Food access and stability in Saint Paul

A technical report to The Neighborhood Food Group Organizations: Afro Eco, Community Design Center of Minnesota, Minnesota Food Association, The Minnesota Project, and Saint Paul – Ramsey County Public Health

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Acknowledgments

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Project background

The Neighborhood Food Project is a partnership between four organizations, The Minnesota Project, Community Design Center of Minnesota, Minnesota Food Association, and Afro Eco. All four organizations are committed to neighborhood revitalization, sustainable food production, and equitable food distribution. In 2009, these organizations received a grant from the United States Department of Agriculture (USDA) to assess the food needs of four targeted communities in Saint Paul: Dayton's Bluff, Payne-Phalen, Thomas-Dale/ Frogtown, and Summit-University. The primary goals of the project were: 1) to understand the food assets and barriers in these four communities, and the particular food needs and perceptions of the population (differentiated by age and ethnicity); and 2) to design a plan, based on community research and participation, for improving the long-term food security in the four communities. A multi-method data collection approach, involving resident surveys and focus groups, was developed by the project partners to understand the needs and strengths of the targeted communities. Results from the assessment will be shared with neighborhood residents through a series of community meetings to gather feedback and identify strategies to improve food access in the community.

As part of its Statewide Health Improvement Program (SHIP) initiative, the St. Paul-Ramsey County Public Health Department offered additional support and resources to the Neighborhood Food Project. Wilder Research was contracted by Ramsey County to support this project by conducting a specific subset of data collection activities, analyzing the data gathered through a resident survey and series of focus groups, and preparing a technical report highlighting key lessons learned. While this report offers the Neighborhood Food Project stakeholders with some suggestions for next steps and issues to consider when moving forward with this project, the partner organizations who received the USDA grant will be working collaboratively with their Advisory Board, community groups, and neighborhood residents to develop strategies to address the gaps and areas of concerns identified by St. Paul residents.

Methodology

Resident survey

Survey development

As part of their workplan for the USDA grant, the Neighborhood Food Project stakeholders designed a 4-page survey to assess where residents got food, their perceptions of food access in their neighborhood, perceived barriers to healthy eating, and suggestions for improving food access in their neighborhood. Wilder Research provided limited technical assistance by reviewing and providing suggestions for the final draft of the survey. A copy of the final survey is included in the Appendix.

Data collection approach

A convenience sample, incorporating quotas for language-specific surveys, was used to gather feedback from St. Paul residents during the months of February through June, 2010. Students from Metropolitan State University distributed surveys to residents in four Saint Paul neighborhoods: Dayton's Bluff, Payne-Phalen, Thomas-Dale, and University-Summit. Data collection staff from Wilder Research administered the surveys in Hmong and Spanish.

Surveys were administered at events and near business areas or public facilities of each neighborhood where there is greater pedestrian traffic. The survey administrators asked residents to participate in the survey at the following events/locations: Immigrant & Minority Farmers Conference (Wilder Center); Valley Apartments Ice Cream Social; East Side Green Fair; American Indian Magnet School monthly pow-wow; Summer youth program registration fair (Dayton's Bluff Recreation Center); Easter Egg Hunt (West Minnehaha Recreation Center); Earth Day (Unity Church); Wellness Wednesdays (First Lutheran Church); Merrick Food Shelf; Golden Thyme Coffee Shop; Rhone Community Library; Arlington Hills Public Library; Dayton's Bluff Public Library; People's Park (Inglehart/Grotto intersection: Summit-University); WIC Clinic East Side; Metro State Library; ByMore Supermercado (Payne-Phalen); Golden Harvest; Hmong Market (Como Ave); University Avenue (intercept interviews on sidewalk); and Payne Avenue (intercept interviews on sidewalk). Residents who completed the survey were offered a plastic cutting board in appreciation of their time.

Response rate

The number of refusals was not tracked among all data collection staff and volunteers, so a final response rate cannot be calculated. According to students and staff who administered the survey, there were very few refusals overall. Those who did not wish to participate often refused due to lack of time.

A total of 505 surveys were completed and entered into an Excel spreadsheet by an intern with the Minnesota Food Project. Surveys were excluded from the analysis if the survey was not completed or if the respondent did not meet all eligibility requirements. These included respondents who indicated they were not 18 years of age or older, did not live in the targeted neighborhoods, or did not do any grocery shopping for their household. Using these exclusion criteria, data from a total of 478 surveys were analyzed in this report. The survey was available in English, Hmong, and Spanish and respondents were encouraged to complete the survey in their primary language. Most surveys (71%) were completed in English, while fewer were completed in Hmong (16%), or Spanish (13%).

Analysis and reporting

All raw data were submitted to Wilder Research for coding and analysis. Coding categories for store type (question 5 in the survey) were discussed and defined with assistance from The Neighborhood Food Project stakeholders. Questions used to gather additional information about barriers to healthy eating and suggestions for improving food access (questions 11 and 14) were coded into key themes for analysis, while the types of vegetables most often purchased by neighborhood residents (question 8 of the survey) were kept primarily as single items or small groups of very similar vegetables (i.e., lettuce, spinach, and mixed greens).

The Neighborhood Food Project stakeholders and St. Paul - Ramsey County Public Health Department prepared the data analysis plan, which incorporated reporting of frequencies for each survey item, as well as a series of exploratory analyses to identify potential differences in responses based on key demographic characteristics. To ensure statistically significant differences could be identified, some demographic categories were creating by combining response codes from items in the survey. The following demographic categories were used throughout the report: gender (male or female); neighborhood (Dayton's Bluff/Payne-Phalen and Thomas-Dale/Summit University); race/ethnicity (Black/African-American, Hispanic/Latino, Asian/Hmong/Pacific Islander, and White/Caucasian); and children in home (households with one or more child and households without any children). Household income categories were also created using cutoffs approximating the 185% Federal Poverty Level, which is used to determine eligibility for a variety of public programs, such as the Women, Infants, and Children

(WIC) program. The specific income and household categories used to create this variable are listed below:

1. Lower and higher income categories defined

Household size	185% FPL	Income level categories used from resident survey: Higher income	Income level categories used from resident survey: Lower income
1	$20,036	>$20,000	$20,000 or less
2	$26,955	>$30,000	$30,000 or less
3	$33,874	>$30,000	$30,000 or less
4	$40, 793	>$40,000	$40,000 or less
5	$47,712	>50,000	$50,000 or less
6	$54,550	>50,000	$50,000 or less
7	$61,550	>60,000	$60,000 or less
8	$68,469	>70,000	$70,000 or less

Note: *The distinction between "higher income" and "lower income" residents is based roughly on the Federal Poverty Guidelines (FPL) from 2010, which accounts for household size when categorizing household income level. Households with nine members or more were excluded as the household income categories were not large enough to estimate an appropriate cutoff level.*

Chi-square analyses and, when applicable, z-tests of proportion with Bonferroni corrections were used to identify significant differences between demographic groups. Bonferroni corrections are used to minimize the errors that result when multiple tests are needed to identify significant differences between groups that have more than two categories. In this report, these corrections result in a more conservative level of significance ($p<0.008$) being used to determine differences between groups based on age, race/ethnicity, and neighborhood. Key differences between residents using these demographic characteristics are reported in the text and/or in the charts throughout the report and in the Appendix.

Although 478 St. Paul residents completed the survey, not all respondents answered each question. Missing data may be due to refusals to questions or responses that were not clearly marked in written surveys. As a result, the number of respondents (N) reported in tables throughout the report varies by question.

Resident focus groups

Question development

A set of focus group questions was developed by The Neighborhood Food Project stakeholders with consultation from the St. Paul - Ramsey County Public Health Department to align with the topic areas addressed in the written survey. A copy of the final set of focus group questions is included in the Appendix.

Recruitment

A total of 12 focus groups were convened across the four targeted neighborhoods. Recruitment for the focus groups was done by a variety of community partners in each of the four neighborhoods. A brief description of the organizations involved in recruiting each focus group is included in the appendix. Although there were no recruitment parameters based on their income, age, gender, or other demographic variables, the conversations that occurred within the focus groups indicated many, but not all, residents had lower incomes, and many of the participants had children living in their household.

Analysis and reporting

Facilitators and notetakers for the community focus groups included community members who were associated with the project partners (facilitators) and student interns from Metropolitan State University (notetakers) and Wilder Research staff (facilitators and notetakers). Facilitator training was provided by an evaluator from the St. Paul - Ramsey County Public Health Department while Wilder Research provided training to the notetakers.

The notes from all focus group were reviewed and analyzed to identify key themes and important distinctions between focus groups. Because some focus group notes were not verbatim transcriptions of the conversation, key themes from the discussion were highlighted but direct comparisons between residents from different neighborhoods could not be made. However, when applicable, specific suggestions or concerns from resident groups were identified and noted in the report.

Limitations

The data included in this report provide a snapshot of resident perspectives from culturally-diverse backgrounds in four St. Paul neighborhoods: Dayton's Bluff, Payne-Phalen, Summit-University, and Thomas-Dale/Frogtown. Steps were taken to include a fairly representative sample of St. Paul residents by administering the survey on different days at a variety of locations and events across the four neighborhoods. However, because the survey was not administered to a random sample of households in the neighborhood, it is possible that the perspectives of those who were approached to take the survey are different than those of residents who would not have been approached because they do not attend community events or shop at local businesses. Although residents of all cultural groups were eligible to respond to the survey, the written survey was available in English, Hmong, and Spanish (the most common languages spoken by residents in the neighborhoods), with residents given the option to complete the survey in their preferred language. In order to address any potential barriers due to low literacy, survey administrators were also available to read the surveys aloud to residents in English, Hmong, and Spanish. Due to these limitations, some caution should be used when making comparisons across neighborhoods or demographic characteristics (i.e., ethnicity, income, age). Conservative statistical approaches were used to minimize the impact of any unintended selection bias.

Respondent characteristics

Demographic characteristics of respondents

A majority of the respondents were responsible for "most" or "all" of the grocery shopping for their household. Half of the respondents (51%) did all of the grocery shopping for their household (Figure 2). As mentioned previously, individuals who completed the survey, but did not do any shopping for their household, were excluded prior to analyzing the survey results.

2. Grocery shopping responsibilities of respondent

How much grocery shopping do you do for your household?	N	Percent
All	238	51%
Most	125	26%
Some	105	22%
Missing	10	2%

Neighborhood

Although most residents lived in either Payne-Phalen or Thomas-Dale/Frogtown neighborhoods, all four St. Paul neighborhoods were well-represented in the survey. Approximately one-third of the respondents were from the Payne-Phalen (34%) and Thomas-Dale/Frogtown (32%) neighborhoods (Figure 3). The fewest number of respondents were residents of the Summit-University neighborhood (14%).

3. Neighborhood of residence (N=478)

Neighborhood	N	Percent
Dayton's Bluff	95	20%
Payne-Phalen	159	34%
Thomas-Dale/Frogtown	154	32%
Summit-University	66	14%
Missing	4	<1%

Residents who responded to the survey were diverse in regard to ethnicity and age. Nearly two-thirds of the survey respondents were female (63%) and half (50%) were adults under the age of 35 (Figure 4). Nearly one-third of the respondents identified themselves as Asian, Hmong, or Pacific Islander (30%), while fewer were White/Caucasian (22%), Black/African-American (18%), or Hispanic/Latino (18%). While residents did represent other ethnic and cultural groups, other cultural categories were too small to include in tests of significance.

4. Gender, age, ethnicity of respondents (N=478)

	N	Percent
Gender		
Male	168	35%
Female	299	63%
Missing	11	2%
Ethnicity		
American Indian, Eskimo, or Aleut	9	2%
Black or African American	85	18%
African (Somalian, Ethiopian, etc.)	20	4%
Hispanic or Latino	88	18%
Asian, Hmong, or Pacific Islander	142	30%
White or Caucasian	104	22%
Bi-racial or Multi-racial	18	4%
Other	6	1%
Missing	6	1%
Age		
18 – 24	94	20%
25 – 34	140	30%
35 – 44	95	20%
45 – 54	56	12%
55 – 64	61	13%
65 or older	25	5%
Missing	6	1%

Nearly two-thirds of the respondents had children under the age of 18 living in their household. Although the size of the household varied considerably, with up to 24 people living together, half of the households (50%) had three or fewer residents (Figure 5). Over one-third of the respondents (37%) lived alone. Among households with children, the number of children living in the home ranged from 1 to 13.

