

**WORCESTER FOOD & ACTIVE LIVING POLICY COUNCIL**

# Hunger-Free & Healthy

---

Final Report

February 2012

## **Authors**

Liz Sheehan Castro, *Hunger-Free & Healthy Project Manager*

Stewart Landers, *John Snow, Inc.*

Lynne Man, *John Snow, Inc.*

## **Contributors/Editors**

Stacie Brimmage, *Regional Environmental Council*

Casey Burns, *Regional Environmental Council*

Elaine Cinnelli, *The Health Foundation of Central Massachusetts*

Ann Flynn, *Guild of St. Agnes*

Donna Lombardi, *Worcester Public Schools*

Jean McMurray, *Worcester County Food Bank*

## **Special Thanks to Project Directors**

Dennis Irish, *Vanguard Health Systems*

Jean McMurray, *Worcester County Food Bank*

## **Special Thanks to the Funder of *Hunger-Free & Healthy***

The Health Foundation of Central Massachusetts

## Table of Contents

<b>Executive Summary .....</b>	<b>5</b>
<b>Introduction .....</b>	<b>9</b>
<b>Overview .....</b>	<b>11</b>
<b>Project Components .....</b>	<b>12</b>
<b>Project Outcomes .....</b>	<b>12</b>
<i>School Meals .....</i>	<i>12</i>
<i>SNAP Application Assistance and Advocacy .....</i>	<i>14</i>
<i>Figure 1. Percent of clients that would have accessed SNAP benefits regardless of Outreach Worker.....</i>	<i>16</i>
<i>Figure 2. Percent of new applicants that experience hunger .....</i>	<i>16</i>
<i>Farmers' Markets .....</i>	<i>17</i>
<i>Figure 3. Total Market Sales.....</i>	<i>19</i>
<i>Figure 4. Income Distribution of Shoppers 2009-2011 .....</i>	<i>20</i>
<i>Figure 5. Amount of Benefits Used 2009-2010 .....</i>	<i>20</i>
<i>Figure 6. Market Vendor Satisfaction .....</i>	<i>21</i>
<i>Educational Gardens .....</i>	<i>21</i>
<i>Table 1. School Gardens Developed by the Regional Environmental Council as part of Hunger-Free and Healthy .....</i>	<i>24</i>
<i>Table 2. 2011 Utilization of School Gardens.....</i>	<i>28</i>
<i>Cooking Classes .....</i>	<i>29</i>
<i>Table 3. Class location and graduation rate.....</i>	<i>31</i>
<i>Table 4. Adult Demographics: Cooking Matters Participants.....</i>	<i>32</i>

<b><i>Table 5. Youth Demographics: Cooking Matters Participants.....</i></b>	<b><i>33</i></b>
<b><i>Policy Advocacy .....</i></b>	<b><i>33</i></b>
<b><i>Table 6. 2010 Policy Priorities.....</i></b>	<b><i>34</i></b>
<b><i>Table 7: 2011 Policy Priorities .....</i></b>	<b><i>35</i></b>
<b><i>Outreach and Communications.....</i></b>	<b><i>36</i></b>
<b><i>Figure 7. Monthly Blog Views .....</i></b>	<b><i>37</i></b>
<b>Sustainability .....</b>	<b>37</b>
<b><i>School Meals .....</i></b>	<b><i>38</i></b>
<b><i>SNAP Outreach .....</i></b>	<b><i>38</i></b>
<b><i>Farmers’ Markets .....</i></b>	<b><i>39</i></b>
<b><i>Figure 8.YouthGROW Booth Project Revenue.....</i></b>	<b><i>41</i></b>
<b><i>Figure 9. Farmers’ Market Projected Non-Sales Revenue .....</i></b>	<b><i>41</i></b>
<b><i>Cooking Classes .....</i></b>	<b><i>42</i></b>
<b><i>Educational Gardens .....</i></b>	<b><i>42</i></b>
<b><i>Policy Advocacy .....</i></b>	<b><i>42</i></b>
<b>Appendix 1. SNAP Outreach Project Component Summary by Year .....</b>	<b>1</b>
<b>Appendix 2: 2011 Sample Messages from School Garden Calendars .....</b>	<b>2</b>
<b>Appendix 3: HFH 2011 Policy Priorities .....</b>	<b>3</b>

## Executive Summary

Hunger-Free & Healthy (HFH) is a project of the Worcester Food & Active Living Policy Council. It is funded through the Health Care and Health Promotion Synergy Initiative of The Health Foundation of Central Massachusetts. It was planned in 2007, piloted in 2008 and has been in its implementation phase since 2009. Although grant funding was authorized in 2012 to continue the project's path to sustainability and to support advocacy efforts, this paper serves as the final 5-year report with data and activities through December 2011.

The primary goals are to:

1. Support and advocate for the increased availability of nutritious and locally grown foods in Worcester Public Schools (WPS).
2. Improve access to healthy affordable foods in low-income and underserved communities.
3. Increase opportunities for youth and adults to reconnect with their food through cooking and gardening.
4. Increase knowledge and awareness of community food security, hunger and inequities in the food system, as well as strategies to solve problems locally.

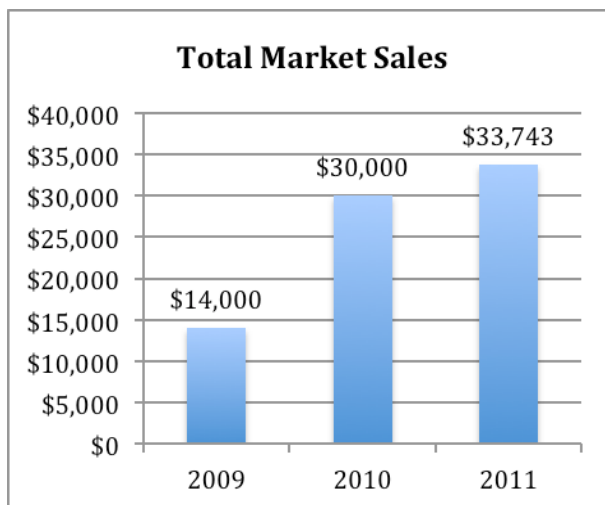
Project components included improving school meals in Worcester Public Schools; increasing the Supplemental Nutrition Assistance Program (SNAP, formerly Food Stamps) participation rate; establishing Farmers' Markets in low-income areas of Worcester; increasing the number of school gardens in Worcester Public Schools; offering free nutrition-based cooking classes to low-income families and teens; building communication and collaboration among organizations and individuals involved in this work; and advocating for policies and systems change to improve food security while encouraging healthy eating.

