successfully engage low-income residents. For instance, Suburban Organics, located in southern New Jersey, has incorporated a sliding scale for membership. This strategy enables the farmer to meet necessary budget requirements, while offering affordably priced shares to low-income residents. The Rutgers student CSA uses grant funds to purchase shares for the local soup kitchen. For the CSA model to be successful in Trenton an alternative payment scheme is essential.

Food in Schools

Several federal and state programs provide healthy food for poor children. For example, the National School Lunch and Breakfast programs provide low-income children with meals that meet federal nutrition guidelines. Although there have been improvements in dietary standards, school lunches have remained largely the same. We found that students are interested in eating fruits and vegetables but found school menus unappealing. While the middle and high schools have the necessary facilities to cook nutritious meals, 95 percent of school breakfasts and lunches rely on canned soups, fruits, and vegetables. Vendors are selected by price, not food quality. Improving the quality of school food and engaging students in learning about healthy eating can become mutually reinforcing. As students learn about food sources and have good tasting healthy food on their lunch plates, they can establish better eating habits within and outside of school.

The Summer Food Service Program (SFSP) is one of the most underutilized of those available. It relies on independent groups to provide food and services to children. There are three providers in Mercer County: The City of Trenton Division of Recreation, Lawrenceville School Camp, and Homefront. Unfortunately, more than 12,000 children eligible for the Summer Food Service Program in Mercer County do not receive program benefits. Increasing SFSP participation rates to just 40 percent of children currently involved in the school lunch program (based on 2004 data) would improve nutrition and bring \$3 million in extra federal funding to New Jersey.

Food Assistance Programs

Many Trenton residents use food assistance programs. Trenton's Emergency Feeding Organization, Mercer Street Friends Food Cooperative (MSFFC) serves 17,000 meals each month. WIC and Food Stamps provide residents with resources for food, but only 53 percent of those eligible participated in New Jersey's Food Stamp Program, putting the state in the bottom

quartile of participation rates nationally. Mercer County's participation rate fell in recent years, but improvements may be coming. Recently, the operating hours of Board of Social Service were extended and application form was simplified and put on-line. To date, more than 150 retail outlets in the Trenton metropolitan area are authorized to accept food stamps.

Knowledge

Access to nutritious food is only one aspect of community health. Knowledge of the vitamin and nutrient content of foods, as well as acquisition of food preparation skills, are keys to improving nutrition. Results from the adult focus group revealed that eating habits among participants are influenced by information provided by physicians. Many participants cited awareness of the harmful effects of fast food, but ate fast food anyway. While this particular group, given their positive involvement with Isles' gardening programs, may be more informed regarding nutrition than residents may as a whole, most agreed a lot of "grease" is consumed in their neighborhoods. Responses from YouthBuild participants provided a sharp contrast, suggesting that little thought is given amongst this age group to health and nutrition. Fruits and vegetables are consumed primarily in the form of juice or as sandwich fixings. Many relied on corner stores for cheese steaks, fries, and rice and beans. Participants' knowledge about nutrition seemed to come from informal sources, such as television programs or advertisements. Most felt it acceptable to eat fast food and other unhealthy foods as long as weight and other health problems were not an issue. The middle-school students seemed very interested in learning more about nutrition, in part because of the prodding of their science teacher. Many indicated an ability to cook, as well as basic knowledge of fruits, vegetables, and other food groups (although not enough to meet the extent of core curriculum standards). Mismatches with respect to knowledge and behavior are apparent from food diaries students kept for the purpose of this study.

Behavior

For our adult focus group participants, price and convenience were the top determinants of food buying. For instance, many used buying clubs for bulk food items and paid attention to grocery store sales advertisements in newspapers and circulars. Although some mentioned patronizing the local farmers' market, those who do felt that there should be more advertising of the market in their neighborhoods to increase awareness of its offerings. Finally, as suggested above, the opportunity to cook at home appears limited by a claim of lack of time, as well as skills, for some. Convenience and taste were the main factors influencing young adult food consumption. Most purchase prepared foods in their neighborhood several times a week. Apparently, the reliance on ready-to-eat foods is not due to a lack of food at home. Rather it reflects an appreciation of the product itself and the social setting in which it is obtained. The corner store plays a significant role as a meeting place, and the social relationships formed with the owners allows negotiation of price as well as the illegal use of food assistance subsidies for hot foods. A third of seventh and eighth grade students in our study eat a home-cooked meal three times a week and many admitted they do not eat vegetables served at dinner at home. When given money from their parents to spend on food, many go to the corner stores to buy unhealthy snacks. In addition, 47 percent eat fast food at least once a week, and 38 percent consume fast food three times a week.

