Growing Local, Knowing Local

Agriculture and Food Security in the Main South Community of Worcester, Massachusetts

Developing an Integrated Environmental Poverty and Health Assessment Using Community Based Participatory Research:

Recommendations for the Massachusetts Department of Public Health

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1. Executive Summary

The presence of affordable, organic, and locally grown and produced food in low-income neighborhoods is an uncommon yet critical element in sustaining social and economic livelihood. However, the lack of healthy food options makes it difficult for families who remain in impoverished urban communities to maintain a well-balanced and nutritious diet that contributes to physical and mental health. Very often, these families are forced to resort to unhealthy foods purchased from nearby fast food restaurants, and local corner or corporate grocery stores with high price mark-ups. In addition to higher prices, these stores generally offer few healthy options, and sell mainly canned and processed foods and very little, if any, locally grown or fresh produce.

While decisions about personal health and eating habits ultimately fall on the individual, the environment in which they live, coupled with the availability and cost of healthy products, drastically affects the choices people are able to make. According to research published by the National Health Institute, African Americans living in neighborhoods with at least one supermarket are more likely to meet dietary guidelines for fruit and vegetable consumption and fat intake than African Americans living in neighborhoods without supermarkets (Flournoy, 2006). Moreover, the absence of healthy foods in a person's diet has adverse effects on health and increases the risk of diabetes, heart disease, cancer and other illnesses that disproportionately affect minorities and low-income Americans. Furthermore, obesity, a condition onset by unhealthy eating, is increasing at an alarming rate nationwide. Despite the growing body of scientific evidence and literature that shows direct linkages between health and a diet rich in fruits and vegetables, most Americans do not consume the recommended amount. Among those who are most likely not to meet the USDA guidelines are non-Hispanic Blacks and individuals with lower incomes (Robinson, 2008).

Given that the Average Adjusted Gross Income (AGI) in the Main South neighborhood was $25,373 in 2004 (City Data Index), a strong need for affordable goods and services is desperately needed. Currently, the biggest food retailers include Compare Foods, a large chain grocery store, three Honey Farms convenience stores, a 7-11 convenience store, and two small Vietnamese grocery stores. With these options, the Artichoke is the only one among them that carries locally-grown produce that is not marked-up for profit and offers discounts to volunteers.

Partner Organizations include the Community Health Clinic, Family Health Center, and the Regional Environmental Council (REC), who is currently working on an urban community garden initiative. This report also incorporates information about the Artichoke Food Co-Op, which supports 31 communal gardens through the Youth Grow Project. Given the need for healthy and sustainable food production systems in this neighborhood, this report also contains a map showing the accessibility to grocery stores and farmers market access.

2. Introduction

The purpose of this report is for the Department of Public Health to inform public policy and discover solutions to environment, poverty, and health issues with a focus on food security and organic sustainable agriculture.

2.1 Definitions:

- *Food security* refers to growing local produce - including the presence of culturally appropriate and affordable food.

- *Agriculture* refers to food that is free of pesticides and is produced through proper sustainable conditions that promote healthy economy and environment

2.2 Contract Organization

The Department of Public Health believes in prevention-based approaches. They work to help all people reach their full potential for health. They also ensure that the people of the Commonwealth receive quality health care and live in a safe and healthy environment. The DPH builds partnerships to maximize access to affordable, high quality health care and are especially dedicated to the health concerns of those most in need. They empower communities to help themselves and protect, preserve, and improve the health of all the Commonwealth's residents.

Strategic Areas of Focus:

1. Track and investigate health problems and hazards in the community (Family Health Center)
2. Prepare for and respond to public health emergencies (All)
3. Develop, apply and enforce policies, laws and regulations that improve health and ensure safety
4. Lead efforts to mobilize communities around important health issues
5. Link people to health services
6. Achieve excellence in public health practice through a trained workforce, evaluation and evidence-based programs

3. Research Questions

Below are some research questions that frame the context of our target area, the Main South neighborhood in Worcester. See *Appendix B* for a conceptual framework that illustrates the relationship among the various actors.

3.1 *What are the environmental, historical, political and socio-economic contexts of your case study site, keeping in mind how they contextualize health specifically?*

It is difficult to separate the contexts as they are all related and exert influence upon each other. Perhaps a good beginning is to explore some of the data offered by the 2000 US Census as these tangible numbers point to the various contexts. The census tracts chosen within the Main South neighborhood of Worcester are Tract 7313 – Beacon Brightly and Tract 7314 – Main Middle. Data provided by the Worcester Community Indicators website presents the findings of the past two decennial censuses (1990 and 2000) and submits a comparison of a sampling of data of the census tracts and that of the City of Worcester.

3.2 *What changes in population have occurred?*

At first glance it is easy to determine some of the socio-economic data that tells a part of the story of Main South. Both tracts lost population with the greatest decrease in the white population and a smaller decrease in the black population. The Asian and Hispanic populations have increased in both tracts, which is indicative of the history of Main South as an entry portal for immigrants into the city of Worcester. Compared with the city, both tracts have a larger percentage of foreign-born individuals with increased immigration percentages between 1990 and 2000. The percent of linguistically isolated households is also significantly higher in these tracts than in the city.

3.3 *What is the poverty rate of the neighborhood?*

The poverty rate or percent of people who are poor is more than double the percent for the city with the city being 17.9% and Beacon Brightly being at 40% and Main Middle at 38%. Median family income in the two tracts is only 56% of the median family income for the city. Education measures for the two tracts reveals that the population 25 years old and over has less attainment of a high school diploma and fewer individuals participating in higher education than throughout the city. The education data is particularly alarming for the Beacon Brightly tract as it is moving in the opposite direction of the city and of the Main Middle tract. In Beacon Brightly, the percent of high school graduates is falling, the percent of individuals with bachelor's degrees is falling and the percent of the population over 25 without a 9th grade education is rising – all of this is movement in the opposite direction of the city and the Main Middle tract.

3.4 *What is the unemployment rate in the neighborhood?*

The employment to population ratio in the two tracts is significantly less than that for the city but the unemployment rate is similar to the 6.3 % in 2000 for the city. Occupation data indicates that the tracts have fewer managerial and professional workers and more production and transport workers. This could indicate fewer dollars coming into the tracts through resident employment.

3.5 *What is the relationship between housing and the environment?*

The housing data from the census provides not only data related to poverty but also begins to submit a look at the environment of the two tracts. The percentage of single family homes is less than 25% of that of the city – in 2000 the city had 36.7% of housing units as single family dwellings while Beacon Brightly is at 7% and main Middle is at 8%. Renter occupied housing is at a greater percentage in the two tracts than in the city and owner occupied housing in the tracts is less than that of the city.

The environment begins to come into focus when looking at the housing data. Determining the population density (#/sq. mile) finds the city at 4600 while Beacon Brightly is at 12,640 and Main Middle is at 16,129. Comparing the percentage of housing that is vacant finds the city is at 5.2% vacant while Beacon Brightly has 10 % and Main Middle has 12 %. This higher vacancy rate could diminish area safety and create more areas of blight and dumping. The tracts also possess a greater percentage of housing built before 1960 – indicating older housing stock in the two tracts. There has also been less housing started in the two tracts since 1980 as compared with the city. The housing built before 1960 is important, as this would mean more housing stock with lead paint.