With respect to school nutrition, progress includes:

- Increasing the number of schools participating in the Universal Breakfast program, bringing the total to 15.
- Increasing the number of schools participating in the Get Fresh, Get Local snack program, bringing the total participating schools from 4 to 10.
- Modification of the WPS contract with Preferred Meals to require them to purchase locally when in season, provide fresh fruit and vegetables at least four days per week, and ensure that 90% of bread products are whole grain.
- Diversification of procurement activities to incorporate more local vendors and more nutritious foods.
- Successful advocacy to Garelick Farms to have them remove high fructose corn syrup from their milk line they deliver to schools.

- Modified the Universal Breakfast meal to include a puffed brown rice cereal and 100% fruit and vegetable juice, significantly reducing the sugar content and increasing the nutritious value of the meal.

The SNAP Outreach component provided assistance at 38 sites in Worcester. At the completion of this project, the SNAP Outreach coordinator had submitted 552 SNAP applications on behalf of clients. Of those whose outcomes were known, 63% of applications were approved. Since its inception in 2009, this secured a very conservative estimate totaling \$285,181 in benefits for eligible households, with benefits averaging \$188 per month, and ranging from \$0 to \$720 per month per household.



Farmers' markets opened in South Main in 2009 and Great Brook Valley in 2010. Revenues from both markets increased over the three-year period, 2009-2011 as seen in the following chart:

More importantly, both markets were able to accept payment using SNAP benefits, Women Infants and Children (WIC) coupons and Senior coupons, thereby furthering our reach to priority populations.

The Educational Gardens component began with the Worcester Educational Garden, located at the Fanning Building Adult Learning Center. This garden was built in 2009 by the REC YouthGrow participants. After seeing the excitement generated by the Worcester Educational Garden in 2009, HFH worked to incorporate more school gardens into its implementation process. In 2010, HFH funded the Regional Environmental Council (REC) to establish a School Gardens program in order to support Worcester Public Schools that had established school gardens, as well as to assist schools that were interested in developing new school gardens. The REC provided technical assistance and physical support to construct 7 new school gardens in 2010 and 5 additional gardens in 2011, bringing the total number of gardens to 14 (13 schools and 1 community center) as summarized in the following table:

Spring 2011	Belmont Street Community School
	Grafton Street School
	Greendale Head Start
	May Street School
	Worcester Technical High School
Fall 2010	Mill Swan A & B Head Start
	Quinsigamond Village Community Center
Spring 2010	Columbus Park Elementary School
	Doherty Memorial High School
	Jacob Hiatt Elementary School
	South High School
2009 and earlier	Goddard School of Science & Technology
	Sullivan Middle School
	Worcester Educational Garden

School gardens have provided an important opportunity for urban youth to learn more about vegetables, see how they grow and enjoy the fruits of their labor. When describing the impact that the gardens have on students, the most common observation was that the hands-on and experiential learning about vegetables was

completely new and quite powerful for many students. Students were engaged in the process and gained confidence through working in the gardens. Both students and teachers learned about vegetables and nutrition. Some teachers found ways to integrate the school garden into core curricula consistent with Massachusetts Frameworks. In order to promote the gardens' sustainability, both participating schools and the REC will continue to develop curriculum integration in the future.

HFH partnered with Cooking Matters (formerly Operation Frontline), a nationally renowned nutrition-based cooking program that teaches low-income families, children and teens how to cook affordable, healthy meals, while also giving them the tools to navigate the complicated world of nutrition and food budgeting. The Cooking Matters class series has graduated 161 adults and youth since 2008, maintaining an 87% graduation rate. For the first two years, classes were held exclusively at the Fanning Building kitchen. In order to expand the program's reach in 2010, classes were expanded to other locations. Survey data show that by the end of the course, graduates reported that 90% improved their cooking skills; 73% are eating more vegetables; 62% are eating more fruits; 80% are eating more whole grains; 49% are eating more lean meats; and 47% are eating more low-fat or fat-free dairy.

Over the course of the project period, HFH has become increasingly active in the local, state and federal policy arena. Working with partners across the state, members of HFH successfully advocated for the passage of major legislation in 2010 at the federal and state

level. In the state of MA, partners worked together to pass:

- An Act to Establish a MA Food Policy Council
- An Act Relative to School Nutrition
- An Act to Improve Public Contracting with MA Farmers (included in the final signed version of the School Nutrition Bill).

At the federal level, HFH partners worked with many national partners as well as our local Congressman McGovern to support the Healthy and Hunger-Free Kids Act of 2010, which was the formal name of the Child Nutrition and WIC Reauthorization.

At the end of the 2010 MA legislative session, the Policy Working Group of HFH developed a policy priority platform that guided the advocacy work in 2011. This can be found in Appendix 2. Towards the end of 2011, in collaboration with the Food SNAP Coalition, members of HFH also began intensive advocacy efforts to increase the state administrative funding for the SNAP Program at the MA Department of Transitional Assistance (DTA). Current staffing and administrative support at the MA DTA offices are insufficient to meet the increasing demand for benefits, resulting in decreased access to benefits. This advocacy will be ongoing throughout the state budgetary process in 2012. HFH members are proud to be at the forefront of this effort.