5. Household size

Number of people in household	N	Percent
1	82	17%
2	85	18%
3	69	15%
4	83	18%
5	45	10%
6	47	10%
7	23	5%
8	18	4%
9	8	2%
10	4	1%
11 or more	1	<1%
Missing	7	2%
Number of people in household under 18		
0	174	37%
1	86	18%
2	85	18%
3	45	10%
4	44	10%
5	16	3%
6	15	3%
7	1	<1%
13	1	<1%
Missing	11	2%
Does at least one child live in the household?		
Yes	293	63%
No	174	37%
Missing	11	2%

Note: *Among respondents who had households with 11 or more members, household size was reported as 11 (N=1), 12 (N=2), 13 (N=2), 20 (N=1), and 24 (N=1).*

Many of the survey respondents lived in low-income households. Approximately half of the survey respondents (51%) lived in households earning $20,000 a year or less, while just over 10 percent of the respondents had lived in households earning $50,000 a year or more (Figure 6). In order to consider potential differences between household income levels, new categories were developed, based roughly on 100% and 185% Federal Poverty Level (FPL) guidelines. Using this criterion, which takes household size into consideration, two in five households had incomes of 100% FPL and fewer than one in five households had incomes greater than 185% Federal Poverty Level.

6. Household income

Total annual income	N	Percent
Less than $10,000	119	25%
$10,000 - $20,000	124	26%
$20,001 - $30,000	88	18%
$30,001 - $40,000	46	10%
$40,001 - $50,000	29	6%
$50,001 - $60,000	21	4%
$60,001 - $70,000	17	4%
$70,001 or more	16	3%
Missing	18	4%
Poverty level – approximately 100% FPL		
Household above 100% FPL	189	40%
Household below 100% FPL	269	56%
Missing	20	4%
Poverty level – approximately 185% FPL		
Household above 185% FPL	94	18%
Household below 185% FPL	366	77%
Missing	18	4%

When resident demographic characteristics were compared by neighborhood, significant differences were noted in the ethnicity of respondents. Residents on the Eastside (Dayton's Bluff and Payne-Phalen neighborhoods) were more likely to be Hispanic/Latino or White/Caucasian than residents of the Frogtown/University area (Summit-University and Frogtown neighborhoods) ($p<0.008$) (Figure 7). Significant differences between ethnic groups were also found when comparing resident groups based on income level, gender, age, and children in the household (Figure A1). However, differences were also noted based on household income (age, children in

household) as well as in comparisons between other groups, indicating the presence of confounding variables. Because it cannot be determined whether the differences between groups can be attributable to ethnicity or another characteristic that correlates with ethnicity, caution is encouraged when interpreting the data included in this report.

7. Demographic characteristics, by St. Paul area

	Eastside (N=244-252)		University (N=212-216)	
	N	**Percent**	**N**	**Percent**
Race/ethnicity**				
Asian/Hmong/Pacific Islander	63	27%	78	43%
Black/African-American	30	13%	54	30%
Hispanic/Latino	67	28%	21	12%
White/Caucasian	76	32%	27	15%
Gender				
Male	87	25%	80	38%
Female	164	65%	132	62%
Household income				
Above 185% FPL	56	23%	38	18%
Below 185% FPL	188	77%	174	82%
Age				
18-24	42	17%	50	23%
25-34	84	33%	55	25%
35-54	82	33%	68	31%
55 or older	44	17%	43	20%
Children in household				
At least one child in household	158	63%	133	62%
No children in household	92	37%	80	38%

** *p<0.008*

Key findings

Current grocery shopping patterns

Most of the survey respondents purchased food from grocery stores. When asked to select all places where they get food, almost all of the respondents (95%) purchased food from at least one grocery store, while approximately one-third purchased food from farmer's markets (35%), fast food restaurants (32%), and small neighborhood stores (32%). Residents were least likely to identify Community Supported Agriculture (CSA) or direct purchases from local farms as places where they purchased food (Figure 8).

8. Type of places St. Paul residents purchase/get food

Source of Food	N	Percent
Grocery store	453	95%
Farmer's market	166	35%
Fast food restaurant	151	32%
Small neighborhood store	155	32%
Warehouse store (Costco, Sam's Club)	121	25%
Convenient store (Holiday, SpeedyMart)	117	25%
Food shelf	93	20%
Other restaurant	83	17%
Garden	67	14%
Food co-op store	64	13%
Truck (Side of the road vendor)	20	4%
Direct from farm (CSA)	15	3%
Other	13	3%

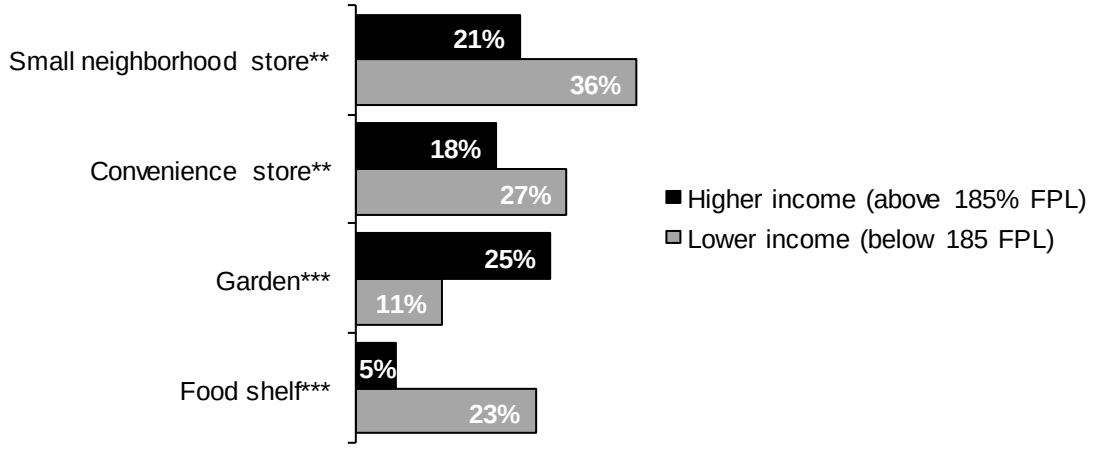
Notes: *"Other" responses included summer market (N=2), Schwan's/milkman (N=2), St. Paul City outdoor market (N=1), community garden (N=1), online (N=1).*

When exploratory analyses were conducted to identify differences in purchasing patterns based on demographic characteristics, a number of patterns emerged. Hispanic/Latino residents were less likely to purchase food from a farmer's market (19%, compared to 41% Asian/Hmong/Pacific Islander and 41% White/Caucasian residents, $p<0.008$), but more likely to shop at a small neighborhood store (53%, compared to 32% Black/African-American and 30% White/Caucasian residents, $p<0.008$). In contrast, White/Caucasian residents were more likely to shop at food co-ops than residents from

all other ethnic groups (30%, compared to 5-7% of residents from other ethnic groups, p<0.008). Asian/Hmong/Pacific Islander and White/Caucasian residents were also more likely to grow their own vegetables in a garden (22% of residents, compared to 4% Black/African American and 3% Hispanic/Latino residents, p<0.008) (Figure A2).

Residents with lower household incomes may be purchasing food from stores that do not typically have the lowest prices. Although the cost of various food items was not assessed for this project, studies have shown that on average, individuals pay more pay more and have fewer healthy items to choose when shopping at convenience stores and small markets instead of supermarkets.[1] Lower income residents were more likely to shop at small neighborhood stores (36%, compared to 21% of higher income residents, p<0.01) and convenience stores (27%, compared to 18% of higher income residents, p<0.01), but less likely to garden (11% of lower income residents, compared to 25% of higher income residents, p<0.001) (Figure 9).

9. Types of places food residents go to seek food, by income level



Location of food stores

Survey respondents were also asked to identify the location for up to three stores/ locations where they got the most food during the last month. Intersections and other locations were coded to indicate which neighborhood the store was located in. To determine how often residents got food from their own neighborhood, only survey responses with an identifiable store type (i.e., grocery store, convenience store) and location were analyzed.

[1] "Access to Affordable and Nutritious Food: Measuring and Understanding Food Deserts and Their Consequences," United States Department of Agriculture, Economic Research Service, June 2009.

Street intersections were provided by the respondents or could be coded for approximately three-quarters (77%) of locations identified in the survey.

There was great variation in number and types of stores residents purchased food from across the four neighborhoods. Among the eligible 838 responses, the stores identified most frequently were in the Payne-Phalen and Thomas-Dale neighborhoods (279 and 249 responses, respectively). Respondents identified far fewer stores in either the Summit-University or Dayton's Bluff neighborhood. There were also differences in the types of stores most often identified by the respondents as places to purchase food in each neighborhood. Over 60 percent of the locations identified by respondents in the Payne-Phalen neighborhood were grocery stores (69%), while most Thomas-Dale responses were neighborhood retail (69%) or grocery (65%) stores (Figure 10). Two-thirds (67%) of the 66 responses for stores in the Summit-University neighborhood were warehouse stores (i.e., Aldi's).

10. Location of stores/other places residents shop for food in key neighborhoods

	Dayton's Bluff (N=21)	Payne-Phalen (N=279)	Summit-University (N=66)	Thomas-Dale (N=249)
Grocery stores (N=428)	1 (5%)	192 (69%)	0 (0%)	158 (65%)
Culturally-specific stores (N=159)	4 (19%)	76 (27%)	3 (5%)	29 (12%)
Warehouse stores (N=109)	6 (29%)	0 (0%)	44 (67%)	4 (2%)
Retail stores (N=54)	0 (0%)	1 (1%)	0 (0%)	37 (15%)
Co-ops (N=23)	0 (0%)	0 (0%)	13 (20%)	0 (0%)
Restaurants (N=17)	4 (19%)	3 (1%)	4 (6%)	3 (1%)
Gas stations (N=13)	3 (14%)	4 (31%)	1 (2%)	4 (2%)
Corner stores/markets (N=10)	1 (5%)	1 (<1%)	0 (0%)	3 (1%)
Farmer's markets/CSAs (N=10)	0 (0%)	0 (0%)	1 (2%)	6 (2%)
Food shelves (N=9)	1 (5%)	1 (<1%)	0 (0%)	4 (2%)

A number of residents shopped at grocery stores, warehouse stores, and culturally-specific grocery stores outside of the four targeted neighborhoods. When asked to identify three places where they most often purchased or received food, about one-quarter (26%) of the responses were places outside of the four neighborhoods of interest in this project. Of the 125 places identified in other St. Paul neighborhoods, grocery stores and culturally-specific stores were most often listed (33% and 36% of responses, respectively) (Figure 11). A number of responses also referred to places located outside of St. Paul. Most of these places were warehouse stores (46%) and grocery stores (37%).

11. Location of stores/other places residents shop for food outside of key neighborhoods

	Other St. Paul neighborhood (N=125)	Neighborhood outside of St. Paul (N=98)
Grocery stores (N=428)	41 (33%)	36 (37%)
Culturally-specific stores (N=159)	45 (36%)	2 (2%)
Warehouse stores (N=109)	10 (8%)	45 (46%)
Retail stores (N=54)	7 (6%)	9 (9%)
Co-ops (N=23)	7 (6%)	3 (3%)
Restaurants (N=17)	2 (2%)	1 (1%)
Gas stations (N=13)	1 (1%)	0 (0%)
Corner stores/markets (N=10)	3 (2%)	2 (2%)
Farmer's markets/CSAs (N=10)	3 (2%)	0 (0%)
Food shelves (N=9)	3 (2%)	0 (0%)

Nearly half of the respondents shopped at a grocery store in their neighborhood, while fewer shopped in other types of local stores. A total of 369 survey respondents provided at least one valid store and location when asked which three places they got food from most often during the past month. Of these respondents, 45 percent shopped at a grocery store in their neighborhood, while fewer shopped at culturally-specific stores 17%) (Figure 12).

12. Number of residents who shopped in at last one store in their neighborhood, by store type (N=369)

	N	Percent
Grocery stores	167	45%
Culturally-specific stores	63	17%
Warehouse stores	11	2%
Retail stores	14	3%
Co-ops	3	1%
Restaurants	8	2%
Gas stations	6	2%
Corner stores/markets	4	1%
Farmer's markets/CSAs	2	<1%
Food shelves	3	1%

The percentage of respondents who shopped for food in their own neighborhood varied significantly. Among respondents who provided information about the type or place and location where they often went for food, only one of every five respondents from Dayton's Bluff and Summit-University shopped in their own neighborhood. In contrast, at least three-quarters of the respondents of those living in the Frogtown/Thomas-Dale (75%) and Payne-Phalen (80%) neighborhoods also shopped at stores in the neighborhood. There were no significant differences in the percentage of the respondents who shopped in their own neighborhoods based on ethnicity, age, gender, income, or the presence of children in the household (Figure A3).