Housing also gives a clue to the historical context of the area. The many three deckers in the area are a product of the housing that was constructed for the employees in the, now mostly vacant, industrial and production facilities that first occupied the Main South area. This decline began in the 1950's and is similar to other New England towns with deteriorating industrial bases and movement of residents to the suburbs. This disinvestment has led to the creation of brownfields in the Main South area– some of which have undergone cleanup and been developed, some of which are in the process of cleanup and development and some still to be addressed.

3.6 *What are the crime rates for the neighborhood?*

A look at crime statistics from the Worcester Police Department website for the year 2008 provides a deeper insight into the Main South environment. The police department has divided the city into 58 Police Statistical Areas (PSA). The Beacon Brightly and Main Middle census tracts nicely correlate to the PSA's Central Zone #5 and Central Zone #4. These two PSA's accounted for 9.9% of the total police incidents in 2008 – of 108,121 incidents in the city 10,775 took place in these two PSA's. Breaking this down a little further it is discovered that these two PSA's accounted for 15.4% of the incidents classified as "Violations of Public Order" (disorderly conduct; fights; trespassing; gun shots; noise related complaints; drugs, prostitution and other vice; and non-domestic disputes) or incidents related to perceptions of public safety – 3,086 incidents in the two PSA's of 19,967 total in the city. Drilling deeper finds that these two PSA's recorded 31.1% of the incidents of "drugs, prostitution and other vice" that occurred in the city (337 incidents in these two PSA's of the 1,083 total incidents in the city).

3.7 *Using CBPR and local knowledge, what can we learn about perception of the neighborhood?*

Perhaps the best assessment of the political context of Main South (with insights into the other aspects of context) comes from small business owners operating in the Main South area. A Clark University 2008 student study group (Aker, et.al, 2008) initiated interviews with business owners in a small section of Main South to determine their perceptions of their business neighborhood and to find out what they believe needs to be done in the area. A sampling of their responses provides a picture framed within "local knowledge."

When asked about their perceptions of the neighborhood the responses included:

- "At night this neighborhood is eerie and dangerous"
- "We take precautions. We accompany each other to our cars"
- "We don't let female employees walk alone after dark"
- "There are pockets of trouble"
- "It's unsafe here due to prostitution and drugs"
- "It's safe to me but my customers feel unsafe"
- "The people who live here are not the ones committing crimes"
- "Customers don't want to come to the area"

When asked what could be done to improve the neighborhood the responses included:

- "Move the PIP"
- "It's shelter traffic that produces the loiterers and addicts and prostitutes"
- "The city doesn't help, they don't want us to be successful down here"
- "The city doesn't care"
- "The city needs to help with cleaning up the empty lots and keeping the sidewalks clean"
- "The police should be more visible. They need to let the bad people see them"
- "The police are not trusted"
- "The police do not do a good job breaking down socio/cultural/economic barriers with the residents"

- "The city doesn't help. They place additional burdens on businesses"
- "The city only cares about certain things and this area is not one of them"

4. Methods

The following methods are meant to guide the organizations in gaining information and insight into the complexities of the food security and nutrition-related health problems facing the neighborhood's residents. Although many are based on quantitative data, it is essential to ground them within a CBPR and local-knowledge framework. See *Appendix A* for a detailed chart that outlines this information.

There are several key indicators that can be used to gather community data on food security and agriculture in Main South *See Appendix D.* There are two things that we should mention in conducting household and community gardens assessment: including sustainability and security of products of those gardens referring to aspects of environment and health, according to Local Food Guide (http://www.farmfresh.org/) and CISA – Community Involved in Sustaining Agriculture. In other words, building household and community gardens is to improve the people's quality of life create a healthy environment, and help the low income people by means of community food programs**.** The helpful tools to perform the evaluation of household and community gardens are interviews and survey by filling up questionnaire forms.

4.1 *Location:* Study participant's proximity to grocery stores, corner stores, markets, etc. A recent study in the American Journal of Health Education demonstrates a link between poverty, fruit and vegetable intake, and childhood obesity. The study surveyed households in multiple metropolitan areas, ranging from low to high poverty rates and found that 78% of the children studied ate less than the daily minimum fruit and vegetable recommended servings, and out of these children 37% were or at risk of being overweight. The study also revealed that those children who were in high poverty areas ate fewer servings of fruit and vegetables a day than those children in higher income areas as a result of having less accessibility to grocery stores and markets (Mushi-Brunt, Haire-Joshu, Elliott, & Brownson, 2007). Given these findings, it is pertinent that location to food-related establishments, alongside data on transportation and health data is analyzed in order to determine a possible correlation between distance and health risks. If a correlation exists, the target population will therefore be more vulnerable to food insecurity and nutrition-related health burdens. The specific goal of this study is to provide support for more local and neighborhood-based markets and grocery stores in the Main South neighborhood. Illustrating these correlations using geographic and location-based data is possible through the use of GIS, which can be a highly useful tool for this given study. Additionally, information can be gathered using CBPR-based community surveys or community mapping techniques to gather local knowledge on the subject.

4.2 *Time exposed to food marketing:* Measurement of the amount of time a person is exposed to a food-related commercial via television. Data will be broken down by what types of foods are advertised (ex. healthy food vs. fast food). In a study on chronic diseases in developing countries, Nugent (2008) discusses how urbanization has led to an increase in exposure to food marketing of fast and processed foods, and is a contributing factor to the rise in nutrition related chronic diseases (NRCD). This trend is especially evident in the United States, where on average, children spend 1,680 minutes per week watching television (Herr, 2009). Exposure to Food Marketing will be analyzed alongside data on food choices and health data to determine if

there is a correlation between exposure to food marketing and health risks related to poor nutritional choices. If a correlation exists, the target population will be considered more vulnerable to food insecurity and nutrition-related health risks.

The purpose of this study is three-fold. Firstly, it would enable the Department of Public Health to further explore the linkage between marketing and individual decision-making. Although health-related choices are largely set on the individual, this study could elucidate the role of larger structural factors such as poverty, racism, and education on health. Additionally, the goal of this study is to provide support to limit advertisement to at-risk populations that are determined through CBPR methods. With this information, the possibility of increasing support for marketing of healthy food options in Main South becomes more viable.

4.3 *Types of food available in the neighborhood:* Inventory of the types of foods available in the marketplaces within the target geographic area. A study by the Food Trust (2001), found that more than 71,000 Philadelphians have difficulty finding fresh fruits and vegetables in their neighborhoods. More and more people are relying on fast food with Americans spending 47% of the food costs towards prepared food, most of which are fast food and take-out (Clauson, 1999). Additional research has shown a correlation among mortality from cardiac illnesses and the density of fast food establishments in a neighborhood (Alter & Eny, 2005). If establishments within the geographic area carry a majority of food that is unhealthy, target population will be more vulnerable. Given these factors, the targets of this project should be focused on increasing support for healthier available options in the Main South Neighborhood.
Possible data collection methods include conducting a Hungry-Free and Healthy Corner Store Survey, in conjunction with surveys at other businesses to gauge the diversity of accessible foods in the neighborhood.