The HFH Project Manager and/or Project Directors participate in six coalitions dedicated to improving the health of the local Worcester community, as well as three statewide coalitions that focus on policy change. Use of social media and other online communication tools have also been part of outreach strategies. This includes a Facebook page, a Twitter account, an electronic newsletter, and a blog page.



## Introduction

Hunger-Free & Healthy is a project of the Worcester Food & Active Living Policy Council. It is funded through the Health Care and Health Promotion Synergy Initiative of the Health Foundation of Central Massachusetts. It was planned in 2007, piloted in 2008 and has been in its implementation phase since 2009. The majority of implementation was completed in 2011; however, support will be provided to some project pieces in 2012 to ensure sustainability.

Hunger and healthy food access were identified by community partners as major public health concerns affecting the Worcester community. In 2006 the (then named) Worcester Advisory Food Policy Council conducted an extensive review of available data that identified the extent to which hunger, obesity, and access to healthy food were affecting Worcester and Massachusetts. This was submitted as part of the initial grant application to the Health Foundation of Central Massachusetts.

At that time studies showed that:

- 7.1 percent of all households in Massachusetts (approximately 175,000 households) were food insecure and 2.7 percent reported food insecurity with hunger.<sup>1</sup> This represented an increase from the 1999-2001 reported numbers, when 6.7 percent of households statewide were food insecure and 2.0 percent were food insecure with hunger.
- Among adults reporting health problems, 65 percent were food insecure. Similarly, the majority of children with fair or poor health were from food insecure families.<sup>2</sup> Children living in households that lack adequate food get sick more often than their peers,<sup>3</sup> are more likely to be hospitalized,<sup>4</sup> and have higher rates of chronic illness.<sup>5</sup>
- Hunger in Worcester County grew dramatically between 2001 and 2005, with a 40% increase in number of people served by the food pantries and soup kitchens associated with Worcester County Food Bank.<sup>6</sup>
- In a 2006 survey conducted in Worcester, 93 percent of the soup kitchens and food

---

<sup>1</sup> Nord, M., Andrews, M. and Carlson, S., Household Food Security in the United States, 2004, U.S. Department of Agriculture, Economic Research Report No. 11, 2005.

<sup>2</sup> Ibid.

<sup>3</sup> Alaimo, K., Olson, C., Frongillo, E. and Briefel, R., Food Insufficiency, Family Income, and Health in US Preschool and School-Aged Children, American Journal of Public Health, 2001.

<sup>4</sup> Cook, J., Frank, D., Berkowitz, C., Black, M., Casey, P., Cutts, D., Meyers, A., Zaldivar, N., Skalicky, A., Levenson, S., Heeren, T. and Nord, M., Food Insecurity is Associated with Adverse Health Outcomes among Human Infants and Toddlers, Journal of Nutrition, 2004.

<sup>5</sup> Weinreb, L., Wehler, C., Perloff, J., Scott, R., Hosmer, D., Sagor, L and Gundersen, C., Hunger: Its Impact on Children's Health and Mental Health, Pediatrics, 2002.

<sup>6</sup> Mathematica Policy Research, Inc., Hunger in America 2006: Local Report Prepared for the Worcester County Food Bank, 2006.

- pantries respondents reported an increase in demand for food assistance in 2005, and 62 percent of these programs saw increased demand for food from elderly people.<sup>7</sup> In this same survey, 31 percent of the participating mothers who did not live in shelters reported there were days in the past month when their families had no food.<sup>8</sup>
- A 2003 report issued by the Central Massachusetts Agency on Aging found risk factors for elevated nutritional risk for elders including increasing age, low income, and living alone. While these applied to both men and women, women were found to be more negatively impacted by low income and living alone.<sup>9</sup>
  - In 2005, 64% of children attending Worcester Public Schools were eligible for free or reduced price lunch.<sup>10</sup> In 2000, 21 percent of families living below the poverty level in Worcester had children under 18 years.<sup>11</sup> These children are at risk for hunger and health consequences. In a study of homeless and low-income families in Worcester, food insecurity with hunger was a significant predictor of chronic health programs among school-age children.<sup>12</sup> The study also found that one-quarter of preschool children with severe hunger had low birth weights, as compared with five percent of children who had not experienced hunger.<sup>13</sup> Low birth weight is a risk factor for physical and cognitive developmental delays in children.<sup>14</sup>

The overall conclusion of all the data available pointed to the trend of increasing food insecurity in Worcester and negative effects on health, child development, and education. During this same time period, there was increasingly more information on best practices and model programs from other communities across the country dealing with similar circumstances. During 2007, the planning year of the Synergy grant, the group researched and studied current best practices to deal with food insecurity. Many were tested in the 2008 pilot year, and project strategies that emerged for implementation were the ones that proved to be most adaptable to the Worcester community.

This report focuses on the activities that were implemented during the 2009-2011 period. The purpose is to inform project partners and the Worcester community on Hunger-Free and Healthy's activities, accomplishments, final status and potential for sustainability moving forward. We hope that the information provided here will illustrate best practices in addressing hunger, promoting community health, and working towards food security and food justice.

---

<sup>7</sup> Rachel's Table, Worcester Hunger Facts January 2006 Survey, 2006.

<sup>8</sup> Ibid.

<sup>9</sup> Central Massachusetts Agency on Aging, Needs of Elders and Their Caregivers in Central Massachusetts, 2003.

<sup>10</sup> Massachusetts Department of Education, 2006.

<sup>11</sup> U.S. Census, 2005.

<sup>12</sup> Weinreb, L., Wehler, C., Perloff, J., Scott, R., Hosmer, D., Sagor, L., and Gunderson, C., Hunger: Its Impact on Children's Health and Mental Health, Pediatrics, 2002.

<sup>13</sup> Ibid.

<sup>14</sup> Kilbride, H.W., Thorstad, K., and Daily, D.K., Preschool Outcome of Less than 801-Gram Preterm Infants Compared with Full-Term Siblings, Pediatrics, 2004.