PATH TO A HEALTHIER FUTURE

We identified barriers that prevent people from eating healthier diets. In framing our recommendations, we attempted to be realistic about solutions to overcome these barriers. We found that residents find it hard to get healthy food in their neighborhoods, do not eat enough healthy food and lack education about health, nutrition, and food preparation. We recognize that implementing some of our suggestions may require resources beyond Isles' capacity. For this reason, we encourage Isles to work with other organizations and governments. We also know that Isles is committed to many areas of community development besides food security and nutrition and understand that the organization cannot pursue all of the recommendations at once.

Therefore, we divided our suggestions into short-term and long-term goals. The short-term goals are projects that Isles could undertake with little help from outside sources. These should take a relatively small amount of time to implement. The long-term goals will likely require collaboration with other actors and may only be implemented over time.

Recommendations for Short-Term Actions

Provide transportation to supermarkets and the Trenton Farmer's Market.

The lack of transportation is a major barrier in the ability to shop at nearby supermarkets. As a result, residents use bodegas, corner stores, and fast food restaurants where there are fewer healthy food options. Easier access to supermarkets and the Trenton Farmers' Market would enable residents to purchase fresh fruits and vegetables. Shuttle services have been established in cities across the country in partnerships with government or with the food outlets. In San Francisco, the city set up a shuttle service between the Bayview Hunters Point neighborhood and food-related outlets that included a nearby farmers' market, government offices, service agencies, and supermarkets.¹⁷ In Los Angeles, a number of supermarket chains provided a shuttle after a UC Davis study showed that supermarket shuttles could boost chain sales (Green, 2003).

¹⁷ This service was later discontinued because of low ridership. One reason cited was a lack of strong marketing in the neighborhood. (San Francisco Community Journalism Project, <http://userwww.sfsu.edu/~j667/shuttle.html>).

Shuttle services have also been implemented in Savannah, Austin, and Pittsburgh. Isles could work with nearby supermarkets (independent and chain), the Trenton Farmers' Market, and city officials to create a shuttle service aimed at improving resident access to various food sources. This should be preceded by a market study to make sure that there is sufficient interest among neighborhood people for this service.

Encourage greater use of federal food assistance programs.

New Jersey ranks among the lowest states in the country in Food Stamp and School Breakfast program participation. However, there have been recent efforts in improving access to government programs. The state recently shortened the Food Stamp and Summer Food Service Program applications and put them on-line, which makes it easier for concerned agents like Isles to help people apply. Additionally, Mercer County Board of Social Services is now open until 8:30 p.m. on Tuesdays. However, other localities have adapted even more innovative ways of reaching eligible participants. Some of these include transportation to social service offices and public announcements about programs on the radio. Essex County, New Jersey is building a mobile social services bus that will help bring applications, service and outreach directly to the most isolated low-income communities (Casiano, 2005). Isles and other groups interested in raising participation rates can look into a broad array of approaches to bring government program knowledge to residents who might otherwise be unclear about their breadth and availability.

Develop a newsletter about healthy eating and form partnerships with local restaurants and organizations to provide nutrition and cooking courses.

Adult education is an important tool in developing a healthier society. Part of the problem with eating a balanced diet lies in food preparation. Many residents believe that they are getting adequate nutrition from their diets because they are eating vegetables at every meal. However, the preparation of the vegetables often reduces their nutritional value if they are fried or prepared with butter or oil. Isles can work with local nutritionists and restaurants to give seminars and or create a newsletter with recipes. A partnership with a local restaurant or supermarket may allow

Isles to offer cooking classes on healthy food preparation. Another possible educational partner might be the Trenton Farmers' Market, which is located next to the Mercer County Agriculture Extension Service office. In the past, the extension service has set up health and nutrition information booths in the Trenton Farmers' Market. Furthermore, the Trenton Farmers' Market has sponsored various events like Senior Day and Jersey Fresh Days. Isles could market these programs in local neighborhoods.