4.4 *Cost of Food:* Create an inventory of the cost of healthier options vs. unhealthy options in the Main South neighborhood. If healthier options are on average at a higher price, the target population will be more vulnerable to choosing less costly, and consequently, less healthy food options. Additionally, given the current economic climate, low-income and moderately low-income households may choose to cut down on food costs by buying more processed and cheaper alternatives, despite their awareness of the importance of fruits and vegetables on health. Increasing support for more affordable healthy food options is therefore more imperative than ever – and should be prioritized given the economic recession. Conducting a survey of food related businesses in order to gather data on the costs of both healthy and unhealthy food in Main South is highly recommended.

4.5. *Number of People on Food Assistance Programs*: Determine the number of people who gain access to their food through governmental programs. Many people who are low-income also qualify for food assistance programs and are obese or at-risk for obesity. They may also be some association between food stamps and obesity (Linz, Lee, & Bell, 2005). Another study for the US Department of Agriculture (USDA) found that a significant amount of food stamp participants did not meet their daily recommended dietary allowances for iron and folate (Cohen, et al, 1999).

To determine if the population on governmental food assistance is more or less vulnerable, data describing the types of food that are available through these programs and in the neighborhood can be used, in conjunction with data describing the given population. If those

who are on food assistance are found to be less vulnerable, there should be more support for expansion of programs. If those who are on food assistance are found to be more vulnerable, restructuring of the programs in unequivocally necessary. Data for this section can be extracted from a variety of sources. The Worcester Public Schools - Free and Reduced Lunch program as well as the Worcester Community Action Council would have pertinent data. Additionally, independent surveys of people who use local food pantries would enable the surveyor to better understand the size, demographics, and knowledge of the given population. Lastly, FHCW data consists of statistics describing the number of people on WIC, and Massachusetts Transitional Aid to Families with Dependant Children has data on the number of families receiving food stamps.

4.6 *Foods available in food assistance programs*: Determine the foods that are accessible by people on food assistance programs. Because people with low-incomes tend to have less access to healthier food options, this study will determine if food assistance programs offer healthy options. The aim of this is to determine if programs are not offering healthy foods, and whether they need support for restructuring their existing programs. The same data sources as the ones recommended in 4.5 can be applied to this project.

4.7 *Age:* Target population and survey/focus group participant's age in years. This study is used to determine if vulnerability changes by age. Because children require more nutrients in order to promote proper physical and mental development, this would allow us to determine if children and the elderly are more or less vulnerable to nutrition-related illnesses and food insecurity. If certain age groups are more vulnerable, policy should reflect this trend and focus on these identified groups. Possible data sources include the US Census Data, which has statistics for the population's age. Additionally, age will be asked of all those who participate in community survey. Data collection methods include the US Census Data (annual gross income for entire target area), and annual gross income will be asked of all those who participate in community survey.

4.8 *Income:* Gross annual income of target population and survey/focus group participants. Respondents on a food security survey for the USDA found that the most significant reason for experiencing food insecurity was a lack of financial resources (Cohen, et al, 1999). With that in mind, it is crucial that this study examine people's economic circumstances, in conjunction with other health and food data to determine if income limits the accessibility to obtain healthier food options. These healthy food options will only become more accessible and affordable with increased support for food assistance programs and affordable food options. Data collection methods include the ones mentioned in 4.8 with respect to income.

4.9 *Race/Ethnicity:* Target population and survey/focus group participant's race and/or ethnicity. In a collaborative study headed by the Food Trust, African-Americans living in Philadelphia were more likely to report having poor quality grocery stores in their neighborhoods (The Food Trust, 2001). Used in conjunction with other health and food data, this study can be used to determine if specific racial or ethnic groups are more vulnerable to inadequate healthy food options in their neighborhood. The results from this could direct policy decisions that create culturally sensitive and appropriate programs and material that are focused on groups that are most vulnerable. Additionally, local knowledge from CBPR can support these culturally

sensitive programs. Data collection methods include the ones mentioned in 4.8 with respect to income.

4.10 *Gender of target population and survey/focus group participants*. The vulnerability within the population may change based on gender. For example, a review of 144 published studies demonstrated a strong inverse association between socio-economic status and obesity in women (Linz, Lee, & Bell, 2005). Used in conjunction with other health and food data, this study can determine if vulnerability changes with respect to gender. The aim of this is to create policy that addresses possible gender differences in vulnerability to nutrition-based health risks. Data collection methods include the ones mentioned in 4.8 with respect to gender.

4.11 *Rate of diabetes*: to determine the number of those within the target population and survey/focus group participants who have diabetes. Because managing diabetes requires specific dietary needs, a population with a higher percentage of those with diabetes will be more vulnerable. Expansion of support programs and health care that addresses the specific needs of those managing diabetes should therefore be a direct goal. Data will be gathered from three sources: the FHCW has data on the number of people within target area who have diabetes; public health data is available from the DPH on numbers of those who have diabetes; and information on diabetes will be asked on the community survey.

4.12 *BMI*: Body Mass Index. BMI is an indicator of those who are obese, underweight, or at risk of being overweight or underweight. Accordingly, those who fall at the lowest and highest percentiles will be the most vulnerable to food insecurity. Targets include garnering further support for services and food systems that support those who are either under or overweight. The data collection method for this should include DPH data on BMI's from the target population.

4.13 *Number of people with nutrition related chronic diseases:* The number of people who are experiencing obesity, overweight, malnutrition, and other nutrition related chronic diseases. A high percentage of the population with nutrition related chronic diseases will increase the overall vulnerability of the population. Further support for services and food systems which supports those who are suffering from nutrition related chronic diseases are therefore critical in the fight to prevent both food insecurity and nutrition-related health problems. Data for this can be obtained from the DPH's data on BMI's from the target population.

4.14 *Number of single parent households*: the number of households with only one parent. A higher percentage of the population with single parent households will be more vulnerable to having less time to cook healthy meals. Given this reality, it is key that there is an increase in healthier foods options that are also convenient for working families. Data can be obtained from the US Census Data, and also from single parents who participate in the community survey.

4.15 *Number of households where both parents work.* A higher percentage of households where both parents work will be more vulnerable to having less time to cook healthy meals. An increase in healthier foods options that are also convenient for working families is also vital to sustaining a healthy community. US Census Data and community survey responses can be used to guide this inquiry.

4.16 *Number of households with multiple jobs:* number of households where family members hold down multiple jobs. A higher percentage of households where both or single parent works multiple jobs will be more vulnerable to having less time to cook healthy meals and suffer from nutrition-related health problems. An increase in healthier foods options that are also convenient for working families is in this case necessary to ensure the health and vitality of this population.

4.17 *Number of nutritional programs*: number of nutritional programs available to target population. Having more programs available within a given neighborhood increases resiliency and contributes to overall health and wellbeing in the population. Expanding the availability of nutritional education programs will therefore contribute to a more sustainable health strategy. Data on what specific areas they should be located can be collected from partner agencies.

4.18 *Awareness of programs*: percentage of the target population that is aware of food assistance programs, places to buy healthier food options, and nutritional education programs. Being able to recognize or be mindful of healthy food alternatives increases resiliency. Although this is heavily dependent on education, access, and affordability, an increase in marketing of programs throughout the neighborhood will be incredibly beneficial in helping people change their eating habits. Information on awareness of specific programs will be asked on community survey in order to gauge their effectiveness.