## Overview

Hunger-Free & Healthy is a collaborative project that aims to reduce hunger and food insecurity in the city of Worcester, Massachusetts. The primary strategy goals are to:

1. Support and advocate for the increased availability of nutritious and locally grown foods in Worcester Public Schools (WPS).
2. Improve access to healthy affordable foods in low-income and underserved communities.
3. Increase opportunities for youth and adults to reconnect with their food through cooking and gardening.
4. Increase knowledge and awareness of community food security, hunger and inequities in the food system, as well as strategies to solve problems locally.
5. Ensure the sustainability of the project components.

The success of this work is dependent on effective partnership. The Steering Committee of Hunger-Free & Healthy is made up of the following organizations:

- Congressman McGovern's Office
- Project Bread
- Saint Vincent Hospital
- United Way of Central MA
- Worcester Department of Transitional Assistance
- The Health Foundation of Central Massachusetts
- The Regional Environmental Council
- UMass Memorial Health Care
- Worcester County Food Bank
- Worcester Public Schools

In addition to Steering Committee members, project partners participate in Hunger-Free & Healthy through the delivery of project strategies and through two different working groups; the SNAP (formerly food stamps) Working Group and the Policy Advocacy Working Group. These partners include:

- Catholic Charities
- Centro Las Americas
- Family Health Center of Worcester
- Jeremiah's Inn
- Cooking Matters/Share Our Strength
- Edward M. Kennedy Community Health Center
- Mass in Motion

- Pioneering Healthier Communities
- Worcester Community Action Council
- Worcester Housing Authority
- Worcester State University
- YWCA of Central MA
- YMCA of Central MA
- Mass Public Health Association
- Pleasant Street Neighborhood Network Center
- Worcester Department of Public Health
- Worcester School Committee members

## Project Components

The project components that make up Hunger-Free & Healthy (HFH) aim to address the systemic issues that create hunger and food insecurity in a community. No single project component can address these issues alone, just as no one person, one organization or one agency can solve these problems alone. The systems approach of HFH works collectively to affect the food environment of the city as well as the knowledge and behaviors of those that live and work in the city. In order to be successful in our work we recognize that we need to affect children, families and seniors; we need to affect neighborhoods as well as institutions; we need to affect the way in which we think and act in regards to our food. With this in mind our project strategies have included:

1. Improving school meals in Worcester Public Schools;
2. Increasing the SNAP (formerly Food Stamps) participation rate;
3. Establishing farmers' markets in low-income areas of the city;
4. Increasing the number of school gardens in Worcester Public Schools;
5. Offering free nutrition-based cooking classes to low-income families and teens;
6. Increasing communication and collaboration among organizations, individuals and institutions involved in this work;
7. Advocating for policies and systems change that supports this work; and
8. Securing on-going funding and support for project components.

## Project Outcomes

### School Meals

Childhood hunger has been a primary concern since we started our work. ,With the 2005 census data reporting that in the 14 low-income tracts in Worcester, 1 in 3 children lived in a household that at times did not have enough food<sup>15</sup>, it was agreed that a focus on improving school nutrition would be an effective strategy. Children get up to two-thirds of their calorie intake in schools<sup>16</sup> and it is important that those calories be healthy and nutrient-dense.

---

<sup>15</sup> Project Bread, 2006.

<sup>16</sup> Project Bread, 2006.

As of the end of 2011, the school meals program in the Worcester Public Schools feeds around 15,800 student lunches, 9,700 breakfasts, and more than 2,000 snacks each day at 60 different school sites. Approximately 21 schools with the highest enrollment are cooking meals in their school cafeterias, which is approximately 9,612 lunches per day (60% of all lunches). The meal participation rate is about 70% and roughly 73% of students district wide qualify for free or reduced lunch. All meals served in the schools are free of artificial trans fats. In addition, there are no soda and snack vending machines that are available to students.

Smaller schools without cooking facilities (24 sites) receive pre-plated meals from an outside vendor, Preferred Meals Systems (32% of all lunches, or 5,132 lunches per day) while another set of smaller schools (15 sites) receive meals as prepared from the new North High School central kitchen (6%, or 1,016 lunches per day). Beginning in the 2010-2011 school year Preferred Meals began to preferentially source local produce and serve fresh fruits and vegetables at least four days per week. All bread products became, and remain, whole grain as well. At all 15 elementary schools that have over 80% of students eligible for free and reduced-price lunch, breakfast is served after the bell in the classroom to ensure that all students are well-fed as the school day starts. Worcester was a pilot site for Farm-to-School and the schools continue to source fresh food from local farms, both in their in-house prepared meals, as well as through the pre-plated meals prepared by an outside company. Farms such as Clearview Farm in Sterling are able to provide fruits such as apples, as well as root crops such as carrots, onions, and potatoes.

Since the inception of HFH, the Worcester Public Schools has been a very collaborative and invested partner. The Director of Child Nutrition for the District, Donna Lombardi, is a passionate advocate of healthy, whole foods in schools and has created a model that is fiscally sound and practical. With her support we have been able to advocate for increased implementation of the Universal Breakfast program<sup>17</sup>, increased healthy snacks, increased access to locally grown produce and improvements to the healthfulness of the school meals program, as well as the school food environment overall.

Since 2009, Hunger-Free & Healthy has provided the community support necessary for the implementation of programs and standards that greatly improve the school food environment. With this community support, the Child Nutrition Director has:

- Increased the number of schools participating in the Universal Breakfast program, bringing the total to 15.

---

<sup>17</sup> Universal Breakfast is a free breakfast program where all students receive a free breakfast in the classroom after the start of the school day.