Work with schools and local farmers to introduce children to local agriculture and expose them to different types of meals.

Several successful programs have been implemented throughout the country to introduce students to agriculture and fresh produce. In Wisconsin, the Department of Education launched the Wisconsin School Homegrown Lunch Program as a pilot in 2002. As part of the program, each school is assigned a "farmer-educator." These farmers host sessions at each school and attend special events. Students learn about farming and growing and harvesting vegetables. This learning is reinforced through the meals prepared in the school cafeteria, as well as meals prepared by culinary staff and students for special school events (See Appendix K). Combining education with meals increases the choices available to students and makes them more open to trying new things. In addition, health and nutrition teachers provide real-life experience to students, thereby enhancing their educational experience. A first step for Isles could be contacting local farmers to see if they would be interested in improving the New Jersey Farm-to-School program. A similar approach to the Wisconsin Homegrown Lunch Program could be taken, where local farmers teach sessions about agriculture. This could be complemented by gradually introducing new healthy items to the school breakfast, lunch, and snack menus. Isles is already working to educate children to fruits and vegetables by setting up seven community gardens on school grounds within the next year. They could enhance the program by including science classes so students can take ownership of the decision to eat healthier food.

Recommendations for Long-Term Actions

Work with the Trenton public schools to emphasize nutrition in the curriculum.

More emphasis could be placed on health and nutrition education for children. When asked whether our educational presentations were helpful, 44 percent of the students we surveyed responded that they were very helpful, implying that they learned a lot of new information and that they are enthusiastic about learning more. If students are more aware of what healthy foods are and what nutrition means, they will carry that knowledge with them throughout their lives. Nutrition education is a critical component in urban settings where fast food chains and junk food are prevalent in and around school property. In California, the Department of Education has made nutrition a standard module in health education. Students not only learn about healthy food choices and how it impacts their physical, mental, emotional and social well-being, but the education is carried through to the food served to students in the cafeteria with an emphasis on a healthy balanced diet and serving sizes appropriate for school age¹⁸. One local avenue of nutrition education might be collaborating with the Trenton Farmers' Market. Isles could sponsor trips for students to the market to expose kids to farmers and local fresh produce sources.

The Edible School Yard can provide a vision of how things could be different. Alice Waters, famed Berkeley chef and food activist started the program in order to teach children about food and nutrition, to combine that with an understanding about where food comes from and teach children culinary skills. The Edible School Yard began by having meetings with faculty, parents, students, and community members. This provided a base to plan goals and objectives. The next step was to convert a section of concrete on the school grounds into a community garden. Then, they began to integrate the program into the yearlong curriculum. These skills increase their knowledge about healthy food and nutrition as well as shifting their attitudes, providing the tools to make better food choices.

In Trenton, a first step could be contacting local farmers to see if they would be interested in expanding the farm-to-school program. Changes could start small. Are there ways to

¹⁸ For more information, visit <http://www.cde.ca.gov/ci/he/cf/>

incorporate more fruits and grains into the menu and less trans-fats and sugars? Can local farmers provide some fresh fruit and vegetables to be included on the snack menu?

Increase the linkages between area farms and Trenton's neighborhoods.

The Trenton Farmers' Market could connect to the community by helping farmers sell their produce in neighborhoods. In our visit to the market, we spoke with one vendor who cited a lack of dedicated and trustworthy labor as a barrier to meeting operational demands. Isles could consider facilitating a program, similar to the Youth Farmstand Program, in which residents work with farmers to provide more fresh produce at the market or at other inner-city locations. In addition, Isles might be able to work with the TFM to replicate the partnership with the Stokes Building in other locations. Currently, a farmer sets up a stand and sells produce at this senior housing complex once a week. The farmers rotate this opportunity among themselves. Jack Ball, the market's manager, was open to creating new opportunities to market farmers' produce in other areas of the city. Isles could also consider facilitating use of area CSAs by subsidizing shares and delivering food in the neighborhood. Alternatively, Isles could explore a youth farmstand venture with Rutgers University.