4.19 *Access to nutritional counseling and programs*: number of people who receive nutritional counseling or participate in nutrition-related programs. Because more people who have access to nutritional programs increases resiliency, increased enrollment in nutritional counseling programs should be a fundamental goal of the program. Data can be collected from partnering agencies in order to determine the most effective way to increase enrollment in these programs.

4.20 *Access to a primary care provider*: number of people in the neighborhood who have access to a primary care provider. As with enrollment in nutrition related programs, people who have a primary care provider are also less likely to suffer from food insecurity and nutrition-related diseases. Increasing enrollment in health centers and hospitals is a crucial first step in preventing and mitigating the effects of these burdens.

4.21 *Time spent preparing meals*: time families have to prepare healthy cooked meals.
A higher percentage of households which have less time dedicated to cooking meals will be more vulnerable to eating fast food and unhealthy options. Accordingly, an increase in healthier foods options that are also convenient for working families is pertinent to ensuring the health of Main South families. The community survey will ask how much time is spent preparing meals in order to better understand the cooking habits of the community and get insider knowledge about what types of programs would be most beneficial.

4.22 *Mode of transportation to access local food:* determine how target population gets to places where they buy food. A study for the USDA found a strong correlation between having access to a car and higher levels of food security (Cohen, et al, 1999). Moreover, a study by the Food Trust (2001) found that in Philadelphia, more than 363,000 people have to travel outside of their neighborhood to get access to a grocery store. Given this information, the community survey will

ask about the location of food stores and how accessible they are to local residents. With this information, it will be possible to increase the accessibility of places to buy food.

4.23 *Number of people involved in community/school gardening:* determine what percentage of the population actively participates in the community gardens. A study on garden-based nutrition education showed that participating in a school gardening program increased the frequency and variety of the students' vegetable intake (Markestey, Goldberg, and Merrigan, 2005). This shows that a higher percentage of the population who grow food in community gardens increases resiliency, and supports the argument for the expansion of community gardens in Main South. Data from the REC can be used to support this claim.

4.24 *Distance (miles) to community garden.* A higher percentage of the population who has access to community gardens increases resiliency, and is yet another reason for more support and expansion of community gardens in the area. Data from the REC and GIS mapping can help illustrate the need and importance of community gardens in Main South.

4.25 *Number of households who garden at home:* number of households that have access to fresh fruits and vegetables grown at home. Urban gardening can yield a significant amount of crops. A small ten-meter by ten-meter household garden can yield enough fresh produce to supplement a household's annual vegetable needs. Even smaller gardens can significantly supplement a household's needs (Brown & Jameton, 2000). A higher percentage of households that grows food at home increase resilience to nutrition-related diseases and food insecurity and is another argument to increase support for home gardening (victory gardens) to increase household food security. Data from Toxic Soil Busters on the number of households served through their gardening services, coupled with information gathered from participants in the community survey will be used.

5. Stakeholders

5.1 *Family Health Center*
(http://www.fhcw.org)

The mission of the Family Health Center is to improve the health and well-being of traditionally underserved and culturally diverse people in the Greater Worcester area. They realize this mission by providing high quality and accessible primary health care for both individuals and families. Every patient is seen in the context of his/her family, culture and community. The Family Health Center believes in the importance of reaching out to all family members to best ensure continuity of care for both adults and children. The Family Health Center's mission supports the training of family practice physicians, as a site for the University of Massachusetts Medical School Family Practice Residency Program since 1974. The facility lies in the heart of one of Main South. Comprehensive Primary Care Services are provided for the whole family by linking each new patient with a doctor or nurse practitioner who cares for that patient. They take a holistic approach to family health and care.

Specific Areas or Initiatives Where We Can Collaborate:

- Disease Management
- Teen Health
- Men's Health Initiative

- Southeast Asian Health program
- Comprehensive Maternal & Child Health Program
- WIC (Women, Infants & Children's Nutrition Program
- MassHealth Access Program
- School-Based Health centers at South High School, Sullivan Middle School and the All School
- Worcester Collaborative for Teen Health
- Health Education

5.2 *Central Massachusetts Center for Healthy Communities (CMCHC)*
(http://www.cmchc.org/)

CMCHC Goals include promoting partnerships among regional and local public health leaders. Promote collaboration among communities to reduce the use of alcohol, tobacco and other drugs particularly among youth and young adults and to mobilize youth and young adults for leadership and civic action. They are also prevention based and community oriented. The Massachusetts Department of Public Health provides funding for CMCHC.

Specific Areas or Initiatives Where We Can Collaborate:

- Resource Center: Prevention resource center
- Trainings: They assist and conduct various trainings
- Research an Evaluation: They support various assessments and data collection
- Community Coalition Development
- Youth Development: To assist in the Youth Grow Gardening Programs

5.3 *Worcester Advisory on Food Policy*
(http://www.worcesterfoodpolicy.org/)

Hunger-Free & Healthy is a project developed by the Worcester Advisory Food Policy Council to reduce hunger and increase the health of residents of Worcester, MA. Planned in 2007 and piloted in 2008, the project will begin its implementation phase this month. Hunger-Free & Healthy is focusing on increasing public and government support for programs to reduce hunger and increase access to more nutritious foods. Specific strategies include: working to increase access to food stamps by training outreach workers at local hospitals; health centers and the Worcester Housing Authority; advocacy for improvements to the food stamp program; increasing participation in the free breakfast program and improving the nutritious quality of the meals in the Worcester Public Schools; working with local corner stores to improve the availability of affordable produce and healthy foods; offering cooking/nutrition classes; expanding the farmers' market in Main South and offering gardening education classes.

The Worcester Advisory Food Policy Council was formed in February of 2006 by then Mayor, now Lt. Governor Tim Murray. It is a partnership of local and statewide nonprofit organizations, Worcester Public Schools and City departments, state agencies, health care providers, colleges and universities, faith based communities, and community members that meet together to discuss issues and projects related to hunger, food insecurity and nutrition. The Council serves as an advisor to Congressman Jim McGovern. The Health Foundation of Central MA funded the planning and pilot phases for Hunger-Free & Healthy**,** and will announce its commitment to fund the implementation phase at this event.

5.4 *The Worcester Housing Authority: Pleasant Street Towers*
(http://www.worcester-housing.com)

Located close to Worcester's downtown district, the Pleasant Street Towers offers low and moderately low income seniors and younger, disabled adults a healthy living space. The eight-story high-rise also includes community garden initiatives.

5.5 *Toxic Soil Busters/Worcester Roots Project*
(http://www.worcesterroots.org)

Worcester Roots is a local non-profit that seeks to "create healthy spaces for living, working and playing." A central component of its strategic plan is to incubate co-operatively-run local, green initiatives. Current initiatives include a recycled computer co-op, a community print shop, and a youth-run lead remediation cooperative. The most established of its incubated initiatives is the lead remediation cooperative, the Toxic Soil Busters. The mission of the Toxic Soil Busters is to address environmental injustice through youth-lead cooperative enterprise. Youth of Toxic Soil Busters test for lead in soil and do low-budget, lead-safe landscape design and implementation in lead contaminated yards. Lead-safe landscaping techniques include phytoremediation (using plants to remove lead from the soil), raised beds for vegetable cultivation, and soil stabilization via covering soil with plants, gravel or pavers.