- Increased the number of schools participating in the Get Fresh, Get Local snack program, bringing the total participating schools from 4 to 10.
- Modified her contract with Preferred Meals to require them to purchase locally when in season, provide fresh fruit and vegetables at least four days per week, and ensure that all bread products are whole grain.
- Diversified her procurement to incorporate more local vendors and more nutritious foods.
- Successfully advocated for Garelick Farms to remove high fructose corn syrup from their flavored milk lines.
- Modified the Universal Breakfast meal to include a puffed brown rice cereal and 100% fruit and vegetable juice, significantly reducing the sugar content and increasing the nutritious value of the meal.

In addition, Hunger-Free & Healthy has:

- Participated in the School Health Council subcommittee to revise and update the district Wellness Policy. This has included updating the policy language to improve the overall school food environment, as well as develop a system for implementation and monitoring of the policy.
- Advocated for the successful passage of the School Nutrition Bill, which provides nutritional guidelines for all foods sold outside of the School Meals Program, termed “competitive foods.” This legislation also increased the limits of purchasing locally, allowing school districts to develop contracts of up to \$25,000 per farm, per contract.
- Participated in the School Nutrition Working Group, a partnership between the Massachusetts Public Health Association’s (MPHA) Act FRESH Campaign, the School Nutrition Association, the Department of Early and Secondary Education, the Department of Public Health, as well as the many associations that represent school superintendents, school business officers, student councils, parent teacher organizations and more. This group continues to collaborate on the implementation of the School Nutrition Bill guidelines that go into effect in August 2012.

This strong collaboration between community partners and the Child Nutrition Director has resulted in many improvements to the quality of school meals, as well as the overall school food environment. Worcester has been recognized widely for the quality of the school meals program, including an award from the Massachusetts Health Council in 2010 as the “Healthiest School System in MA” and many features in the media including a feature article in the Boston Globe and two pieces on NECN.

### **SNAP Application Assistance and Advocacy**

The Supplemental Nutrition Assistance Program (SNAP, formerly known as Food Stamps) is a cornerstone program necessary for low-income families to establish food security. With

food prices rising well above inflation<sup>18</sup> since 2008, this subsidy can be crucial for working families, single-parent households, elderly, people with disabilities, as well as for single people living alone. In 2004, of the estimated 659,000 Food Stamp eligible people living in Massachusetts, 49% were enrolled in SNAP; this statistic ranked Massachusetts as one of the poorest performing states in SNAP participation.<sup>19</sup> This low level of participation is what prompted Hunger-Free & Healthy to include it as a project strategy.

Since May 2009 when the SNAP Outreach project component of HFH was implemented, the SNAP Outreach worker has done outreach and provided application assistance at 38 sites in Worcester.<sup>20</sup> At the completion of this project, she had submitted 552 SNAP applications on behalf of clients. Of those whose outcomes were known, 63% of applications were approved.<sup>21, 22</sup> This secured a very conservative estimate totaling \$285,181 in benefits for eligible households,<sup>23</sup> with benefits averaging \$188 per month, and ranging from \$0 to \$720 per month per household.

The SNAP Outreach worker was also able to reach a diverse range of individuals and households throughout the city. In terms of race/ethnicity, she reached a higher percentage of Blacks and Hispanics than are represented in the city of Worcester, indicating that both populations continue to experience food insecurity at a disproportionate rate as compared to the general populations, as well as the need to continue to target these populations for ongoing assistance. The outreach worker also reached a wide range of ages, from as young as 18 to as old as 93 years. At the same time, the average age of applicants decreased over the project period (from 49.1 in 2009 to 41.9 years old in 2011, mean 45.6 from 2009-2011), as younger families applied. Over the course of the project, 203 applicant households contained one or more children, representing nearly 40% of all households served, and included a total of 376 children. Examination of trends in serving children is even more compelling, as the percentage of households with children increased steadily from 28% in 2009 to 44% in 2011. Appendix 1 shows detailed trends over the duration of this project component.

---

<sup>18</sup> Wholesale prices spike on steep rise in food, oil. Associated Press. March 16, 2011.

<sup>19</sup> United States Department of Agriculture, Food and Nutrition Services, Produced by Mathematica Policy Research, Inc., **Reaching Those In Need: State Food Stamp Participation Rates in 2004**. October 2006.

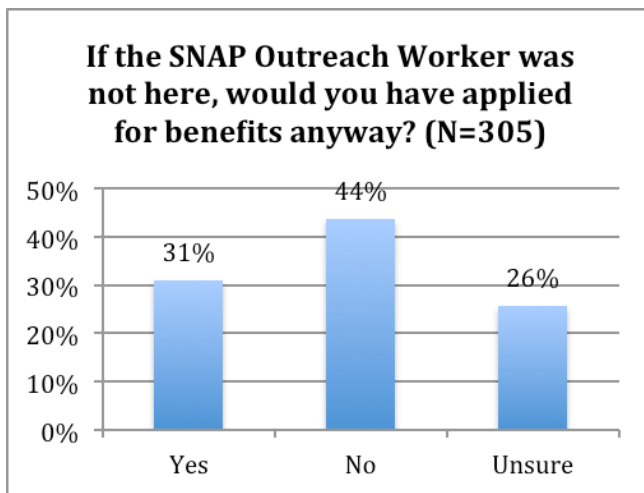
<sup>20</sup> The number of sites decreased in 2011 in order to maximize those that had been shown in previous years to be most productive.

<sup>21</sup> Outcome was known for 472 (86%) of all applicants to whom SNAP Outreach Worker provided assistance.

<sup>22</sup> Data are inclusive of May 2009 through November 2011.

<sup>23</sup> This total was calculated by multiplying the monthly amount a household was awarded by six months, which is the average time for which a household is approved before needing to be recertified. This amount is conservative for several reasons. First, it is likely in this economic environment that households are on food stamps for a much longer time period. Second, certain populations, such as elders, are approved for a longer initial time period before needing to be recertified. Finally, some clients were approved, but the benefit amount was not known. Therefore, the amount of benefits received by these clients is not included in the total.