13. Percentage of residents who shopped within their own neighborhood

	N	Percent
Dayton's Bluff (N=72)	14	19%
Payne-Phalen (N=128)	107	84%
Summit-University (N=53)	10	19%
Frogtown/Thomas-Dale (N=116)	85	73%

Notes: *Significant differences were found between residents in the Payne-Phalen and Frogtown/Thomas-Dale neighborhoods when compared to Dayton's Bluff and Summit-University ($p<0.008$).*

Key places to purchase, access food

Grocery stores, markets

Similar to the resident survey results, focus groups participants purchased food primarily from grocery stores, but identified a variety of food sources. Focus group participants also discussed purchasing food from a variety of places, including warehouse stores, farmer's markets, culturally-specific markets, and other retail stores. The participants most often reported shopping at Rainbow and Cub, but a few noted they shop at a Dollar Store for condiments or snacks, or higher end stores (i.e., Kowalski's) and co-ops when they have money to do so. In all but one focus group, some of the participants also stated they received food from friends and family when they didn't have enough.

> I think you would be surprised by how many people would be glad to stay in the community and support it. We want to see our community build up. The more you spend in your community, the better. – Payne-Phalen resident

Culturally-specific markets are important places to purchase food for many residents. Across all focus groups, residents identified culturally-specific markets as places they shopped for food. This included residents who wanted to purchase foods from their own

culture, as well as others interested in cooking different types of ethnic foods. In both focus groups with Hmong participants, they described grocery stores as places where you can buy "American food" that their children want to eat, but that they must go to Hmong flea markets to find Hmong vegetables and other cultural foods that adults, especially elders, want to eat. They preferred shopping at these stores not only because they carried vegetables and other foods that cannot be found in larger grocery stores, but also because they could speak to the store clerks and other shoppers in Hmong. Participants of the Spanish-speaking focus group also noted that they liked going to a market where clerks spoke and understood Spanish. Participants in the two Somali focus groups also identified Halal markets (stores that sell foods that are permissible for Muslims to eat) as key places where they purchase food that cannot be found in large grocery stores. Often, they went to markets in Minneapolis to shop. A few Hmong and Somali participants also spoke about the social aspect of shopping in their respective markets. A Hmong woman stated it is easy to spend an entire day at the flea market, and a Somali woman noted she often ran into an acquaintance while shopping at a Halal market.

> The most important place is the Hmong store because they have the food items that you want to eat…no matter how far a store is, I will go there. – Hmong resident
>
> I like to go to Latino stores because I like to support my culture and the product is always fresh. If I find a product that doesn't look fresh, I just talk to the owner and they do something about it. – Hispanic resident

Farmer's markets

In most focus groups, a number of residents purchased fresh vegetables from farmer's markets. Most residents felt the markets were a good place to purchase fresh vegetables. However, some residents did not go to farmer's markets because Electronic Benefit Transfer (EBT) payments were not accepted or they didn't know where a farmer's market was located or felt they were too far away. One resident noted that he doesn't go to farmer's markets because he feels the quantities sold are more than he can use when cooking for himself. In two focus groups, a few residents noted that some farmer's markets are selling fewer vegetables while adding other types of products. Hmong residents who participated in the focus group went to a Hmong flea market to purchase fresh vegetables, rather than a standard farmer's market.

> At the farmer's markets…it seems like they don't have what I'm looking for anymore. Now they have pretty flowers and plants, but they don't have my greens, beets, and things like that. – Payne-Phalen resident

Community-supported agriculture (CSA)

Few residents were familiar with CSAs or purchased food from local farms. Across the focus groups, only handful of residents had a CSA share or purchased food from local farmers. When the concept of CSAs was described to focus group participants, residents in all but the Hmong-speaking focus groups were interested in hearing more about this option. A few Hmong residents felt it was likely this option would be too expensive.

Individual/community gardens

Limited land access was perceived as a significant barrier to gardening among a number of residents. Residents in three focus groups grew some of their own food. Although some residents said they were familiar with gardening and didn't have time to grow their own food, residents in six focus groups said they couldn't garden because they didn't have access to land. This included residents in both Somali groups, as well as residents in one of the Hmong groups and a couple participants in the Spanish-speaking focus group. A number of residents were interested in learning how to grow their own food through classes or other workshops. Some residents were interested in basic information about what to grow in Minnesota or how to prepare the soil for planting; others were interested in more advanced topics, such as extending the growing season by using greenhouses or other strategies.

> I am renting, but renting doesn't mean you can't grow food. I have neighbors and they are growing food in their backyard.

Overarching concerns

Not all residents were familiar with the stores, food shelves, and markets identified by others in the focus group discussions. In many of the focus groups, some residents were unfamiliar with some of the stores and food shelves mentioned by others during the discussion. During one of the Payne-Phalen focus groups, participants shared different information about nearby meat markets and culturally-specific stores that sold things in or near their neighborhood. Some participants felt a resource directory, with names and descriptions of food stores, food shelves, and other programs, would be helpful.

Factors that influence where residents shop for food

Perceived convenience of location was an important factor respondents considered when purchasing food from different locations. Survey respondents were asked to identify up to three places they went to purchase or receive most of their food during the past month and to (67% of stores/other locations) (Figure 14). Location was an important factor when people went to gas stations (91%) and corner stores (78%), as well

as grocery stores (73%) to purchase food. Respondents most often identified "good prices" as a key factor that influenced their decision to shop at warehouse stores (71%) and retail stores (72%). In contrast, "good quality" was a key factor respondents considered when purchasing food from co-ops (96%) or farmer's markets/CSAs (64%).

14. Factors influencing food purchases

	Convenient location	Good quality	Good selection of products	Good prices	Safe location
Grocery stores (N=564)	**410 (73%)**	304 (54%)	289 (51%)	303 (54%)	159 (28%)
Culturally-specific grocery stores/markets (N=179)	**123 (69%)**	88 (49%)	96 (54%)	84 (47%)	59 (32%)
Warehouse stores (N=149)	75 (50%)	60 (40%)	48 (32%)	**106 (71%)**	32 (22%)
Retail stores (N=72)	42 (58%)	34 (47%)	31 (43%)	**52 (72%)**	23 (32%)
Co-ops, organic grocery stores (N=27)	9 (33%)	**26 (96%)**	19 (67%)	3 (11%)	10 (37%)
Corner stores, markets (N=23)	**18 (78%)**	9 (39%)	6 (26%)	8 (35%)	6 (26%)
Gas stations (N=21)	**19 (91%)**	7 (33%)	4 (19%)	6 (29%)	7 (33%)
Farmer's markets/CSA (N=14)	6 (43%)	**9 (64%)**	**9 (64%)**	8 (57%)	7 (50%)
Food shelves (N=9)	**5 (56%)**	**5 (56%)**	4 (44%)	3 (33%)	3 (33%)
Combined (N=1080)	**729 (67%)**	553 (51%)	516 (47%)	589 (54%)	318 (29%)

Notes: *Respondents could select multiple factors for each type of location.*

There were some differences between residents of different cultural backgrounds in the degree to which specific factors influencing food selection. Exploratory analyses were used to determine whether there are any differences in the factors residents consider when selecting a place to purchase food. Hispanic/Latino residents were less likely to consider "convenient location" when choosing a food store/location than other cultural groups (76%, compared to 91% of Asian/Hmong/Pacific Islander and 90% of White/ Caucasian residents, $p<0.008$) (Figure A4). White/Caucasian residents were more likely to consider "good selection of products" when choosing where to purchase food than residents of other cultural groups (76%, compared to 56% of Black/African-American and 59% of Asian/Hmong/Pacific Islander residents, $p<0.008$). There were no differences in the types of factors residents considered based on neighborhood of residence, gender, age, or household income**.**

Barriers to healthy eating

The cost of healthy food was identified as a barrier of healthy eating by most of the survey respondents. Eighty percent of the respondents felt the price of healthy food impacted their ability to eat healthy food "very much" or "somewhat" (Figure 15). Approximately three in five residents identified other barriers to healthy eating, including the quality of foods in stores where respondents shop (66%), availability of healthy foods (61%), time to shop (60%), and time to prepare foods (62%).

When additional exploratory analyses were conducted to identify differences between respondents who responded an item affected them "very much," few significant differences emerged. There were significant differences in the number of Asian/Hmong/ Pacific Islander residents compared to White/Caucasian residents who felt the availability of culturally specific food affected their ability to eat healthy food (28% of Asian/ Hmong/Pacific Islander residents, compared to 8% White/Caucasian residents, $p<0.008$) (Figure A5). There were also significant differences between Asian/Hmong/Pacific Islander residents and Hispanic/Latino residents in the degree that the quality of food in stores affected their ability to eat healthy food (23%, compared to 9% of Hispanic/Latino residents, $p<0.008$).

15. To what degree do the following issues affect your ability to eat healthy food?

Issue	Very much	Somewhat	Not at all
Price of healthy food (N=468)	**197 (42%)**	173 (37%)	98 (21%)
Quality of food in stores where I shop (N=461)	92 (20%)	**213 (46%)**	156 (34%)
Availability of healthy foods (N=463)	104 (22%)	**182 (39%)**	177 (38%)
Time to shop (N=464)	80 (17%)	**200 (43%)**	184 (40%)
Time to prepare food (N=462)	99 (21%)	**187 (41%)**	176 (38%)
Knowledge of how to cook healthy food (N=458)	77 (17%)	167 (37%)	**214 (47%)**
Food people I live with prefer (N=450)	76 (17%)	165 (37%)	**209 (46%)**
Availability of the food my culture eats (N=455)	80 (18%)	154 (34%)	**221 (49%)**
Availability of equipment to prepare and store food (N=451)	61 (14%)	145 (32%)	**245 (54%)**
Other (N=79)	11 (14%)	19 (24%)	49 (62%)

Notes: *"Other" responses included: no interest in doing it/don't like it (N=3), personal disability/foods prepared by aides (N=2), location of stores/how to get to stores (N=2), seasonality (N=1), shelf life (N=1), stress (N=1), allergies (N=1).*

Consistent with other responses to the survey questions, residents from each of the four neighborhoods reported that price and cost were the barriers that made it most difficult to get healthy food. Survey respondents were also asked to respond to an open-ended question asking them what makes it difficult to get healthy food. These responses were coded into key themes and reported below (Figure 16). Over 10 percent of residents from the Dayton's Bluff and Payne-Phalen neighborhoods who responded to this question did not feel it was difficult to purchase food and instead described it as a personal choice. At this level of analysis, the types of responses provided by the respondents did not vary considerably based on ethnicity or gender. Some responses provided by residents are included in the sections that follow to further illustrate key themes.

16. Issues that make it difficult to get healthy food, coded open-ended responses

	Dayton's Bluff (N=74)	Payne-Phalen (N=119)	Summit-University (N=48)	Thomas-Dale (N=121)
Price (healthy food too expensive, cost)	32 (43%)	63 (53%)	25 (43%)	68 (56%)
Nothing is difficult, purchasing healthy food is a choice	11 (15%)	22 (19%)	7 (12%)	11 (9%)
Lack of time to shop/cook	8 (11%)	13 (11%)	8 (14%)	8 (7%)
Lack of transportation	3 (4%)	9 (8%)	4 (7%)	8 (7%)
Do not know how to prepare healthy food	5 (7%)	8 (7%)	2 (3%)	5 (4%)
Lack of shopping locations in my area	5 (7%)	3 (3%)	4 (7%)	5 (4%)

Cost

As described previously, over three-quarters of the survey respondents identified the price of healthy foods as an issue that affected their ability to eat healthy food "somewhat" or "very much." Young adults (ages 18-24) were significantly less likely to identify price as an issue that affected them "very much" than adults from older age groups (28%, compared to 51% of adults ages 25-34 and 45% of adults ages 35-54, p,0.008) (Figure A5). There were no other significant differences based on other demographic characteristics (i.e., neighborhood, gender, income, or ethnicity).

A total of 109 survey respondents (23%) described an issue related to price or cost when asked what makes it difficult to eat healthy food. While many simply listed "price" or "cost of food" as their response, others provided more specific information about having less income due to the current economy or recent job loss. Some respondents had specific concerns about the price of organic food while others felt healthy food is generally more expensive than unhealthy food.

Across all focus groups, price was also often the main factor in determining where they purchased food. It was common to hear that participants compared prices across multiple stores, and may stop multiple places to purchase food. Other common factors that influenced where residents shopped included the quality of meat, fruits, and vegetables and convenience/proximity to their home. Fewer made purchasing decisions based on wanting to support local growers.

> I'd say it takes me 3 or 4 trips to different stores to get what I want, depending on how much money I have and how much time I have.
>
> It costs more to eat healthy than not to eat healthy. If you end up always buying the fresh fruits and vegetables, you're going to run out of money.
>
> Organic [foods are] too expensive for low to middle-income people, although it is supposed to be healthy. Healthy and organic food is too expensive for most people's budgets in my community and neighborhood.
>
> Healthy food costs more. If I bought what I know I should eat, I would run out of money and have nothing for a while. So I compromise and try to balance my need for nutrition with my need for budgeting.