Collaborate with Trenton stores to increase the availability of fresh produce.

We found that residents eat unhealthy, prepared foods at neighborhood corner stores. Many of these stores do not carry fresh produce or low fat milk. The Food Trust of Philadelphia developed a "Corner Store Campaign" that includes marketing to promote healthier snack choices and a commitment to work collaboratively with corner storeowners to increase the availability of healthy snack choices.¹⁹ In San Francisco's Good Neighbor program, high school students developed agreements with local storeowners to stock a specific amount of fresh and healthy foods. Several months after the program began produce sales at one neighborhood store doubled to make up 15 percent of total sales (Duggan, 2004). Isles could develop a similar

¹⁹ See <http://www.thefoodtrust.org/php/programs/corner.store.campaign.php> for more information.

campaign with local stores to provide healthier food options, specifically focusing on alternatives to unhealthy prepared foods.

Work with other organizations, policy makers, and governments to develop a food policy council, and to facilitate connections between Trenton leaders and local farmers.

Food policy councils fill a leadership role in encouraging cities and other actors to consider the importance of food in the lives of their residents. Isles could help facilitate the creation of a food policy council dedicated to improving food access. Food policy council members are usually appointed by municipalities and the council includes a variety of stakeholders. Food policy councils play an important role in helping policymakers and other actors to consider ways to improve local food systems. For example, in Hartford, Connecticut, the Advisory Commission on Food Policy helped increase participation in a school breakfast program and worked with the attorney general to prevent a supermarket merger that would have eliminated competition in the city. In Knoxville, Tennessee, the Food Policy Council worked with city planners to incorporate food concerns into plans.

Trenton, as the state capital, provides unique opportunities for building connections between farmers and the Trenton community. The nearby location of state political leaders allows local organizations to pursue a strategy that seeks to influence structural changes and food policy perceptions at the state level. An example of such a partner is NJ Café restaurant, located at the State Capitol complex. The manager and purchasing agent for the NJ Café is willing to explore the interest of State House employees in buying locally grown foods. Isles, as a local community organization, or as part of a larger food council, could facilitate an agreement to provide New Jersey produce in the State House raising awareness of food issues and furthering statewide efforts to address food insecurity.

BIBLIOGRAPHY

After school Snack Program, Frequently Asked Questions, USDA Food and Nutrition Service, <http://www.fns.usda.gov/cnd/Afterschool/includes/FAQs.htm> (last accessed April 29, 2005).

Ashman, Linda, Jaime de la Vega, Marc Dohan, Andy fisher, Rosa Hippler and Bill Romain. 1993. *Seeds of change: Strategies for food security for the inner city*. Southern California Interfaith Hunger Coalition, Los Angeles, CA.

Blalock, Lydia and Lisa Brewster. Interview conducted by Norman Glickman and Kathe Newman, December 2004.

California Food Policy Advocates. http://www.cfpa.net/Summerfood/sfsp_factsheet.htm (last accessed April, 2005).

Casiano, Jonathan. 2005. "Bus Drives Welfare Outreach Program." *The Star Ledger*. March 30.

Community Food Security Coalition website. http://www.foodsecurity.org/farm_to_school.html (last accessed March 10, 2005).

Cook, Roberta L. 2004. "Supermarket Challenges and Opportunities for Fresh Fruit and Vegetable; Producers and Shippers: Lessons from the US Experience," Paper presented at the Conference on Supermarkets and Agricultural Development, May 24.

Dobson Consulting. 1999. "Buyer Power and Its Impacts on Competition in the Food Retail Distribution Sector of the European Union." http://www.agribusinessaccountability.org/pdfs/259_Buyer%20Power%20Impact%20on%20Competition%20in%20EU%20Food%20Retail%20Sector.pdf

Duggan, Tara. 2004. "Bringing Healthy Produce to Poor Neighborhoods." San Francisco Chronicle. July 16.

Economic Research Service (ERS)- Data, Food Stamps: <http://www.ers.usda.gov/Data/FoodStamps/> (last accessed April 2005).

Ecumenical Ministries of Oregon. 2001. *Portland's Bounty: A Guide to Eating Locally and Seasonally in the Greater Portland and Vancouver Areas*. 2nd Edition. Portland, OR: Interfaith Network for Earth Concerns.