5.6 *Artichoke Food Co-op*
(http://www.artichokecoop.org)

Situated in the Main South Community, the Artichoke provides affordable and healthy organic food. They are socially involved and help distribute information on various health related topics. They also advocate for access to food for impoverished people and families. Although several supermarkets exist in the heart of Main South, the Artichoke is the only non-profit store and the only store that focuses on healthy foods. The Artichoke does not mark up prices to make a profit and makes decisions based on the welfare of its workers and overall community. In the wake of an economic downturn and rising prices, non-profit food cooperatives like the Artichoke are providing communities with access to products that circulate within, rather than take away from, the local economy.

5.7 *Regional Environmental Council*
(http://www.recworcester.org)

REC is a grassroots, non-profit organization located in the Main South neighborhood of the city of Worcester. Founded in 1971, the REC has been dedicated to building healthy, sustainable, and equitable communities in Worcester for over 35 years. It stresses local knowledge, community building and local, grassroots work.

6. Findings

6.1 *Data on Sullivan Middle School:*

- In a Massachusetts Department of Public Health study, out of the 722 students surveyed at Sullivan Middle, 69% were calculated as having a body mass index greater than the 85th percentile. Those above the 85th percentile for BMI are considered at-risk for being overweight.

- 43 students during the 2006 – 2007 school year who need to receive exercise and nutrition counseling services.
- There are 882 students in Sullivan Middle as of the 2007 – 2008 school year.
- 80% of the student population is eligible for free or reduced lunch.

Race/Ethnicity

White (non Hispanic/Latino)	**39 %**
Black (non Hispanic Latino)	**12 %**
Hispanic/Latino	**39 %**
Asian/Pacific Islander	**10 %**

*Besides the BMI statistics the rest of the data comes from the Worcester Public Schools

7. Conclusions and Recommendations

7.1 *Conducting a Community Food Assessment*

According to the Community Food Security Coalition, there are four key steps in conducting a Community Food Assessment. They are as follows (taken directly from www.foodsecurity.org):

Organize:
- Identify key stakeholders
- Organize initial meeting(s)
- Determine the group's interest in conducting an assessment
- Identify and recruit other participants, representing diverse interests and skills
- Continue to organize and engage constituents throughout project

Plan:
- Review other assessments
- Determine assessment purposes and goals
- Develop an overall plan and decision-making process; clarify roles
- Define geographic and population boundaries
- Identify and secure grants, in-kind resources, and/or project sponsor
- Recruit and train staff and volunteers

Research:
- Develop questions and indicators
- Identify existing data and information needed
- Develop research tools and methods
- Collect and analyze data
- Compile and summarize findings

Advocate:
- Discuss findings with community and develop recommendations

- Create action plan to implement priority recommendations
- Clarify roles and determine whether additional partners should be recruited
- Develop media strategy (build relationships, frame message, create news)
- Disseminate findings to the public, policymakers and journalists
- Advocate for policymakers and others to take action based on recommendations
- Evaluate assessment project

8. Appendix

8.1 Appendix A: Indicators Spreadsheet

Exposure Indicators					
Indicator	**Description**	**Units**	**Interpretation**	**Targets**	**Methods**
Location	Distance of study participants to grocery stores, corner stores markets, etc.	Distance (miles)	Residents who are farther from places to buy food will be more vulnerable	Provide support for more local/neighborhood based markets/grocery stores	GIS, Community survey
Time exposed to food marketing	Measurement of the amount of time a person is exposed to a food related commercial via television. Data will be broken down by what types of foods are advertised (ex. Healthy foods vs. Fast Foods)	Time	An increase in exposure to marketing of unhealthy foods (high in fat or sugar) increases vulnerability	1) Further explore link between marketing and individual decision-making 2) Provide support to limit advertisement to at-risk populations 3) increase support for marketing of healthy food options	Community Survey, Focus Groups
Types of Foods available in neighborhoods	Inventory of the types of foods available in the marketplaces within the target geographic area	Types of food	If establishments within the geographic area carry a majority of food that is unhealthy, target population will be more vulnerable	Increase support for more healthier options available	1) Hungry Free and Healthy Corner Store Survey 2) survey at other businesses
Cost of Foods	Inventory of the cost of healthier options vs. unhealthy options	Dollars	If healthier options are on average at a higher price, the target population will be more vulnerable	Increase support for more affordable healthy food options	2) Survey of food related businesses
# Of People on Food Assistance Programs	To determine the number of people who gain access to their food through governmental programs	# Of people	Used in conjunction with the data on what types of food is available through these programs to determine if this specific population on governmental food assistance is more or less vulnerable	If those who are on food assistance are found to be less vulnerable, support for expansion of programs. If those who are on food assistance are found to be more vulnerable, restructuring of the programs.	1) Data from Worcester Public Schools - Free and Reduced Lunch 2) Data from the Worcester Community Action Council 3) # of people who use local food pantries 4) FHCW (# of people on WIC) 5) Mass. Transitional Aid to Families with Dependant Children (food stamps)
Foods available in food assistance programs	Determine what foods those who are on food assistance programs have access to	Types of food	Use to determine if food assistance programs offer healthy options	If programs are not offering healthy options, support for restructuring programs.	1) Data from Worcester Public Schools - Free and Reduced Lunch 2) Data from the Worcester Community Action Council 3) # of people who use local food pantries 4) FHCW (# of people on WIC) 5) Mass. Transitional Aid to Families with

					Dependant Children (food stamps)

Sensitivity Indicators					
Indicator	**Description**	**Units**	**Interpretation**	**Targets**	**Methods**
Age	Age of target population and survey/focus group participants	Years	Used to determine if vulnerability changes by age (are children and the elderly more vulnerable)	If certain age groups are more vulnerable, policy should reflect this trend and focus on these identified groups	1) US Census Data (age for entire target area) 2) age will be asked of all those who participate in community survey
Income	Gross annual income of target population and survey/focus group participants	Dollars	Used in conjunction with other health and food data to determine if income limits the accessibility to obtain healthier food options	Increased support for food assistance programs, and affordable food options	1) US Census Data (annual gross income for entire target area) 2) annual gross income will be asked of all those who participate in community survey
Race/Ethnicity	Race/Ethnicity of target population and survey/focus group participants	Race/Ethnicity	Used in conjunction with other health and food data to determine if specific racial or ethnic groups are more vulnerable	Policy which is culturally sensitive and appropriate, and focused on those groups which are most vulnerable	1) US Census Data (race/ethnicity for entire target area) 2) race ethnicity will be asked of all those who participate in community survey
Gender	Gender of target population and survey/focus group participants	Gender	Used in conjunction with other health and food data to determine if vulnerability changes with gender	Policy which addresses possible gender differences in vulnerability	1) US Census Data (gender for entire target area) 2) gender will be asked of all those who participate in community survey
# People with diabetes	To determine the number of those within the target population and survey/focus group participants who have diabetes	# People	Because managing diabetes requires specific dietary needs, a population with a higher percentage of those with diabetes will be more vulnerable	Expansion of support programs and health care which addresses the specific needs of those managing diabetes	1) Data from FHCW of the # of people within target area who have diabetes 2) public health data from the DPH on numbers of those who have diabetes 3) information on diabetes will be asked on community survey
BMI	Body Mass Index	BMI	Because BMI is an indicator of those who are obese, underweight, or at risk of being overweight or underweight, those who fall at the lowest and highest percentiles will be the most vulnerable to food insecurity	Further support for services and food systems which supports those who are suffering from being underweight or overweight	1) DPH data on BMI's from target population