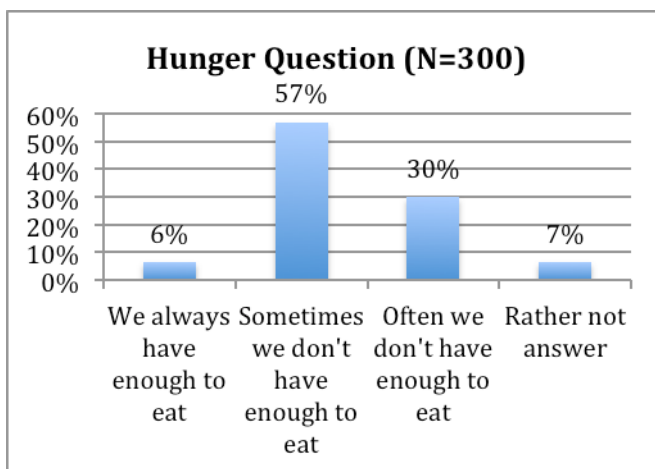
**Figure 1. Percent of clients that would have accessed SNAP benefits regardless of Outreach Worker**



From April 2010 to November 2011, people who received assistance in filing applications for benefits from the SNAP Outreach Worker were asked several questions to gauge both the need for and the effectiveness of the outreach program. Of those answering these questions, nearly 70% said they were unsure or would not have applied for SNAP benefits if the SNAP Outreach worker had not been at the site at which the encounter took place (Figure 1).

In addition, 87% of people who applied through the SNAP Outreach Worker also indicated that they sometimes or often do not have enough to eat (Figure 2).

**Figure 2. Percent of new applicants that experience hunger**



In addition to the mobile SNAP Outreach Worker, Hunger-Free & Healthy was instrumental in engaging the two major hospitals in Worcester, Saint Vincent and UMass Memorial Health Care, in including SNAP application assistance within the system of their Financial Benefit Counselors (FBC). The FBC's already assist patients in signing up for health insurance if they do not have any, which uses the same system as the

SNAP application. Working with Project Bread, the FBC's were trained in SNAP application assistance and have integrated it into their work, giving the community yet another potential point of entry into the SNAP system. Project Bread was able to take this work one step further and work with UMass Memorial to develop the guidebook, *How Hospitals Can Help*, which outlines ways for the healthcare system to engage in fighting hunger.



To further enhance SNAP participation throughout Worcester, Hunger-Free & Healthy has convened a working group of SNAP outreach workers, agencies, institutions and the Department of Transitional Assistance (DTA). By bringing together partners that are doing SNAP application assistance and outreach, as well as local or statewide advocacy on SNAP related policy issues, we have developed a stronger sense of collaboration and communication between organizations and the state agencies. The group meets quarterly to discuss various initiatives in outreach and policy, as well as brainstorm to overcome any difficulties and to share lessons learned and best practices.

In a report released by the United States Department of Agriculture in October of 2011, Massachusetts had risen to 10<sup>th</sup> in the nation in SNAP participation rates, with nearly 77.6% of eligible households participating in the program.<sup>24</sup> While the work of Hunger-Free & Healthy is not solely responsible for this jump in ranking, and partners like Project Bread have been very instrumental in the increase throughout the state, the Hunger-Free & Healthy model of a mobile SNAP Outreach Worker has been very successful and is a key component in creating community food security in Worcester.

### **Farmers' Markets**

The Farmers' Markets established through Hunger-Free & Healthy have provided a source of quality, local, affordable produce for areas with high concentrations of low-income households. During the HFH project period, two new farmers' markets were developed in Worcester; one in Main South and one in Great Brook Valley. Both the Main South and Great Brook Valley neighborhoods are in areas that have been identified as having low supermarket sales, a high prevalence of low-income households, and high incidence of diet-related illness and death.<sup>25</sup> In addition, the USDA has identified both neighborhoods as "food deserts"<sup>26</sup>. A food desert is defined as a "low-income census tract where a substantial number or share of residents have limited access to a supermarket or large grocery store"<sup>27</sup>.

---

<sup>24</sup> Calculating the SNAP Program Access Index: A Step by Step Guide 2010. United States Department of Agriculture, October 2011. <http://www.fns.usda.gov/ora/menu/Published/snap/FILES/Other/PAI2010.pdf>

<sup>25</sup> *Food for Every Child: The need for more supermarkets in Massachusetts*. The Food Trust, 2010. <http://www.thefoodtrust.org/php/programs/massachusetts.php>

<sup>26</sup> USDA Food Desert Locator. [www.ers.usda.gov/data/fooddesert/about.html](http://www.ers.usda.gov/data/fooddesert/about.html).

<sup>27</sup> A "low-income census tract" is one that must have either a poverty rate of 20% or higher or a median family income at or below 80% of the area's median family income. A low-access community is at least 500 people and/or 33% of the census tract's population resides more than one mile from a supermarket or large grocery store.

The Main South Farmer's Market was piloted in 2008 by the Regional Environmental Council (REC), and opened for its first full season in 2009 as part of Hunger-Free & Healthy. From 2009 to 2011 it was open every Saturday from June through October. During the first several months of 2009 it was located at the corner of Benefit Street and Main Street, and towards the end of the 2009 season it relocated to the parking lot of the YMCA Central Branch, just a few blocks away, also on Main Street. The REC manages all aspects of the market and maintains active partnerships with Project Bread, the YMCA, the Worcester Art Museum and WIC.

During the 2009 season at the Main South market, 5 produce farms, 1 dairy farm, 1 baker, 2 restaurants and 1 apiary participated in the market. Total sales for the season were approximately \$14,000, with the average weekly farm sales ranging from \$350 to \$500. The total WIC (Women Infants and Children) and Senior Coupons redeemed were \$3,249 and the total SNAP sales were \$574. Wholesome Wave Foundation provided \$331 in match funds for consumers who shopped with SNAP benefits, enabling a customer to purchase \$10 worth of goods for \$5. This incentive is important for making fresh, local food accessible to people with limited economic means.