Farm to School website, <http://www.farmtoschool.org/nj/programs.htm> (last accessed April 6, 2005).

Federal Emergency Management Agency, <http://www.fema.gov/rrr/efs.shtm> (last accessed March 15, 2005).

Federal Food Programs, FRAC, http://www.frac.org/html/Federal_food_programs/programs/nsfp.html (last accessed April 29, 2005).

Food and Nutrition Service, <http://www.fns.usda.gov>, Nutrition Program Facts: WIC. (last accessed February 5, 2005).

Food and Nutrition Service, <http://www.fns.usda.gov>, WIC at a Glance. (last accessed February 5, 2005).

Food and Nutrition Service, USDA- Food Stamp Program FAQs: <http://www.fns.usda.gov/fsp/faqs.htm#3m> (last accessed April 2005)

Food and Nutrition Service, USDA- Summer Food Admin Guidance: http://www.fns.usda.gov/cnd/summer/library/Admin_Guidance_2005.pdf (last accessed April 2005)

Food Research and Action Center (FRAC)- Food Programs-TEFAP. http://www.frac.org/html/federal_food_programs/programs/tefap.html (last accessed April 2005).

Food Research and Action Center (FRAC). Community Childhood Hunger Identification Project. 1995. http://www.frac.org/html/hunger_in_the_us/health.html. (last accessed April 2005).

Food Stamp Nutrition Education Program (FSNEP): <http://rutgers.njfsnep.org/about/default.asp> (last accessed April 2005).

Free and Reduced Price Lunch Data, Mercer County: Free & Reduced Price Lunch 2004 Data, NJ Department of Education.

Green, Frank. 2003. "Free Rides for Grocery Shoppers Becoming Popular Service in Some Areas." *The San Diego Union-Tribune*. April 19.

Hegazy H., Buscher S., Kunze H. J., Wrubel T., Hean T.K., and Park S.Y. 1997. "To Market, to Market: the Changing Face of Grocery Retailing," *Long Range Planning* 30(6): 836-846.

Hess, Doug and Jim Weill. 2003. *State of the States: A Profile of Food and Nutrition Programs Across the Nation*. Food Research and Action Center.

Income Requirements for National School Lunch Program, USDA Food and Nutrition Service. <http://www.fns.usda.gov/cnd/governance/notices/iegs/IEGs04-05.pdf> (last accessed April 29, 2005).

Interview with former caseworker and present educator/trainer, Mercer County Board of Social Services, February 2005.

Interview with Phyllis Stoolmacher, Mercer Street Friends Food Cooperative, February 18, 2005

Interview with Cafeteria Manager at School X. March 2005.

Interview with Nurse at School X. March 2005.

Johnson, Karl, Stephen Percy, and Edward Wagner. 1996. *Comparative Study of Food Pricing and Availability in Milwaukee*. Report Prepared for the Food System Assessment Project. The Hunger Task Force. Milwaukee: Center for Urban Initiatives and Research. University of Wisconsin Milwaukee.

Life Sciences Research Office, Federation of American Societies of Experimental Biology: "Core Indicators of Nutritional State for Hard to Measure Populations." *The Journal of Nutrition* 102(November 1990 Supplement): 1575-76.

Mercer Street Friends Analysis provided by Policy Analyst, Terry Kiely. 2005.

National School Lunch Program Fact Sheet, USDA Food and Nutrition Service, <http://www.fns.usda.gov/cnd/Lunch/AboutLunch/NSLPFactSheet.pdf> (last accessed April 29, 2005).

New Jersey Urban Ecology Program, Rutgers University, <http://aesop.rutgers.edu/~njuep> (last accessed March 10, 2005).

Nord, Mark. Economic Research Service. United States Department of Agriculture. "Food Security in the United States: Measuring Household Food Security." Briefing Room.