A number of residents believed food prices were generally higher in Minnesota than in other states. In four English-speaking focus groups, residents noted that when they lived in other nearby states (Illinois, Indiana, Michigan, and Ohio), it seemed that prices were lower. A few noted that they had lived in places with meat, fish, and vegetable markets, as well as smaller culturally-specific stores that seemed to sell foods at lower cost. A few participants noted they, or someone they knew, purchased food from other states or asked relatives to purchase food from other states because they were unable to find a culturally-specific food item (i.e., tropical fruits, Caribbean spices) or felt the items were too expensive.

Convenience

The convenience of shopping was also a factor some residents considered when purchasing food. Although many focus group participants purchased food from stores that were not in their neighborhood, a number of residents went to corner stores and gas stations to purchase food because it was convenient and close to home.

> Sometimes you can't get to a farmer's market or grocery store. You get what is convenient for you.

Transportation

Survey respondents generally got to stores for shopping by car. Most of the respondents (68%) drove their own vehicle, while nearly one-third (29%) drove with someone else. Approximately one-quarter of the respondents reported walking (27%) or riding the bus (22%). Fewer respondents went by bike, taxi, or shuttle. Not surprisingly, lower income residents were more likely to drive with someone else, walk, taxi, or bus than residents with higher incomes (Figure A6). In addition, Black/African-American residents were significantly more likely to walk, bike, or ride with someone else than residents of other cultural groups.

17. Usual transportation when shopping for food (N=476)

Type of transport	N	Percent
Drive own car	322	68%
Drive with someone else	138	29%
Walk	127	27%
Bus	102	22%
Bike	39	8%
Taxi	26	5%
Shuttle	6	1%
Other	11	2%

Notes: *Respondents could choose multiple responses. "Other" responses included: Metro Mobility (N=4), family members (N=2), carpool (N=1), shop online (N=1).*

Although most residents were generally satisfied with their transportation to stores, some identified transportation as a significant barrier when shopping for food. Most survey respondents (81%) were satisfied with their transportation to stores for shopping. However, focus group participants who used the bus noted that it is very difficult to carry bags of groceries. As a result, some noted they need to shop more often, which takes more time than they would like to spend shopping. A few residents carpool with others, but noted that rides can be unreliable and can take additional time if the driver want to run additional errands or takes longer shopping at the store. Consistent with the focus group findings, when survey respondents were asked whether they would like a different transportation option to get food, over one-quarter of the respondents who use a taxi (39%), bus (39%), walk (27%), or ride with someone else (25%) were interested in another transportation option (Figure 18).

18. Percentage of residents who would like to have a different transportation option when shopping for food (N=88)

	Respondents interested in a different transportation option	
Current mode of transportation	**N**	**Percent**
Taxi	20	23%
Bus	39	44%
Walk	34	39%
Drive with someone else	34	39%
Bike	8	9%
Drive own car	27	31%
Shuttle	4	5%
Other	7	8%

Notes: *Respondents could choose multiple transportation options.*

Residents who wanted a different transportation option to get to a store/or other place to purchase food were asked to specify the type of transportation option they would prefer. Among the 77 residents who provided a response, 33 residents would prefer to get to a store by car, while fewer preferred travel by bus (N=12), free shuttle (N=10), walking (N=8), Metro Mobility/other disability transportation service (N=2), taxi (N=1), or bike (N=1).

Food stability

Over half of the survey respondents reported running out of money before being able to buy enough food at least once during the past three months. Although a majority of respondents (53%) reported they ran out of money for food at least once during the past three months, fewer respondents (40%) sought events or places to get free food. Not surprisingly, respondents with lower incomes were significantly more likely to have run out of money (60%, compared to 27% of respondents with higher incomes, $p<0.001$) and seek events or places to get free food (45%, compared with 21% of respondents with higher incomes, $p<0.001$) (Figure A7).

19. Within the past 3 months, how often have you experienced the following?

Experience	Never	Once	2-3 times	4-5 times	6+ Times
Ran out of money before I was able to buy enough food (N=454)	215 (47%)	98 (22%)	91 (20%)	28 (6%)	22 (5%)
Sought events and places to get free food (N=449)	271 (60%)	67 (15%)	69 (15%)	22 (5%)	20 (5%)

Many Saint Paul residents turned to food shelves or assistance from friends and family if they needed money for food. In three English-speaking focus groups, a few residents stated they go to food shelves or other outreach organizations for free food if they run out of money. However, it was more common for the focus group participants to say they received food or money from friends and family when they needed additional food. A few also mentioned changing their shopping patterns by purchasing Ramen noodles or other low-cost food when they run low on money.

> …Being on welfare, I'm sorry, but I need more than $300 of food stamps to feed six people. I run out around the middle of the month.

Food shelves were used less often by Hmong and Somali focus group participants. In the two focus groups with Hmong residents, many did not know about food shelves and others stated they would prefer not to seek help from others if they were without money for food. Although there are food shelves in Saint Paul that do carry culturally-specific foods and provide food to Hmong families, the focus group participants were not aware of, or did not utilize, this community resource. Somali residents explained they were able to start a tab at Halal markets if they needed additional money for food. The focus group participants also noted that the markets give out loans that they can use for other purchases. One of the focus group questions asked residents whether they expected there would be a time in the next year when they will not be sure of how their family will eat. In the Muslim faith, Somali residents trust in Allah to provide for them and rarely plan for anticipated hardships. Therefore, this question was difficult for Somali residents to respond to within their cultural context.

Satisfaction with food availability, quality

A majority of the survey respondents were satisfied with the availability of healthy foods in their neighborhood. When asked about the availability of different types of food, most residents were satisfied with the availability of fruits, vegetables, whole grains, lean meats, low-fat dairy, and beans/nuts (65-75%). When potential differences between cultural groups were explored, significantly fewer Asian/Hmong/Pacific Islander residents were satisfied with the availability of low-fat dairy (50%, compared with 70% White/ Caucasian and 76% Hispanic/Latino residents, $p<0.008$) and beans/ nuts (49%, compared with 70% White/Caucasian, 71% Black/African-American, and 91% Hispanic/Latino residents, $p<0.008$) (Figure A8).

20. How satisfied are you with the availability of healthy foods in your neighborhood?

Type of Food	Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
Fruits (N=470)	142 (30%)	**212 (45%)**	70 (15%)	39 (8%)	7 (2%)
Vegetables (N=470)	139 (30%)	**205 (44%)**	87 (19%)	29 (6%)	10 (2%)
Whole Grains bread, rice or other grains (N=464)	132 (28%)	**199 (43%)**	97 (21%)	28 (6%)	8 (2%)
Lean Meats (N=461)	114 (25%)	**188 (41%)**	111 (25%)	40 (9%)	8 (2%)
Low-Fat Dairy (N=462)	112 (24%)	**190 (41%)**	121 (26%)	32 (7%)	9 (2%)
Beans/Nuts (N=462)	128 (28%)	**184 (40%)**	115 (25%)	23 (5%)	12 (3%)

Consistent with the survey results, most focus group participants stated they were satisfied with the food they purchase. Although residents in all focus groups identified ways food availability could be improved, when asked directly, most were satisfied with the quality and availability of food they purchase. In one of the focus groups with Hmong residents, however, one of the participants noted that he has purchased food close to the expiration date to save money, and that food has been of poorer quality.

Residents were less satisfied with the availability of culturally-specific foods in their neighborhoods. In the focus group with Somali men, there was general agreement that they were not satisfied with their food purchase options and noted it was very different than when purchasing food from markets in Somalia. In contrast, Somali women were generally satisfied with the food available in Minnesota. Other residents also noted that culturally-specific foods could be difficult to find. In a focus group conducted in the Payne-Phalen neighborhood, three participants stated they purchase food in bulk when they visit relatives or ask friends and relatives to ship foods and spices to them.

Food preferences

Individuals who completed the food survey were asked to identify the four vegetables they buy the most. The responses were coded into single items or similar groups of vegetables (i.e., lettuce/spinach), when applicable. Some survey responses were ineligible items, such as flour or meat. A total of 41 vegetables were identified. Tomatoes, though not vegetables, were included on this list because they were listed frequently by survey respondents.

Survey respondents reported most frequently purchasing lettuce or spinach, broccoli, carrots, tomatoes, corn, or green beans/beans. Across all neighborhoods, the most common types of vegetables purchased by residents remained fairly consistent (Figure 21). Residents in the Thomas-Dale neighborhood were more likely to report purchasing cabbage and bok choy (30%, compared to 8-18% of residents of other neighborhoods).

21. Most common vegetables purchased by residents, by neighborhood (N=453)

	Dayton's Bluff (N=90)	Payne-Phalen (N=155)	Summit-University (N=62)	Thomas-Dale (N=146)	Neighborhoods combined (N=453)
Lettuce/spinach	43 (48%)	70 (45%)	26 (42%)	62 (43%)	201 (44%)
Carrots	33 (37%)	58 (37%)	30 (48%)	38 (26%)	159 (35%)
Tomatoes	32 (36%)	58 (37%)	18 (29%)	37 (25%)	145 (32%)
Broccoli/Chinese broccoli	35 (39%)	50 (32%)	17 (27%)	39 (27%)	141 (31%)
Beans/green beans	33 (33%)	35 (23%)	22 (35%)	33 (23%)	110 (24%)
Onions, scallions	16 (18%)	40 (26%)	16 (26%)	38 (25%)	110 (24%)
Corn	26 (29%)	35 (23%)	15 (24%)	34 (23%)	110 (24%)

Notes: *Although less common in other neighborhoods, Thomas-Dale residents often purchased cabbage/bok choy (30%).*

There were some differences in food preferences among residents of different cultural groups. The types of vegetables purchased by higher- and lower-income householders were fairly consistent (Figure 22). However, there were more differences between residents of different ethnic groups. In addition to the differences listed in the figure below, Asian/ Hmong/Pacific Islander were more likely to purchase Hmong greens (40%, compared to none of the other residents) and Hispanic/Latino residents were more likely to purchase bell peppers (29%, compared to 4-17% of resident of other ethnic groups).

22. Most common vegetables purchased by residents, by ethnic group (N=399), income (N=441)

	Race/ethnicity				Income level	
	African-American (N=76)	Latino/ Hispanic (N=87)	Asian/ Hmong (N=136)	White (N=100)	Higher income (N=90)	Lower income (N=351)
Lettuce/spinach	26 (34%)	47 (54%)	52 (38%)	53 (53%)	41 (46%)	154 (44%)
Carrots	29 (37%)	37 (43%)	24 (18%)	49 (49%)	35 (39%)	119 (34%)
Tomatoes	14 (18%)	58 (67%)	25 (18%)	34 (34%)	28 (31%)	114 (33%)
Broccoli/Chinese broccoli	26 (34%)	25 (29%)	30 (37%)	21 (21%)	33 (37%)	103 (29%)
Beans/green beans	33 (43%)	10 (11%)	25 (18%)	35 (35%)	21 (23%)	96 (27%)
Onions, scallions	10 (13%)	24 (28%)	43 (32%)	19 (19%)	21 (23%)	90 (26%)
Corn	39 (51%)	9 (10%)	9 (7%)	36 (36%)	13 (14%)	93 (27%)

Less than one-third of the survey respondents reported eating fruits and vegetables multiple times each day. Although the survey asked residents to consider how often they ate different types of food, not the total number of servings they consumed, the survey results indicate a number of residents do not meet the USDA Dietary Guidelines. According to the Dietary Guidelines for Americans established by the Department of Health and Human Services and the Department of Agriculture, a 1600-calorie adult diet should incorporate 3-4 servings of vegetables and 4 servings of fruit each day. However, less than one-third of the respondents reported eating fruits (28%) or vegetables (31%) multiple times each day (Figure 23).

23. On average, how often do you eat the following types of food?

Type of Food	Never	1 time/week	Few times/week	1 time/day	Few times/day	5+ times/day	USDA Dietary Guidelines
Fruits (N=472)	8 (2%)	88 (19%)	**126 (27%)**	116 (25%)	118 (25%)	16 (3%)	4 servings/day
Vegetables (N=473)	5 (1%)	53 (11%)	**140 (30%)**	125 (26%)	125 (26%)	25 (5%)	3-4 servings/day
Whole Grains bread, rice or other grains (N=468)	9 (2%)	57 (12%)	93 (20%)	127 (27%)	**147 (32%)**	35 (8%)	6 servings/day
Lean Meats (N=470)	18 (4%)	63 (13%)	**144 (31%)**	130 (28%)	92 (20%)	23 (5%)	3-4 servings/day
Low-Fat Dairy (N=469)	74 (16%)	97 (21%)	**106 (23%)**	98 (21%)	74 (16%)	20 (4%)	2-3 servings/day
Beans/Nuts (N=470)	80 (17%)	**126 (27%)**	120 (26%)	58 (12%)	65 (14%)	21 (5%)	3-4 servings/week

Over 90 percent of the respondents were "somewhat" or "very interested" in eating more healthy foods. Women were more likely to be "very interested" in eating healthy foods than men (59%, compared to 47% of males, $p<0.05$) (Figure A9). Overall, only nine percent of residents were "not interested" in eating more healthy foods (Figure 24).