In 2010, HFH worked with the REC to open the Great Brook Valley Farmers' Market, which also ran on Saturdays. The two markets are on opposite sides of the city, thus there was no competition between the markets. The two markets combined attracted an average of 240 people per week and generated an average of \$500 per farmer per week in sales, with total sales nearly reaching \$30,000 for the season. Roughly 70% of patrons that responded to the mid-season survey indicated that they eat more fruits and vegetables as a result of the Farmers' Market. The two markets combined had a total of \$5,685 in SNAP sales and about \$3,700 in WIC and Senior Coupon sales. Also, 90% of people surveyed felt that the prices at the Farmers' Market were either lower or about the same as their local supermarkets. A total of 64% of people surveyed also indicated that they shopped on either a weekly or monthly basis at the market.

2011 proved to be an even more active year for the REC's Main South Farmers' Market. However, due to unforeseen challenges with the market in Great Brook Valley, REC transitioned that market into a mobile market late in the season to increase opportunities for low-income people to purchase fresh produce. In addition to these two on-going markets, the REC began to receive many requests for establishing farmers markets in other areas of the city. In order to respond to demand without over-stretching their capacity they began to run "mini-markets" at different locations in the city. These mini-markets were one-day farmers'

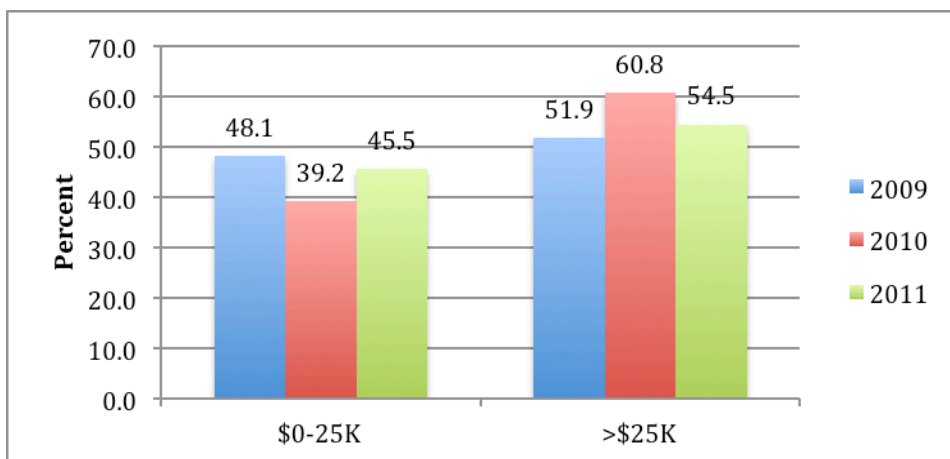
markets done in collaboration with an organization or agency. The produce sold came from the REC's own YouthGROW farms as well as from other local farms that were vendors at the other REC farmers' markets. These mobile markets provided an opportunity for residents to redeem WIC Coupons, Senior Coupons, as well as purchase produce with cash, credit/debit, or SNAP benefits. Mini-markets were implemented at the Worcester Housing Authority senior/disabled housing site at 40 Belmont St., at AIDS Project Worcester in Green Island, at Crompton Park, and at the Worcester Senior Center.

In 2011 the Main South, Great Brook Valley and Mini-markets combined generated \$33,742 in market sales. This included \$6,788 in EBT benefits, \$6,680 in WIC Coupons and \$1,630 in Senior Coupons. Most of this revenue came from the Main South Market, which generated nearly \$32,000 in sales, with \$6,392 from SNAP, \$5960 from WIC Coupons and an additional \$1204 from Senior Coupons.

On a survey administered at the Main South market, 38% of people came to the market specifically because they could use their benefits. In addition, 50% of shoppers had young children living at home, suggesting a positive impact on children's nutrition. Fifty percent of shoppers self-identified as White, while 50% identified as non-White, indicating that the market also reached a diverse population.

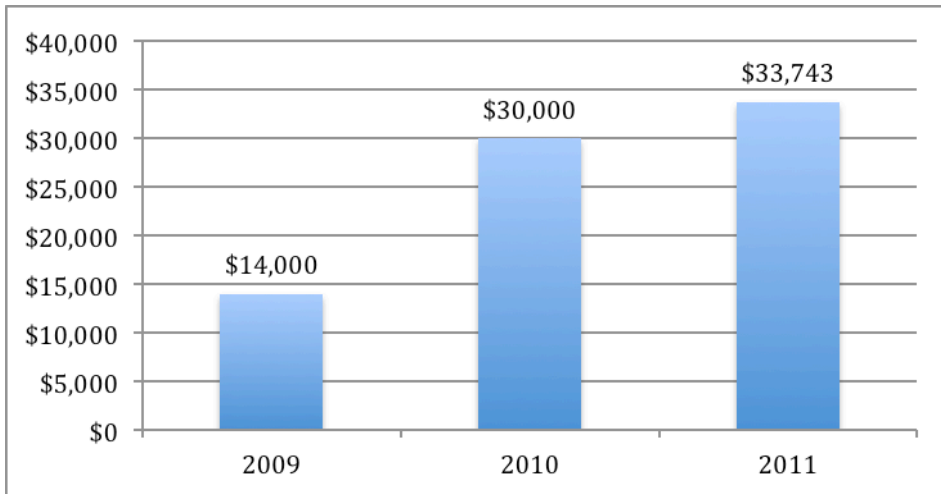
The growth in sales from all markets over the 3 years of operation is shown in Figure 3.