# Of people with nutrition related chronic diseases	Determine the number of people who are experiencing obesity, overweight, malnutrition, and other nutrition related chronic diseases	# Of people	A high percentage of the population with nutrition related chronic diseases will increase vulnerability	Further support for services and food systems which supports those who are suffering from nutrition related chronic diseases	1) DPH data on BMI's from target population

Sensitivity Indicators continued

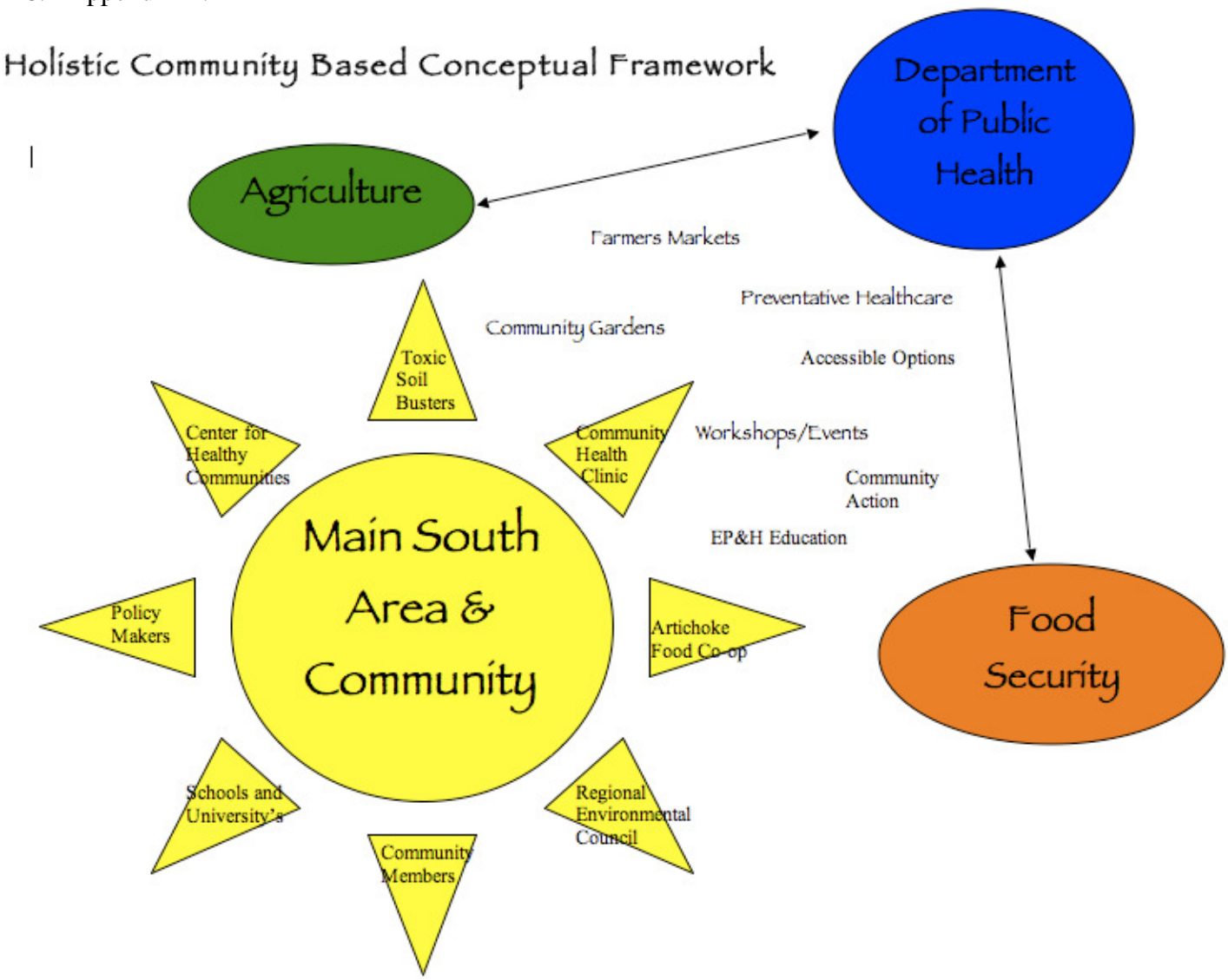
Indicator	Description	Units	Interpretation	Targets	Methods
# Single parent households	Determine the number of households with only one parent	# Households	A higher percentage of the population with single parent households will be more vulnerable to less time to cook healthy meals	Increase in healthier foods options that are also convenient for working families	1) US Census Data (# single parent households) 2) singe parent household will be asked of all those who participate in community survey
# Households where both parents work	Determine the number of households where both parents work	# Households	A higher percentage of household where both parents work will be more vulnerable to less time to cook healthy meals	Increase in healthier foods options that are also convenient for working families	1) US Census Data (# households where both parents work) 2) do both parents work will be asked of all those who participate in community survey
# Households with multiple jobs	Determine the number of households where family members hold down multiple jobs	# Households	A higher percentage of household where both or single parent works multiple jobs will be more vulnerable to less time to cook healthy meals	Increase in healthier foods options that are also convenient for working families	1) US Census Data (# households where family members hold multiple jobs) 2) how many jobs family members work will be asked of all those who participate in community survey
Time spent preparing meals	Determine the time families have to prepare healthy cooked meals	Time	A higher percentage of households which have less time dedicated to cooking meals will be more vulnerable to eating fast food and unhealthy options	Increase in healthier foods options that are also convenient for working families	Community survey will ask how much time is spend preparing meals

Adaptive Capacity Indicators

Indicator	Description	Units	Interpretation	Targets	Methods
# Of nutritional programs	Determine the number of nutritional programs available to target population	# Programs	More programs available increases resiliency	Expansion of nutritional education programs	Data collected from partner agencies

Awareness of programs	Determine the number of the target population that is aware of food assistance programs, places to buy healthier food options, and nutritional education programs	# Of people	More people who are aware increases resiliency	Increased marketing of programs	Information on awareness of specific programs will be asked on community survey
Access to nutritional counseling/programs	Determine the number of people who receive nutritional counseling/programs	# Of people	More people who have access to nutritional programs increases resiliency	Increased enrollment in nutritional counseling programs	Data collected from partner agencies
Access to a primary care provider	Determine how many people in the target population have access to a primary care provider	# Of people	More people who have a primary care provider increases resiliency	Increases enrollment with health centers	Data collected from partner agencies
Mode of transportation to location of food access	Determine how target population gets to places where they buy food	Type of transportation	Will be used with data of location of food stores to determine how accessible markets and grocery stores are	Increase accessibility to places to buy food	Information will be asked on community survey
# Of people involved in community/school gardening	Determine what percentage of the population community gardens	# Of people	A higher percentage of the population who grow food in community gardens increases resiliency	Support for and expansion of community gardens	Data from the REC
Location relative to community gardens	Determine the number the target population which has access to community gardens	Distance (miles)	A higher percentage of the population who has access to community gardens increases resiliency	Support for and expansion of community gardens	1) Data from the REC 2) GIS mapping
# Of households who garden at home	Determine the number of households which have access to fresh fruits and vegetables grown at home	# Households	A higher percentage of households which grow food at home increase resilience	Increase support for home gardening (victory gardens) to increase household food security	1) Data from Toxic Soil Busters on the # of households served through their gardening services 2) participants in the community survey will be asked if they garden at home