24. How interested are you in eating more healthy foods? (N=464)

Response	N	Percent
Very Interested	255	55%
Somewhat Interested	178	38%
Not Interested	31	7%

Through the course of their discussions, focus group participants also expressed interest in healthy eating. When asked to define "healthy eating," a broad range of ideas were offered by participants. Common responses included not only eating a balanced diet that incorporated fresh fruits and vegetables, but also eating healthy portions, avoiding processed food, and minimizing high fat or high sugar items (i.e., red meat, sweets) in their diet. A number of focus group participants also noted that it is also important to incorporate physical activity into a healthy lifestyle.

Strategies to help residents eat more healthy food

Over half of the survey respondents felt coupons and price discounts would help them eat more healthy food. Additionally, respondents expressed interest in more nearby farmers markets, more healthy choices at restaurants and fast food places, and better variety and quality where they shopped. Additionally, one-third expressed interest in having more stores accept food stamps or WIC vouchers. Fewer felt that more opportunities to grow their own food, opportunities to purchase food directly from farmers, or free or low-cost shuttles would help them eat more healthy foods. Respondents with lower incomes were more likely to be interested in more stores accepting WIC (40%, compared to 10% higher income respondents), having free or low-cost shuttles to local stores/markets (27%, compared to 13% higher income respondents), and preparing healthy foods (34%, compared to 22% higher income respondents) (Figure A10). Lower income respondents were less likely to feel greater access to farmer's markets would help them eat more healthy food (40%, compared to 55% higher income respondents).

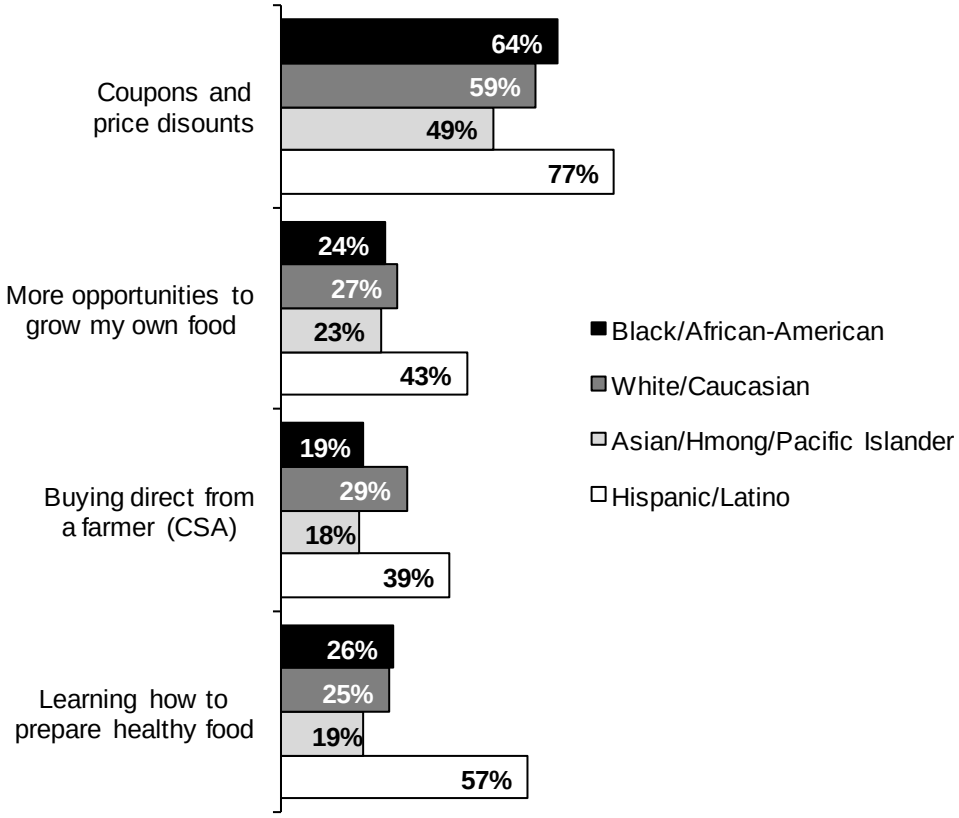
25. Which of the following would help you eat more healthy food? (N=477)

Intervention	N	Percent
Coupons and price discounts	294	62%
More nearby farmers markets	205	43%
More healthy choices at the restaurants/fast food places	187	39%
Better variety and quality where you shop	182	38%
More stores accepting food stamps/WIC vouchers	156	33%
New or improved supermarket nearby	153	32%
Learning how to prepare healthy food	148	31%
More opportunities to grow my own food	139	29%
Buying direct from a farmer (CSA)	118	25%
Free or low-cost shuttle to local stores/markets	112	24%
Other	26	5%

Notes: *Respondents could choose multiple responses. "Other" responses included: lower cost/prices (N=7), cooking pots, stove (N=1), access to fresh meat (not frozen) (N=1), growing it myself (N=1), more food stamps (N=1), more weekday hours at the farmer's market (N=1), not working so much (N=1), transportation (N=1), willpower (N=1), nothing (N=2).*

Some differences between ethnic groups were identified in the perceived helpfulness of various healthy eating supports. Hispanic/Latino survey respondents were consistently more likely than respondents from other ethnic groups to identify coupons and price discounts, opportunities to grow their own food, buying direct from a farmer, and learning how to prepare healthy food as strategies that would help them eat more healthy food ($p<0.008$) (Figure 26). Young adults (ages 18-24) were also significantly more likely to be interested in free or low cost shuttles to local sores and learning how to prepare healthy food than older respondents (Figure A10). Other differences between resident groups based on income, gender, age, and race/ethnicity can also be found in the appendix (Figure A10).

26. Strategies that would help residents eat more healthy food, by ethnicity



Most respondents were at least somewhat interested in opportunities to learn about healthy foods. More than three-fourths of respondents (78%) were interested in learning to cook with healthy foods. At least two-thirds were interested in learning more about growing their own food (71%), learning how to choose healthy foods at the store (70%), and learning to purchase foods from farmers (69%). Somewhat fewer (53%) were interested in learning to can or preserve their own food (Figure 27).

When the training interests of residents were explored in great depth, a few significant differences between cultural groups were noted. Hispanic/Latino residents were more likely to be interested in growing their own food than residents of other ethnic groups (80%, compared to 61-67% of residents from other ethnic groups, $p<0.008$) (Figure A11). Asian/Hmong/Pacific Islander residents were less interested in learning how to cook with healthy foods than residents of other ethnic groups (65%, compared to 85-89% of residents from other ethnic groups, $p<0.008$).

27. Interest in learning about food preparation, selection topics

Topic	Very interested	Somewhat interested	Not interested	Not sure
Growing my own food (N=455)	115 (25%)	**164 (36%)**	139 (31%)	37 (8%)
Canning/Preserving food (N=445)	84 (19%)	151 (34%)	**165 (37%)**	45 (10%)
Cooking with healthy foods (N=453)	145 (32%)	**210 (46%)**	82 (18%)	16 (4%)
How to choose healthy foods at the store (N=454)	126 (28%)	**202 (44%)**	97 (21%)	29 (6%)
Buying healthy food from a farmer (N=450)	139 (31%)	**171 (38%)**	103 (23%)	37 (8%)

When asked to identify one thing that would help them eat more healthy food, most survey respondents identified lowering the price of food. Among the 361 residents who responded to this question, 40 percent suggested reducing the cost of food by lowering the price of fruits, vegetables and organic food, as well as offering more coupons or discounts (Figure 28). A few residents identified becoming employed or increasing their income as a way to improve the affordability of food.

Other common suggestions offered by residents who completed the survey as ways to help them eat more healthy food included providing information about purchasing and preparing healthy foods (15%), improving the availability of healthy foods (9%), and increasing access to healthy foods by expanding the hours/locations of stores and farmer's markets (7%). A few residents also noted they want to eat healthier foods to address health concerns or lose weight (4%). Although most responses to this question included broad statements, a few specific suggestions were made by the respondents, including finding ways to have someone who can help elders cook, providing coupons to purchase items from cultural stores and farmer's markets, and expanding the hours and locations of farmer's markets.

28. Suggestions to help residents eat more healthy food, comments grouped by key themes (N=391)

Key theme	N	Percent
Reduce price	157	40%
Offer coupons or discounts	*24*	*7%*
Reduce cost of specific types of food (fruit, vegetables, organic)	*10*	*3%*
Increase availability of healthy foods	65	17%
Improve access to stores, places that offer healthy foods	51	13%
Encourage more stores to take EBT/food stamps/WIC	*8*	*2%*
Offer other types of transportation	*6*	*2%*
Need assistance with shopping, food preparation	*6*	*2%*
Increase knowledge among residents	56	14%
Offer opportunities to learn how to cook healthy foods	*33*	*8%*
Offer opportunities to learn how to buy/select healthy foods	*4*	*1%*
Focus on eating healthy to improve health, maintain diet	15	4%
Nothing/I don't need to change anything to eat healthy foods	15	4%
Other	32	9%

Notes: *Items in italics are sub-themes within each main category. "Other" responses mentioned by two or more residents included: gardening (N=6); willpower/deciding to make a change (N=4); limiting exposure to greasy food/fast food (N=3); expanding eligibility for EBT/food stamps (N=2); having a better climate for fruits and vegetables (N=2); and produce that stays fresh longer (N=2).*

Among focus group participants, many residents felt they generally understood how to prepare healthy food but felt it was difficult to maintain healthy cooking habits. A number of factors, including time, cost, and familiarity with healthy food, made it difficult for residents to cook healthy food regularly. A few residents noted that although they know how to prepare healthy food, they may eat portions that are too large. One Hmong resident stated that although many elders eat primarily rice and greens, the amount of rice they eat is unhealthy. Another African-American woman noted that she often prepares food in a healthy way, but then adds butter when eating the food. Some of the focus group participants, primarily younger residents, did note that they would like to learn more about preparing healthy food. For example, one young woman stated she wanted to learn how to cook Asian food in a healthier way, without frying the food as often.

Additional comments were made by many of the individuals who completed the written survey describing additional challenges, observations, and suggestions. These comments can be found in the appendix. In addition, a number of suggestions were made by the

focus group participants to encourage healthy eating among neighborhood residents, including the following:

- When providing information to residents, focus on how to eat healthy food and what is healthy, rather than identifying foods that are unhealthy.
- Develop a community recipe book with involvement from local residents.
- Identify local food resources, including culturally-specific markets, food shelves, and other affordable food options.
- Create a DVD that can be used to teach residents, including those with limited reading/writing skills, how to prepare healthy food properly.
- Provide opportunities for community residents to meet another through community potlucks and group cooking classes.
- Offer a mobile store that can sell fresh fruits and vegetables at different locations in the city, including public housing apartment buildings.
- Encourage entrepreneurs and business owners to establish new grocery stores, markets, and healthy restaurants in neighborhoods with vacant storefronts.

Key findings, considerations

A considerable number of topics were explored during this project to understand issues related to food access in these four St. Paul neighborhoods. A number of key themes emerged when the data from the resident survey and focus group discussions were analyzed. Some of these key themes are listed below:

- **Most residents were interested about learning more about healthy eating and improving their overall diet.** Most of the survey respondents were at least somewhat interested in eating more healthy foods, and many residents who participated in the focus groups were also interested in improving their health. Although food consumption was not measured in a comprehensive manner in this assessment, self-reported eating habits indicate there is room for improvement. Less than one-third of the survey respondents reported eating fruits or vegetables multiple times on an average day.

- **The cost of fresh fruits and vegetables, location of markets and other stores, quality of perishable food items, and time needed to cook and prepare food, were identified as common barriers to healthy eating.** Among some focus group participants, the cost of food was perceived to be higher in Minnesota than in other states. However, it was outside of the scope of this report to explore the validity of these claims. The lack of culturally-specific markets and limited availability of culturally-specific foods in larger grocery stores were also identified as barriers to healthy eating among specific cultural groups as well as among residents who enjoy cooking a variety of foods.