2004. <http://www.ers.usda.gov/Briefing/FoodSecurity/measurement/> (last accessed May 2005).
- Nord, Mark, Margaret Andrews, and Steven Carlson. 2002. *Household Food Security in the United States*. Economic Research Service. United States Department of Agriculture. <http://www.ers.usda.gov/publications/fanrr35/>
- NJDA Bureau of Child Nutrition <http://www.state.nj.us/agriculture/markets/childnutrition.htm> (last accessed March 15, 2005).
- NJDA- Food Distribution. <http://www.state.nj.us/agriculture/markets/fooddist.htm> (last accessed March 15, 2005).
- NJDA- TEFAP Program. <http://www.state.nj.us/agriculture/markets/tefap.htm> (last accessed March 15, 2005).
- Official Website for the City of Trenton. <http://www.ci.trenton.nj.us/hhswic.html> (last accessed March 15, 2005).
- Pothukuchi, Kameshwari. 2004. "Community Food Assessment: A First Step in Planning for Community Food Security." Special Issue: Planning for Community Food Systems. *Journal of Planning Education and Research*. Summer. 23:4-
- _____. 2003. *The Detroit Food System: A Handbook for Community Planners*. Detroit: Wayne State University.
- Pothukuchi, Kami and Joan Bickes. 2001. *Hortaliza! Youth Nutrition Garden Demonstration Project in Southwest Detroit: A Report on Benefits, Potential and Challenges*. Detroit: Wayne State University.

Rosenberg, Linda, Nagatoshi, Charles and Roper, Richard. 2003. *Helping Working Families After Welfare: Access to New Jersey's Support Services*. Mathematica Policy Research, Inc.

Rosso, Randy and Weill, Jim. 2005. *State of the States: 2005: A Profile of Food and Nutrition Programs Across the Nation*. Food and Research Action Center, Washington, D.C.

Schirm, Allen L. and Castner, Laura A. 2002. *Reaching Those In Need: State Food Stamp Participation Rates in 2000*. Mathematica Policy Research, Inc. for the Food and Nutrition Service of the USDA.

School Breakfast Program Fact Sheet, USDA Food and Nutrition Service, <http://www.fns.usda.gov/cnd/Breakfast/AboutBFast/FactSheet.pdf> (last accessed April 29, 2005).

Siedenburg, Kai and Kami Pothukuchi. Eds. 2002. "What's Cooking in Your Food System? A Guide to Community Food Assessment." Venice, CA: Community Food Security Coalition. <http://www.foodsecurity.org/pubs.html#books>

Smith, Alan. 2005. "Super G Will Close 2 Stores: Says City, Ewing Sites Underperform. " *Trenton Times*. July 5, 2005. P. A1, A10.

Special Milk Program Fact Sheet, USDA Food and Nutrition Service. <http://www.fns.usda.gov/cnd/Milk/AboutMilk/FactSheet.pdf> (last accessed April 29, 2005).

SFSP04 (Summer Food Service Program 2004) Analysis Spreadsheet. NJ Department of Agriculture, Bureau of Child Nutrition Programs.

- Stevens, Mark R. and Samina Raja. 2001. "What's Eating You About What You Eat? A Survey of Madison Residents' Likes and Concerns." For the Madison Food System Project. Madison Food System Project Working Paper Series MFSP-WPS-05. <http://www.wisc.edu/urpl/mfsp/>
- Tat Keh, Hean and Seong Y. Park. 1997. "To Market to Market: The Changing Face of Grocery Retailing" *Long Range Planning* 30 (6): 836-846.
- United Way of America, <http://www.efsp.unitedway.org/> (last accessed March 15, 2005).
- United State Bureau of the Census. 2000 STF 3.
- Varela, Olmedo. 1996. *Socio-spatial Relationships and Food Programs in Milwaukee's Food System*. Milwaukee: Center for Urban Initiatives and Research.
- Varela, Olmedo, Karl Johnson, and Stephen Percy. 1998. *Food Insecurity in Milwaukee: A Qualitative Study of Food Pantry and Meal Program Users*. Report Prepared for the Food System Assessment Project. The Hunger Task Force. Milwaukee: Center for Urban Initiatives and Research. University of Wisconsin Milwaukee.
- Van Vranken, Rick, Community Development Studio Presentation, February 2005.
- Who Feeds the Hungry? Mapping New York City's Emergency Food Providers. New York: The New York City Food Bank. <http://www.foodbanknyc.org/go/programs-and-resources/research/index.htm>
- Winter, Metta. 2004. "Serving Children of Low-Income Families." *Human Ecology* 21: 13-7.