8.2 Appendix B:



8.3 Appendix C: Main South SWOT in the context of food security and sustainable development

Strengths	Weaknesses
• Family Health Center of Worcester, Inc. • Artichoke Food Co-Op • Toxic Soil Busters • REC YouthGrow • Worcester Department of Health • Vacant spaces → community development, i.e.: gardens • Large labor pool • Farmers' markets • Community gardens • Racial diversity	• Lack of capital • Most jobs are unskilled, lower paying • High population density • Vacant spaces → blight • Older, pre-1960 housing stock → higher risk of lead poisoning • Presence of drugs and prostitution • Perceived danger, especially at night and with regard to the PIP shelter • Police – community tension • Lack of government support and political power
Opportunities	**Threats**
• Stimulus package • MA Global Warming Solutions Act of 2007 • MA Green Jobs Act of 2008 • Neighborhood Stabilization Grant • Community Development Block Grant	• Current economic crisis • Increased competition for grants and state funding • Gentrification

8.4 Appendix D: Questionnaire Form

A. General information

ID form:

Date of survey:

Gardens' status: Household _____ Community _____

Zip code _____

Building's year _____

Garden's size _____ (m^2)

B. Content of questionnaire form

1. Do you build up your garden by considering sustainable and security agro-products?

Yes _____

No _____

If yes, what and where do you get information of guiding?

_____

What do you think about sustainable and security agro-products?

_____

2. What kind of water do you use for irrigation?

_____ Supplied water

_____ River (or Stream)

_____ Pond (or Lake)

Other (_____)

3. What kind of fertilizer do you use?

_____ Chemical

_____ Organic

_____ Both organic and chemical fertilizers

_____ Compound

Other (_____)

4. Do you use pesticide, herbicide, and so on to protect your plan?

_____ Yes _____ No

If yes, how often do you use?

5. What kinds of plants do you grow?

_____ Vegetables

_____ Flowers

_____ Fruits

Others (_____)

6. Do you use your garden's product for your daily meals?

_____ Yes _____ No _____ Undecided

7. Do you think that those products are fresh and safety

_____ Yes _____ No _____ Unknown

8. Do you also sell your products?

_____ Yes _____ No _____ Undecided

9. If yes, where/how do you sell your products?

_____ Grocery stores

_____ Market

_____ Schools

_____ Community food programs

Others (_____)

10. Do you offer community food program your products?

_____ Yes _____ No _____ Undecided

11. If yes, how often do you offer?

_____ one time per month

_____ two times per moth

_____ three times per month

Comments _____

12. Is your garden used for schools visiting?

_____ Yes _____ No

13. If yes, how are the students interested in?

_____ Very interested

_____ Interested

_____ Kind of

_____uninterested

Your comments: _____

14. How do your neighborhoods think about you garden?

_____ Very enjoyable

_____ Enjoyable

_____ Kind of

_____ Un-enjoyable

Your comment: _____

15. Do you think that the household and community gardens are great places of recreation in urban environment?

_____ Yes

_____ No

Your comments: _____

16. Do you think that the household and community gardens help beautiful your community?

_____ Yes

_____ No

Your comments: _____

8.5 Appendix E:

Draft of Community Food Assessment Survey
This draft contains examples of questions asked on proven effective assessment tools. A committee should review appropriateness of questions to their locality and question order.

1. What is your home zip code? _____

2. What is your gender? Male ___ Female ___ Transgendered_____

3. About how old are you? (circle one)
□ 17 and under □ 18-34 □ 35-59 □ 60 and over

4. What is your current family composition (living/staying with you)? (Choose only ONE answer)

☐ Single
☐ With spouse/partner
☐ With one or more children
☐ With spouse/partner and one or more children
☐ Other: _____

5. Which best describes your race/ethnicity? (Choose only ONE answer)

☐ African American/Black
☐ Asian or Pacific Islander
☐ Caucasian/White (Non-Hispanic)
☐ Hispanic/Latino/a
☐ Native American/American Indian
☐ Multi-Racial/Ethnic
☐ Other, please specify: _____

6. Including yourself how many people live in your household? _____

Children under 18 _____
Adults 18 and over _____

7. What range includes your total household income, before taxes, for 2003?

□ $0-$20,000 □ $20,001 to $30,000
□ $30,001 to $50,000 □ $50,001 & over

8. Where do you buy most of your groceries? _____
Why? _____

9. How often do you go to the store mentioned above?

□ Once a month □ Every two weeks □ Once a week
□ More than once a week □ Other _____

10. How many bags of groceries do you usually buy on one of those trips?

□ 1-2 bags □ 6 or more bags
□ 3-5 bags Comments: _____

11. Do you also use other stores? Yes No (If No, go to #12)

If yes, what store[s] and where are they located? _____
Why do you shop at these stores? _____

12. What time of day do you usually shop?

13. Besides stores, are there other non-emergency sources you regularly use to get food? (Check all that apply):

□ Farmers Market □ Senior Meal Site □ Community Garden
□ Personal Garden □Restaurant/Fast Food □ Other _____
□ Home Delivered Meals

14. If you are a senior:
Do you know about Senior Meal Programs? Yes No

Do you ever attend Senior Meal Programs? Yes No

If there were a Senior Meal Program
near you, would you go? Yes No

15. Have you applied for all the public assistance that you believe you are eligible for?
Yes No
If no, why not? _____

16. Do you or your children participate in any publicly funded programs?
(Check all that apply):

□ Food Stamps □ School Breakfast/School lunch
□ CalWorks (AFDC) □ Summer Lunch
□ WIC □ SSI
□ Head Start □ Other

Please explain: _____

17. Do you ever go to a food closet or a soup kitchen? Yes No

If yes, how many times in the last year have you gotten food from a food closet or a soup kitchen? _____

18. Do you receive USDA food commodities? Yes No

19. Do you have any of the following health conditions? (Circle all that apply)

- ☐ Acid-Reflux (GERD)
- ☐ Diabetes
- ☐ High blood pressure
- ☐ HIV/AIDS
- ☐ Hypertension
- ☐ Lactose intolerance
- ☐ Obesity
- ☐ Permanent mental disability
- ☐ Permanent physical disability
- ☐ Persistent dental problems
- ☐ Other, specify: _____

20. Do you currently receive food stamps? Yes No

20a. If YES, approximately how long do your food stamps cover everything you need to eat?