- **Food stability was an issue for many survey respondents. Over half of the survey respondents reported running out of money before being able to buy enough food at least once during the past three months.** Although a number of residents who responded to the survey and participated in the focus groups utilized local food shelves, others relied on informal help from friends and family. Within the Hmong and Somali community, loans could be borrowed from culturally-specific markets to pay for groceries or other expenses.

- **Most survey respondents and focus group participants purchased food from grocery stores.** Fewer residents went to other types of locations including farmer's markets, small markets or corner stores, warehouse stores, and convenience stores. Hispanic/Latino residents were less likely to purchase food from farmer's markets, but more likely to shop at a small neighborhood store. White/Caucasian residents were more likely to shop at food co-ops than residents of other cultural backgrounds.

Overall, the survey respondents were least likely to identify purchasing food directly from farmers through CSAs or other routes, and most focus group participants were not familiar with this option.

- **Residents with lower household incomes may be purchasing food from stores that do not typically have the lowest prices.** Although the cost of various food items was not assessed for this project, on average, recent studies have demonstrated individuals typically pay more pay more and have fewer healthy items to choose when shopping at convenience stores and small markets instead of supermarkets. Results from this resident survey indicated lower-income residents were more likely to shop at small neighborhood stores and convenience stores, but less likely to garden.

- **There are significant differences and gaps in the types of stores and food resource availability across the four neighborhoods.** Although this project did not include an inventory of places residents can purchase or receive food in each of the four neighborhoods, results from the survey and focus group discussions indicate limited availability of healthy shopping options in the four neighborhoods. Very few options were identified by residents in the Dayton's Bluff and Summit-University neighborhoods. A number of residents reported shopping regularly at stores in other St. Paul neighborhoods or outside of the city. Overall, only one of every five respondents from Dayton's Bluff and Summit-University shopped in their own neighborhood, compared to at least three-quarters of the respondents in the Frogtown/ Thomas-Dale and Payne-Phalen neighborhoods.

- **Limited food purchasing options within neighborhoods was a challenge to some residents, particularly those without cars.** Strategies may be needed to provide other opportunities for residents who bus, taxi, and walk to stores with transportation alternatives that make shopping easier, such as neighborhood shuttles.

- **Residents have very different levels of familiarity with the resources available in their neighborhoods, including smaller markets and food shelves.** During focus groups discussions, the stores, markets, and other food resources (i.e., food shelves) that some residents frequently visited were unfamiliar to others. Some of the participants felt that it would be helpful to have a resource booklet or online resource that listed local stores, especially local farmer's markets, culturally-specific markets, and specialty markets (i.e., meat markets), and food shelves.

- **Despite frustrations with the availability of healthy foods in their neighborhoods, residents were generally satisfied with the food they purchased.** Results from the survey and focus groups identified a number of concerns regarding availability of healthy foods in the four targeted neighborhoods, including limited options for

purchasing culturally-specific foods and the cost of fresh fruits and vegetables. Despite this, three-quarters of residents were generally satisfied with the availability of fruits and vegetables in their neighborhood.

- **Many residents are unaware of, or have limited access to, garden plots to grow their own food.** Overall, relatively few residents across the four neighborhoods grow some of their own vegetables, but there was interest in learning to garden, especially among Hispanic/Latino residents who responded to the survey. A number of residents were also interested in purchasing food from farmer's markets and CSAs, but noted it would be important for those types of businesses to accept EBT cards.

- **Many residents identified lowering the price of fruits and vegetables as an important way to increase the availability of healthy foods.** Residents were also interested in a number of other strategies, including: increasing the number of farmer's markets in neighborhoods or expanding the hours of existing markets; providing residents with classes on healthy cooking; and expanding the number of healthy options on restaurant menus. One-third of the survey respondents also felt increasing the number of stores accepting food stamps or WIC vouchers or having access to new or improved supermarkets would help improve the accessibility of healthy foods.

There are other considerations the Neighborhood Food Project stakeholders may want to keep in mind when developing strategies to improve food access to St. Paul residents:

- **When developing strategies to provide residents with information about local resources, a multi-method communication approach will be necessary to reach all residents.** Although many residents in the community focus groups were interested in receiving additional information about healthy eating, food preparation, and other topics, including canning and gardening, the residents preferred different methods of communication. While some residents felt online information would be easiest for them to use, others felt they would be more likely to read written information. A number of residents were interested in classes where they would have the opportunity to learn new information while also getting to know others in their neighborhood. However, other strategies, such as using a DVD to teach healthy cooking skills were also identified as options that may be helpful to residents.

- **Compiling an inventory of stores and other food resources (i.e., food shelves or centers with free meals) may be a useful next step to pursue.** Across all focus groups, participating residents were familiar with different neighborhood resources, such as culturally-specific markets, specialty stores (i.e., butcher shops), and food

shelves. Some residents, especially those who wanted to support local businesses in their community, felt it would be helpful to have a list of these resources available.

- **When providing information or classes on food preparation or shopping for healthy food, it will be important to recognize cultural differences in food preferences.** In both Hmong and Somali focus groups, generational differences in food preferences were noted. While many adults and elders continue to primarily eat traditional foods, children and young adults were more likely to eat "American" food. If healthy cooking classes or materials are developed, it will be important to make sure the materials are relevant to residents from cultural communities who have different levels of familiarity, comfort, and interest in traditional ethnic foods.

- **Food shelves and other community resources to address hunger may need to be better marketed to Hmong and Somali residents.** The communities targeted by this project have a high concentration of low-income households. While many residents were familiar with and utilized food shelves and other community resources, residents from the Hmong and Somali communities who participated in the focus groups were not aware of, or did not feel it was appropriate to utilize, these resources. When considering the most effective approaches to provide outreach and resources to these cultural communities, there may be opportunities to coordinate with Halal markets and Hmong markets to enhance their efforts or provide additional culturally-specific supports to residents. Different culturally-specific strategies may be needed to inform residents about the food resources available to them in the community.

Appendix

Additional data tables

Open-ended responses

Focus group descriptions

Food access resident survey

Focus group questions

Additional data tables

A1. Demographic characteristics of respondents, by ethnicity

	Asian/Hmong/ Pacific Islander	Black/ African-American	Hispanic/ Latino	White/ Caucasian	Total
Neighborhood**					
Eastside (Payne-Phalen, Dayton's Bluff)	63 (27%)	30 (13%)	67 (28%)	76 (32%)	236 (100%)
University (Summit-University, Frogtown)	78 (43%)	54 (30%)	21 (12%)	27 (15%)	180 (100%)
Income**					
Above 185% FPL	28 (31%)	11 (12%)	5 (6%)	46 (51%)	90 (100%)
Below 185% FPL	112 (35%)	70 (22%)	79 (25%)	57 (18%)	318 (100%)
Gender**					
Male	41 (27%)	43 (28%)	33 (21%)	37 (24%)	154 (100%)
Female	100 (38%)	40 (15%)	55 (21%)	65 (100%)	260 (100%)
Children in household**					
At least one child in household	100 (40%)	49 (20%)	69 (28%)	33 (13%)	251 (100%)
No children in household	41 (25%)	35 (21%)	18 (11%)	69 (42%)	163 (100%)
Age**					
18-24	36 (43%)	23 (28%)	19 (22%)	5 (6%)	83 (100%)
25 -34	40 (34%)	20 (17%)	29 (24%)	30 (25%)	119 (100%)
35-54	42 (31%)	28 (21%)	35 (26%)	29 (22%)	134 (100%)
55 or older	23 (28%)	13 (16%)	5 (6%)	40 (29%)	81 (100%)

Note: *Z-tests with Bonferroni corrections were used to identify significant differences between ethnic groups ($p<0.008$). In each category, there were significant differences between ethnic groups for at least one variable.*

A2. From which of the following places do you get food? (N=419-474)

	Grocery store	Food co-op store	Fast food restaurant	Other restaurant	Warehouse store	Small neighbor-hood	Convenience store	Food shelf	Direct from farm (CSA)	Garden	Farmers market	Truck/side of road vendor
Neighborhood	**	*										
Summit-University/Thomas-Dale	92%	17%	35%	17%	27%	31%	25%	23%	4%	15%	36%	5%
Dayton's Bluff/Payne-Phalen	98%	10%	29%	18%	24%	33%	24%	17%	3%	14%	33%	4%
Income level		***				**	**	***		***		
Above 185% FPL	95%	33%	29%	21%	23%	21%	18%	5%	6%	25%	42%	7%
Below 185% FPL	95%	9%	33%	16%	27%	36%	27%	23%	9%	11%	34%	3%
Gender			*								***	
Male	96%	14%	39%*	21%	24%	33%	30%	23%	5%	14%	24%	4%
Female	95%	13%	27%*	15%	26%	32%	22%	17%	2%	15%	41%	4%
Age						*	*					
18-24	96%	13%	43%	22%	30%	38%	28%	15%	2%	11%	31%	2%
25-34	94%	19%	29%	15%	24%	32%	24%	15%	3%	11%	34%	3%
35-54	97%	9%	29%	15%	25%	38%	30%	23%	5%	15%	34%	5%
55 or older	92%	13%	28%	22%	23%	15%	13%	23%	1%	21%	43%	7%
Children in household		**		*	**	*					*	
At least one child in household	96%	10%	30%	14%*	30%	38%	26%	18%	4%	13%	38%	4%
No children in household	94%	19%	33%	22%*	19%	24%	23%	20%	2%	15%	29%	5%
Race/ethnicity		*	*	*		*	*	*		*	*	
Black/African-American	96%	11%	46%	19%	21%	32%	28%	31%	1%	4%	31%	0%
Hispanic/Latino	98%	5%	24%	16%	32%	53%	17%	11%	3%	3%	19%	5%
Asian/Hmong/Pacific Islander	91%	7%	14%	8%	22%	23%	16%	9%	5%	22%	41%	4%
White/Caucasian	97%	30%	46%	29%	24%	30%	34%	27%	4%	22%	44%	7%

****p<0.001 **p<0.01 *p<0.05*

A3. Percentage of respondents who purchased/received food within their neighborhood (N=196-216)

	Percentage of respondents
Neighborhood	
Summit-University/Thomas-Dale	56%
Dayton's Bluff/Payne-Phalen	61%
Income level	
Above 185% FPL	59%
Below 185% FPL	58%
Gender*	
Male	60%
Female	57%
Age	
18-24	58%
25-34	62%
35-54	53%
55 or older	65%
Children in household	
At least one child in household	58%
No children in household	60%
Race/ethnicity	
Black/African-American	56%
Hispanic/Latino	64%
Asian/Hmong/Pacific Islander	57%
White/Caucasian	62%

A4. Factors influencing shopping decisions (N=390-442)

	Convenient location	Good quality	Good selection of products	Good prices	Safe location
Neighborhood					
Summit-University/Thomas-Dale	88%	71%	63%	75%	38%
Dayton's Bluff/Payne-Phalen	84%	67%	66%	75%	36%
Income level					
Above 185% FPL	90%	74%	74%	81%	41%
Below 185% FPL	84%	68%	63%	73%	36%
Gender					
Male	88%	67%	62%	75%	38%
Female	85%	71%	67%	75%	37%
Age					
18-24	81%	74%	71%	76%	38%
25-34	88%	71%	64%	68%	35%
35-54	89%	70%	64%	79%	41%
55 or older	83%	59%	62%	78%	35%
Children in household					
At least one child in household	86%	70%	63%	73%	35%
No children in household	86%	68%	68%	78%	41%
Race/ethnicity					
Black/African-American	80%	75%	56%	79%	33%
Hispanic/Latino	76%	77%	69%	78%	33%
Asian/Hmong/Pacific Islander	91%	60%	59%	68%	39%
White/Caucasian	90%	70%	76%	80%	40%

A5. Issues that affect your ability to eat healthy food

	Price of healthy food	Quality of food in stores where I shop	Availability of healthy foods	Time to shop	Time to prepare food	Knowledge of how to cook healthy food	Food people I live with prefer	Availability of the food my culture eats	Availability of equipment to prepare and store food
Neighborhood									
Summit-University/Thomas-Dale	45%	22%	25%	17%	21%	16%	15%	21%	16%
Dayton's Bluff/Payne-Phalen	40%	18%	19%	17%	22%	18%	19%	15%	12%
Income level				*					
Above 185% FPL	39%	22%	23%	24%	26%	18%	19%	13%	13%
Below 185% FPL	44%	20%	22%	16%	20%	17%	16%	19%	13%
Gender									
Male	36%	21%	23%	16%	20%	20%	17%	15%	10%
Female	46%	20%	22%	19%	23%	15%	16%	18%	15%
Age	+								
18-24	28%	17%	22%	12%	21%	17%	22%	16%	14%
25-34	51%	23%	23%	20%	22%	16%	16%	20%	13%
35-54	45%	17%	22%	19%	22%	18%	16%	17%	14%
55 or older	39%	22%	25%	16%	22%	16%	12%	16%	13%
Children in household									
At least one child in household	45%	18%	22%	18%	21%	16%	17%	17%	14%
No children in household	38%	23%	24%	16%	22%	18%	16%	17%	12%
Race/ethnicity		+						+	
Black/African-American	41%	24%	29%	21%	27%	18%	19%	19%	12%
Hispanic/Latino	31%	9%	13%	20%	17%	15%	15%	13%	8%
Asian/Hmong/Pacific Islander	45%	23%	22%	17%	18%	16%	21%	28%	17%
White/Caucasian	44%	18%	25%	19%	30%	16%	14%	8%	13%

****p<0.001 **p<0.01 *p<0.05 +p<0.008*

A6. How do you get to the place where you usually buy your food?

	Drive own car	Drive with someone else	Bike	Walk	Taxi	Bus	Shuttle
Neighborhood		*	*		*		
Summit-University/Thomas-Dale	65%	34%	11%	28%	8%	25%	3%
Dayton's Bluff/Payne-Phalen	71%	24%	5%	25%	3%	18%	0%
Income level	***	***		*	*	***	
Above 185% FPL	96%	12%	11%	16%	1%	4%	0%
Below 185% FPL	60%	34%	7%	29%	7%	26%	2%
Gender	*					**	
Male	60%	30%	11%	30%	7%	28%	1%
Female	72%	29%	6%	25%	4%	17%	1%
Age	*						
18-24	64%	41%	13%	29%	5%	29%	1%
25-34	79%	26%	7%	25%	4%	17%	1%
35-54	61%	27%	7%	30%	8%	23%	1%
55 or older	66%	26%	6%	21%	2%	16%	3%
Children in household	*						
At least one child in household	72%	28%	8%	25%	6%	18%	1%
No children in household	62%	31%	8%	29%	5%	25%	2%
Race/ethnicity	+		+	+	+	+	
Black/African-American	52%	36%	11%	39%	14%	39%	2%
Hispanic/Latino	72%	24%	1%	19%	5%	16%	0%
Asian/Hmong/Pacific Islander	75%	26%	7%	18%	1%	8%	1%
White/Caucasian	71%	22%	7%	30%	5%	26%	1%

****p<0.001 **p<0.01 *p<0.05 +p<0.008*

A7. Within the past 3 months, how often have you experienced the following?

	Ran out of money before I was able to buy enough food	Sought events and places to get free food
Neighborhood		
Summit-University/Thomas-Dale	57%	41%
Dayton's Bluff/Payne-Phalen	49%	39%
Income level	***	***
Above 185% FPL	27%	21%
Below 185% FPL	60%	45%
Gender	**	*
Male	62%	45%
Female	47%	36%
Age		
18-24	46%	40%
25-34	46%	40%
35-54	47%	38%
55 or older	55%	38%
Children in household		
At least one child in household	48%	38%
No children in household	46%	39%
Race/ethnicity		
Black/African-American	32%	57%
Hispanic/Latino	55%	69%
Asian/Hmong/Pacific Islander	53%	66%
White/Caucasian	49%	53%

****p<0.001 **p<0.01 *p<0.05*

A8. Satisfaction with healthy foods in your neighborhood

	Fruits	Vegetables	Whole grains	Lean meats	Low-fat dairy	Beans, nuts
Neighborhood		**				
Summit-University/Thomas-Dale	72%	67%	69%	62%	60%	63%
Dayton's Bluff/Payne-Phalen	79%	78%	73%	68%	69%	71%
Income level						
Above 185% FPL	78%	73%	68%	62%	68%	60%
Below 185% FPL	74%	73%	72%	66%	64%	69%
Gender						
Male	75%	76%	67%	62%	60%	67%
Female	76%	72%	74%	67%	68%	67%
Age						
18-24	80%	73%	65%	71%	66%	69%
25-34	72%	72%	72%	60%	60%	66%
35-54	74%	73%	74%	65%	66%	66%
55 or older	78%	76%	72%	67%	70%	70%
Children in household						
At least one child in household	75%	74%	73%	66%	64%	70%
No children in household	75%	73%	69%	65%	66%	62%
Race/ethnicity			+		+	+
Black/African-American	81%	77%	70%	67%	67%	71%
Hispanic/Latino	84%	81%	83%	72%	76%	91%
Asian/Hmong/Pacific Islander	71%	70%	64%	61%	50%	49%
White/Caucasian	73%	72%	72%	63%	70%	70%

****p<0.001 **p<0.01 *p<0.05 +p<0.008*

A9. Interest in eating more healthy foods

	Very interested
Neighborhood	
Summit-University/Thomas-Dale	52%
Dayton's Bluff/Payne-Phalen	57%
Income level	
Above 185% FPL	58%
Below 185% FPL	56%
Gender*	
Male	47%
Female	59%
Age	
18-24	56%
25-34	57%
35-54	54%
55 or older	51%
Children in household	
At least one child in household	55%
No children in household	55%
Race/ethnicity	
Black/African-American	61%
Hispanic/Latino	55%
Asian/Hmong/Pacific Islander	43%
White/Caucasian	59%

****p<0.001 **p<0.01 *p<0.05 +p<0.008*

A10. Which of the following would help you eat more healthy food?

	More stores accepting WIC vouches/ food stamps	Free or low-cost shuttle to local stores/ market	New or improved supermarket nearby	Better variety and quality where you shop	More healthy choices at restaurants/ fast food places	More nearby farmers markets	Coupons and price discounts	More opportunities to grow my own food	Buying direct from a farmer (CSA)	Learning how to prepare healthy food
Neighborhood							*			
Summit-University/Thomas-Dale	34%	25%	36%	40%	38%	39%	57%	28%	23%	28%
Dayton's Bluff/Payne-Phalen	32%	22%	28%	37%	41%	46%	66%	30%	26%	34%
Income level		**				**				*
Above 185% FPL	10%	13%	33%	35%	46%	55%	56%	30%	28%	22%
Below 185% FPL	40%	27%	33%	40%	38%	40%	64%	30%	25%	34%
Gender						*				
Male	34%	26%	33%	38%	40%	34%	57%	27%	26%	34%
Female	32%	22%	32%	39%	38%	48%	65%	31%	24%	30%
Age		+	+	+						+
18-24	46%	34%	46%	50%	45%	45%	66%	33%	23%	46%
25-34	31%	19%	31%	44%	46%	46%	66%	32%	26%	32%
35-54	33%	25%	29%	31%	35%	41%	59%	29%	27%	30%
55 or older	20%	18%	26%	31%	31%	38%	55%	23%	22%	17%
Children in household* **										
At least one child in household	39%	23%	32%	41%	40%	45%	65%	30%	24%	34%
No children in household	23%	25%	33%	35%	38%	40%	58%	29%	26%	26%
Race/ethnicity		*	+		+	+	+	+	+	+
Black/African-American	42%	35%	32%	36%	46%	29%	64%	24%	19%	26%
Hispanic/Latino	38%	31%	42%	47%	47%	43%	77%	43%	39%	57%
Asian/Hmong/Pacific Islander	29%	17%	30%	39%	23%	47%	49%	23%	18%	19%
White/Caucasian	21%	14%	22%	32%	43%	43%	59%	27%	29%	25%

****p<0.001 **p<0.01 *p<0.05 +p<0.008*

A11. How interested are you in learning more about the following?

	Growing my own food	Canning/ preserving food	Cooking with healthy foods	Choosing healthy foods at the store	Buying healthy food from a farmer
Neighborhood				*	
Summit-University/Thomas-Dale	66%	54%	80%	72%	72%
Dayton's Bluff/Payne-Phalen	67%	62%	83%	82%	78%
Income level					
Above 185% FPL	66%	62%	82%	76%	76%
Below 185% FPL	67%	58%	80%	81%	75%
Gender					
Male	69%	63%	84%	75%	78%
Female	67%	57%	80%	72%	74%
Age					
18-24	69%	58%	85%	79%	72%
25-34	69%	61%	86%	80%	78%
35-54	66%	61%	76%	76%	73%
55 or older	61%	50%	76%	74%	76%
Children in household					
At least one child in household	68%	60%	80%	77%	74%
No children in household	66%	58%	83%	77%	77%
Race/ethnicity	+		+		
Black/African-American	61%	60%	89%	80%	76%
Hispanic/Latino	80%	55%	88%	86%	81%
Asian/Hmong/Pacific Islander	61%	62%	65%	73%	66%
White/Caucasian	67%	57%	85%	73%	78%

****p<0.001 **p<0.01 *p<0.05 +p<0.008*

Open-ended survey responses

A12. Open-ended comments from respondents regarding healthy foods or the project

Location/Availability of healthy foods
Availability seems to constantly be better!
Farmer's market for the East Side.
Fresh fruits and vegetable would be nice.
Have more healthy choices and new varieties of whole foods, etc.
I go to Minneapolis to get fresh produce that comes from Texas, Mexico, and California. It is a produce warehouse in South Minneapolis (Los Chinelos).
I love the farmer's market – it's fresh and cheap but I drive a ways to get there so I don't go as much as I like.
I need more vegetables and fruits because I have high cholesterol.
I wish there were more healthy foods at fast food restaurants.
I would at the school to provide more healthy food like fruit and juice not junk food.
I would like to get healthy food for cheap price but also good quality; more selection at convenient store locations.
I'd like to see a local farmer's market, something we could walk to on a Saturday; Cub's produce stinks, but it's what we can afford.
Let it be more accessible to other people.
More selection, more locations that provide healthy foods.
Most neighborhoods need healthier food banks.
I have access to a car, so groceries aren't too hard to get, but this neighborhood (Dayton's Bluff) has no real choices – a few small stores, not much else. Good luck with project!
My neighborhood has a lot of good organic products from Mexico.
Restaurants make hotter, healthy foods in the area that I like.
Want a food shelf nearby.
We need more farmers markets so we can get healthy-fresh vegetables and fruits.
It would be really nice to get food support once in a while especially for people who couldn't work enough to support themselves or their family.
Money/Pricing
Healthy food is good, but the healthier the pricier it is.
Help with income, lowering price, build a food shelf in St. Paul/Frogtown.
I think the price plays a big role in people eating healthy.
I would like more fruits and vegetables from other countries, better variety and cheaper. The fruits imported from other countries are too expensive. I can't buy it because I don't have the money.

A12. Open-ended comments from respondents regarding healthy foods or the project (continued)

Money/Pricing (continued)

It would be great to find access to affordable, locally grown vegetarian food.
Look into realistic welfare and food subsidy for low income families.
Lower cost fruits.
Shopping in the community room would be nicer if it were a little more economical.
Thanks for doing the survey. Help with the cost of fruits and vegetables.
The economy gives little to no room for healthy living or eating.
The thing that is hardest to buy is safe meat without the preservatives and colors and artificial stuff for a price I can afford.
The richer people must be exposed to and experience how limited poorer people are for funds, stamps hardly help.
I think that commercials and trends contribute a lot to the way people eat, I don't believe that income has much to do with poor eating (look at Asian culture), it is habit and probably a lot of laziness/ no time or care.

Education/Information

Educate people about healthy food/free help/classes.
How to buy food healthily.
I need more information. The stores should have posted signs with nutritious/healthy products.
I worked 12 hours a day, 5 days a week. I didn't have time to cook. I have an ulcer now. I didn't know the harm I was doing to myself by eating unhealthy food. I would have liked a class to know how to eat healthy/take care of myself before.
I would like some good tips to remember while cooking healthy foods.
I would like to have more time to learn about how to prepare healthy food.
Knowing about healthy foods when I was young. Teaching children the right ways.
Knowledge of good cultural foods to eat and bad cultural foods to eat.
More advertising helps.
More information about the benefits of healthy foods should be available to families.
My guy and I are very interested in organic foods and would love to learn more about them.
Teaching people how to grow own food and being more self-sustaining.
In charge of community garden/learning to garden.
Just to be able to provide better choices/examples for our children.
Mostly no time for growing, canning, cooking, etc. at this point. Industrial/Technological society with high demand on my time already!
Poor people suffering the consequences of a junk food diet is very evident in this neighborhood. People need to be educated and learn to enjoy healthy food and the health results from eating them. I fear people who represent this neighborhood's typical diet will not fill this survey out.