- ☐ One week
- ☐ Two weeks
- ☐ Three weeks
- ☐ All month

20b. If you receive food stamps, do you use those benefits to pay for other life necessities?
Yes No

20c. If NO, why not? (circle all the apply)

- ☐ I have never applied for food stamps
- ☐ I do not qualify because my income is too high
- ☐ I do not qualify because I receive SSI
- ☐ I don't know how to apply for food stamps
- ☐ The requirements of the program are not worth the benefits
- ☐ I have a drug felony on my record

21. Did you know that you can receive food stamps even if you have a drug felony on your record?
Yes No

22. How much do you generally spend on food each month, including both cash and food stamps?

☐ Nothing
☐ $1 - $50
☐ $51 - $100
☐ $101 - $200
☐ $201 or more

23. Do you have access to any of the following food storage/cooking facilities? (Circle all that apply)

	My own	In a Community Kitchen
☐ Cupboards/Food Storage space	1	2
☐ Full-size refrigerator	1	2
☐ Small refrigerator	1	2
☐ Hotplate	1	2
☐ Microwave	1	2
☐ Oven	1	2
☐ Stove	1	2
☐ Other, specify: _____	1	2

24. Which of the following do you generally buy and/or eat? (Circle all that apply)

☐ Beans
☐ Canned fruits and vegetables
☐ Chips
☐ Dairy products
☐ Eggs
☐ Fish/Seafood
☐ Fresh fruits
☐ Fresh vegetables
☐ Fruit juices
☐ Hot dogs
☐ Meats (chicken, beef, etc.)
☐ Pizza
☐ Pre-packaged meals (i.e. microwavable)
☐ Pre-packaged pasta (i.e. spaghetti)
☐ Pre-packaged snack foods (i.e. chips)
☐ Ramen Noodles
☐ Rice
☐ Soda
☐ Soda
☐ Soy Products
☐ Whole grain breads and/or whole grain cereals
☐ Other, specify: _____

25. Which of the choices below do you consider to be nutritional/healthy food options? (Circle all that apply)

☐ Beans
☐ Canned fruits and vegetables
☐ Chips
☐ Dairy products
☐ Eggs
☐ Fish/Seafood
☐ Fresh fruits
☐ Fresh vegetables
☐ Fruit juices
☐ Hot dogs
☐ Meats (chicken, beef, etc.)
☐ Pizza
☐ Pre-packaged meals (i.e. microwavable)
☐ Pre-packaged pasta (i.e. spaghetti)
☐ Pre-packaged snack foods (i.e. chips)
☐ Ramen Noodles
☐ Rice
☐ Soda
☐ Soda
☐ Soy Products
☐ Whole grain breads and/or whole grain cereals
☐ Other, specify: _____

26. How many servings of fruits and/or vegetables do you eat on an average day?
(Note: a serving is about a ½ cup, a small apple, ½ banana, etc.)

☐ 0
☐ 1 – 2
☐ 3 – 4
☐ 5 – 9
☐ 10 or more

27. Does any of the following prevent you from eating healthy food on a regular basis? (Circle all that apply)

☐ Buying healthy food is too expensive
☐ Free food lines are not controlled/dangerous
☐ Healthy food is not easily accessible in the community
☐ I am limited to eating what is available in free food lines and programs
☐ I do not choose to eat healthy food
☐ I do not have adequate cooking facilities
☐ I do not have time to eat healthy, balanced meals
☐ Lack of appropriate places to store food
☐ Lack of adequate refrigeration
☐ Lack of transportation to large markets
☐ Markets in our neighborhood aren't open at hours I need them
☐ Need identification to access food banks
☐ Not sure what choices are healthy or unhealthy
☐ Other, specify: _____

28. Are there certain foods that you need but find difficult to get in this neighborhood? Yes No

If yes, what foods and why?

29. Are you aware that eating 5 or more fruits and vegetables a day can lead to a healthier life? Yes No

About how many servings of fruits and vegetables do you eat a day? _____

30. What would help you to eat 5 or more fruits and vegetables a day? _____

31. Do you think you eat the right amount of fruits AND vegetables now, or do you think you should eat more?

- ☐ RIGHT AMOUNT
- ☐ SHOULD EAT MORE
- ☐ DON'T KNOW/NOT SURE

32. How many total servings of fruits and vegetables do YOU think YOU should eat every day for good health? _____

33. Are you PLANNING to eat more fruits and vegetables over the next 6 months?

- ☐ YES
- ☐ NO
- ☐ DON'T KNOW/NOT SURE

34. Are you currently TRYING to eat more fruits and vegetables?

- ☐ YES
- ☐ NO
- ☐ DON'T KNOW/NOT SURE

35. What is the ONE main reason why you eat fruits and vegetables?

- ☐ Decrease risk of disease (cancer, heart disease, high cholesterol)
- ☐ Weight reduction/control
- ☐ Lifestyle change (moved, getting married, having children)
- ☐ Trying to eat healthier foods
- ☐ Availability
- ☐ Taste
- ☐ My children/family/friends want me to
- ☐ Right thing to do
- ☐ Other (specify):
- ☐ DON'T KNOW/NOT SURE

36. What is ANOTHER reason why you eat fruits and vegetables?

- ☐ Decrease risk of disease (cancer, heart disease, high cholesterol)
- ☐ Weight reduction/control
- ☐ Lifestyle change (moved, getting married, having children)
- ☐ Trying to eat healthier foods

☐ Availability
☐ Taste
☐ My children/family/friends want me to
☐ Right thing to do
☐ To set an example for my family
☐ Other (specify):
☐ DON'T KNOW/NOT SURE

37. What is your primary means of transportation to the grocery store?
(Mark all that apply):

□ Carpooling □ Bike □ Bus
□ Taxi □ Light Rail □ Walk
□ Car- your own □ Other's car □ Other (specify) _____

38. How long does it take to get there one way? _____

39. Is getting to the grocery store difficult for you?
Yes No (If No, go to #41)
40. If a grocery store was easier to get to, how would your shopping habits change?
41. What do you see as the main problems to getting food, if any?
42. Are there any changes in the community that would make it easier to get food?
43. In addition, what do you see as the main obstacles to eating healthy foods, if any?
44. If you have kids in school (or if you are a student, fill out for self):

Do your kids eat school lunch? Yes No
If no, why not?

Do your kids eat school breakfast? Yes No
If no, why not?

Are you aware of free or reduced
price school meals? Yes No

Do your kids participate in a free or
educed price meal program?
If no, why not? Yes No

45. In general, do you have any comments about the school meals?

46. Would you be interested in using any of the following in the downtown community?

	Not interested	Somewhat interested	Very Interested
a BBQ areas in parks			
b Community garden			

c Community kitchens
d Cooking classes
e Culinary arts program
f Farmer's market
g Job training programs
h Nutrition education
i WIC site
j Other: _____

47. Is there anything else related to food and nutrition that you would like to see changed in your community?
48. How many hours a week do you:
watch television? _____ listen to the radio?_____
49. Do television commercials influence the foods you decide to buy? Yes No
50. Please list the foods you see advertised most often in the media.
51. Are there nutritional services offered in your neighborhood? Yes No
52. If yes, have you ever used them? Why or why not?
53. Do you currently have health insurance? Yes No
54. If yes, who is your insurance provider?
55. Where do you go for primary care?
56. Where do you go for emergency treatment?
57. What is the date of your last physical?
58. What is the date of your children's last physical?

59. Do you have the ability to garden?
Yes No
60. If yes, what types of fruits and vegetables do you grow?

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http://www.ci.worcester.ma.us/wpd/

Family Health Center
www.fhcw.org
http://www.volunteermatch.org/search/org18079.jsp

United States Census Bureau
http://factfinder.census.gov/home/saff/main.html?_lang=en

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