A12. Open-ended comments from respondents regarding healthy foods or the project (continued)

Health/Physical Activity
Eating healthy is very productive and food for the body.
Healthy eating is very important-one has to start as a child.
I think it would be a better idea to promote more physical activity in the neighborhood.
I want to gain a healthier lifestyle by eating healthier foods.
To me it is very important to know what we are eating because that is good for our health.
We have to eat healthier and not to drink soda.
Support/ideas for healthy exercise and eating for elders.
This survey is encouraging people to choose and eat health food.
Other
Considering the obesity problem in the United States, I think projects like this are very important. Thank you!
Thank you – everything on this survey is written well, no suggestions, glad you are doing surveys.
Hope someone notices this!
I appreciate the work you are doing; I think that I agree with Martin Luther King, "The best social service is a job." We need to address unemployment, addiction, inequities to improve our community, including food access. Food shelves are putting band-aids on serious wounds.
I like to have healthy foods all the time.
Let's pick fruit this fall!
Most of the foods in this country is grown with a lot of chemicals.
See what happens with this survey. Keep me posted.
Taste great!
Thank you. Please help the needs of the Hmong community. Do something useful.
The kids in this country eat too much junk food.
What is healthy?
Wonderful idea! In a time with much toil such a query invites hope. Thanks!
We should eat fruits and vegetables, that's what [person] says all the time.
Since I cook for myself and no others I suppose that I cook whatever is handy or sometimes quick…but I do try to eat as healthy as possible.
"Ojala"(maybe) and they do something for the community.
Choices.
Help some of us get our own places or housing to have and to keep food for our children.
I live to eat, rather than live to eat, so having healthy foods is beneficial.
Multicultural.
Too much meat is not good for you.

Focus group descriptions

Neighborhood-specific focus groups

Dayton's Bluff: A focus group was conducted July 6, 2010 at Ames Lakes Community Center with 13 female residents of the Dayton's Bluff neighborhood. Opportunity Neighborhood recruited the participants, all of whom were estimated to be approximately 25-35 years old.

Dayton's Bluff: A focus group was held at First Covenant Church in the Dayton's Bluff neighborhood on July 12, 2010. A total of 12 residents (3 men and 9 women) participated in the focus group. These residents included African-American and White residents, some with children and others who were single. The residents ranged in age from early 20s to middle-aged.

Dayton's Bluff: A focus group consisting of 14 residents was recruited and hosted by Metropolitan State University May 26, 2010. Fliers were distributed at the Dayton's Bluff public library and through direct community outreach by individuals involved with the project (a staff member who is an active member of the Dayton's Bluff community and a faculty member who had students working on the project).

Payne-Phalen: Five residents participated in a focus group at the Cultural Wellness Center on July 8, 2010. These residents were recruited through the organization.

Payne-Phalen: A focus group coordinated by the East Side Neighborhood Development Company was held on July 8, 2010. Participants included a diverse group of local residents, including men and women, individuals who self identified as African-American, Hmong, Hispanic, White, and Jamaican, adults who had children, and single older adults.

Thomas-Dale: Two separate focus groups were held for residents of Valley Apartments (a St. Paul Public Housing apartment building) on July 19th and July 8th, 2010. Signs were posted in the building to recruit individuals interested in participating.

Language-specific focus groups

Spanish-speaking focus group: Bilingual Wilder Research staff actively recruited focus group participants when conducting interviews near Bymore Supermercado in the Payne-Phalen neighborhood. (These residents did not complete the survey.) The focus group was held at the Wilder Center on June 19, 2010. Nine residents participated in the focus group (six women and three men).

Hmong focus groups: Wilder Research partnered with two community organizations, Lao Family Community of Minnesota (Summit-University) and Hmong American Partnership (Payne-Phalen), to recruit participants for the two focus groups. The focus group held June 29 at Lao Family had 19 participants (4 men and 15 women) who were estimated to be between the ages of 20 and 60. The focus group held June 26 at the Wilder Center (HAP) had 17 participants (9 women and 8 men), with most approximately 40-60 years of age.

Somali focus groups: Wilder Research partnered with New Faces to recruit participants for a focus group on June 28th at their site. The participants were all men, with many who were single and approximately 50-60 years of age. A separate focus group was also conducted for Somali women. Recruitment was done by a community member (a Somali woman) and the focus group was hosted in an individual home on August 9th. Eleven women participated in the discussion. The facilitator estimated the age of nine of the participants to be over the age of 30. Many of the women had children. Both focus groups included residents in the Summit-University neighborhood.

Food access resident survey

Healthy Food in Your Neighborhood Survey

What are healthy foods? This survey defines healthy foods as fruits, vegetables, whole grains, lean meats, low-fat dairy, beans and nuts.

This survey is being used to get your opinions about the options for healthy eating in your neighborhood. We will use the results to help find ways to bring more of these foods into your neighborhood. Please do not put your name on this survey—your answers are completely private. To learn more or participate in a focus group, please leave your contact info with us.

1. What neighborhood do you live in?

- ☐ Dayton's Bluff
- ☐ Payne-Phalen
- ☐ Thomas-Dale
- ☐ Summit-University
- ☐ Frogtown
- ☐ None of the above (please don't take survey)

2. How much shopping do you do for your household?

- ☐ All
- ☐ Most
- ☐ Some
- ☐ None (please don't take survey)

3. Are you 18 years of age or older as of today's date?

- ☐ Yes
- ☐ No (please don't take survey)

First, tell us a little about the food in your neighborhood

4. From which of the following places do you get food? *Choose all that apply.*

- ☐ Grocery store
- ☐ Food co-op store
- ☐ Fast food restaurant
- ☐ Other restaurant
- ☐ Warehouse store (Costco, Sam's Club)
- ☐ Small neighborhood store
- ☐ Convenience store (Holiday, SpeedyMart)
- ☐ Food shelf
- ☐ Direct from farm (CSA)
- ☐ Garden
- ☐ Farmers market
- ☐ Truck (side of the road vendor)
- ☐ Other: _____

5. What are the three places where you bought the most food in the last month (for example: Cub, Rainbow, Stasny Food Market, Los Puentes Produce, Ha Tien Grocery, Halal meat Express)? *Check the boxes that apply for each.*

Food source 1: _____	Food source 2: _____	Food source 3: _____
Location/ Intersection: _____	Location/ Intersection: _____	Location/ Intersection: _____
☐ Convenient location	☐ Convenient location	☐ Convenient location
☐ Good quality	☐ Good quality	☐ Good quality
☐ Good selection of products	☐ Good selection of products	☐ Good selection of products
☐ Good prices	☐ Good prices	☐ Good prices
☐ Safe location	☐ Safe location	☐ Safe location

Survey by Minnesota Project, Community Design Center of MN, Minnesota Food Association, Afro Eco, St. Paul-Ramsey County Public Health Page 1 of 5

Healthy Food in Your Neighborhood Survey

6. Within the past 3 months, how often have you experienced the following? *Indicate for each experience below.*

	Never	Once	2-3 times	4-5 times	6 or more times
Sought events and places to get free food					
Ran out of money before I was able to buy enough food					

Next, let's talk about healthy foods in your neighborhood

Healthy foods are fruits, vegetables, whole grains, lean meats, low-fat dairy, beans and nuts.

7. How satisfied are you with the availability of healthy foods in your neighborhood? *Indicate for each type below.*

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Fruits (cannned, frozen or fresh)					
Vegetables (canned, frozen or fresh)					
Whole Grains (bread, rice or other grains)					
Lean Meats					
Low-Fat Dairy					
Beans/Nuts					

8. What are the four vegetables that you buy the most? *Write on lines below.*

1 _____

2 _____

3 _____

4 _____

9. How interested are you in eating more healthy foods? *Check one.*

- ☐ Not interested
- ☐ Somewhat interested
- ☐ Very interested

Healthy Food in Your Neighborhood Survey

10. To what degree do the following issues affect your ability to eat healthy food? *Indicate for each issue.*

	Not At All	Somewhat	Very Much
Price of healthy food			
Quality of food in stores where I shop			
Availability of healthy foods			
Time to shop			
Time to prepare food			
Knowledge of how to cook healthy food			
Food people I live with prefer			
Availability of the food my culture eats			
Availability of equipment to prepare and store food			
Other: _____			

11. What makes it difficult to get healthy food? *Tell us in the box below.*

Next, please tell us about what would help you eat more healthy food

Healthy foods are fruits, vegetables, whole grains, lean meats, low-fat dairy, beans and nuts.

12. On average, how often do you eat the following types of food? *Indicate for each type.*

	Never	1 time per week	A few times per week	1 time per day	A few times per day	5 or more times per day
Fruits (canned, frozen or fresh)						
Vegetables (canned, frozen or fresh)						
Whole Grains (bread, rice or other grains)						
Lean Meats						
Low-Fat Dairy						
Beans/Nuts						

Healthy Food in Your Neighborhood Survey

13. Which of the following would help you eat more healthy food? *Choose all that apply.*

- ☐ More stores accepting food stamps/WIC vouchers
- ☐ Free or low-cost shuttle to local stores/markets
- ☐ New or improved supermarket nearby
- ☐ Better variety and quality where you shop
- ☐ More healthy choices at restaurants/fast food places
- ☐ More nearby farmers markets
- ☐ Coupons and price discounts
- ☐ More opportunities to grow my own food
- ☐ Buying direct from a farmer (CSA)
- ☐ Learning how to prepare healthy food
- ☐ Other: _____
- ☐ Other: _____

14. What ONE thing would help you to eat more healthy food? *Tell us in the box below.*

15. How interested are you in learning more about the following? *Indicate interest in each item.*

	Very interested	Interested	Not at all interested	Not sure
Growing my own food				
Canning/preserving food				
Cooking with healthy foods				
How to choose healthy foods at the store				
Buying healthy food from a farmer				

16. How do you get to the place where you usually buy your food? *Choose all that apply.*

- ☐ Drive own car
- ☐ Drive with someone else
- ☐ Bike
- ☐ Walk
- ☐ Taxi
- ☐ Bus
- ☐ Shuttle
- ☐ Other: _____

17. Would you rather have a different transportation option to get to where you buy your food? *Check one.*

- ☐ No, transportation is not an issue
- ☐ Yes, I would rather get there by: _____

Healthy Food in Your Neighborhood Survey

Last, please tell us a few things about yourself

This information will be kept confidential and your answers will never be attached to your name. By answering these questions, you will help us understand how healthy food affects people in your neighborhood.

18. What is your total annual household income, before taxes? *Check one.*

- ☐ Less than $10,000
- ☐ $10,000 - $20,000
- ☐ $20,001 - $30,000
- ☐ $30,001 - $40,000
- ☐ $40,001 - $50,000
- ☐ $50,001 - $60,000
- ☐ $60,001 - $70,000
- ☐ $70,001 or more

19. How many total people live in your household currently, including yourself? _____

20. How many of these members are under the age of 18? _____

21. What is your age? *Check one.*

- ☐ 18-24
- ☐ 25-34
- ☐ 35-44
- ☐ 45-54
- ☐ 55-64
- ☐ 65 or older

22. What is your gender? *Check one.*

- ☐ Male
- ☐ Female

23. What is your ethnicity? *Check one.*

- ☐ American Indian, Eskimo, or Aleut
- ☐ Black or African American
- ☐ African (Somalian, Ethiopian, etc.)
- ☐ Hispanic or Latino
- ☐ Asian, Hmong, or Pacific Islander
- ☐ White or Caucasian
- ☐ Bi-racial or Multi-racial
- ☐ Other: _____

24. Do you have other comments regarding healthy foods or this project you would like to make? *Write below.*

Thank you for taking this survey! Your answers will help us bring more healthy foods to your neighborhood.

Focus group questions

1. What does “healthy” mean to you?
2. What does “eating healthy food” mean to you?
3. Where do you get your food?
4. Why do you choose these places? What is important to you when selecting and buying your food?
5. Are you satisfied with the food you have available for your family? Why or why not?
    a. Does this vary by type of food? *[Ask about meats, breads, cereals, fresh fruits and vegetables, frozen and canned foods, milk and dairy, treats , etc. Or ask: Are you more satisfied with different types of food than others?]*
    b. What are some healthy foods that you try to serve your children and family?
6. Are there times when you run out of money before you are able to buy enough for you or your family? If so, what do you do about it?
7. Do you expect to have any time in the next year when you will not be sure how you or your family are going to eat? *[Optional, may be omitted if time is limited.]*
8. Do you feel you know how to prepare healthy food? Is this something you would like more information about?
    a. What would you like to learn?
    b. How would you like to learn?
9. Do you grow any of your own food? Would you like to know more about growing your own food?
10. Do you regularly use farmer’s markets? Why or why not?
11. Do you get any food directly from farmers or from a CSA? *[CSA refers to Community Supported Agriculture: This is where you buy a box of fruits/vegetables each week from a local farm.]* Would you be interested in more information on this?
12. Are there other things about trying to access and eat healthy foods that you would like to mention?

Thank You!
[Remember to have participants sign the sheet to receive their incentives. Please move the chairs and tables back to how the room was arranged prior to the focus group. Participants can take any extra food or it can be left with the building manager, if they have use for it.]