**Figure 3. Total Market Sales**



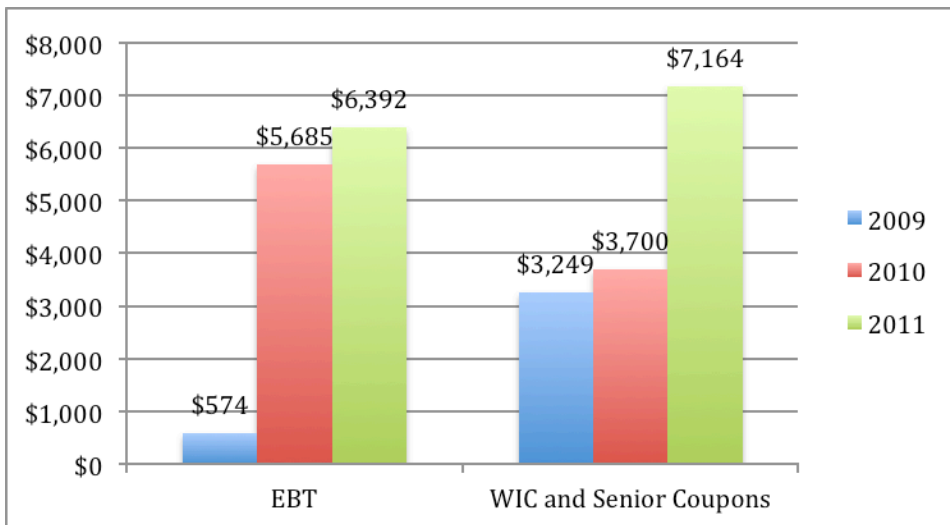
At the same time, a significant number of low-income people were consistently able to take advantage of the market during all three years (Figure 4).

**Figure 4. Income Distribution of Shoppers 2009-2011**



In addition, the amount of food purchased through EBT, WIC and Senior Coupons increased each season the market was operational, further illustrating the success of this model. (Figure 5).

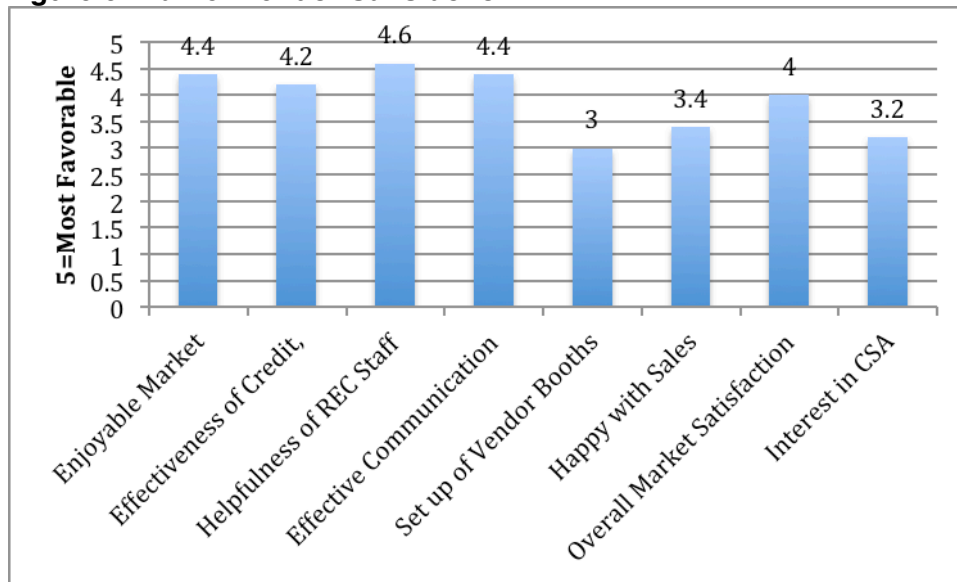
**Figure 5. Amount of Benefits Used 2009-2010**



Towards the end of the 2011 season, The REC Market Manager administered a short survey to 5 market vendors. Overall, the vendors were pleased with the market. Of the 5 vendors, all gave favorable ratings for enjoying the market, effectiveness of the Debit/Credit/EBT

system, helpfulness of the REC staff, and were neutral or somewhat satisfied with sales. They commented that the overall atmosphere was so much fun that making a lot of money was less important. Regarding the booth set up, one vendor was dissatisfied, three were neutral, and one was somewhat satisfied. One vendor commented on the awkward logistics for unloading and loading the truck. Four vendors (80%) said they would like to see ways to draw in more customers in the coming season. Interest in starting a market wide CSA (community supported agriculture or market share) varied widely. Two vendors were not interested, one was neutral and two vendors were highly interested. (Figure 6).

**Figure 6. Market Vendor Satisfaction**



In open-ended questions, vendors expressed appreciation for the diversity of people as well as venues and interest in participating in a mobile market in 2012. Suggestions included more organization for the booths, making the parking lot more accessible and obtaining more variety in the music and entertainment.

### **Educational Gardens**

An important piece of developing community food security is giving people a chance to reconnect with growing and preparing food. Many children in urban communities grow up without ever seeing food grow. In our fast-paced society convenience foods that come from fast food restaurants, frozen meals, and canned or prepared meals are often the norm. Because these convenience foods are fast and cheap, busy parents and families may opt for them in order to save on time and money. However, learning how to grow and prepare healthy, inexpensive meals from simple, whole ingredients saves money and promotes health. For this reason educational gardens that reach both adults and youth are an important component of creating a hunger-free and healthy community.

The Educational Gardens component began with the Worcester Educational Garden (WE Garden) at the Fanning Building Adult Learning Center, which is located in the downtown area of Worcester. This garden was built and planted in 2009 by the REC YouthGROW participants. After its first short, but successful growing season, teachers, students and staff from the Fanning Building Adult Learning Center became more interested in being involved. During the winter of 2010 Lutheran Social Services (LSS) and New Entry Sustainable Farming (NESF) conducted a pilot winter garden, engaging students and teachers in the wonders of growing greens over the cold, snowy winter months. When spring came, there were edible greens already waiting under the make-shift row covers that had been used. Refugee clients of the LSS program harvested and sold the greens to the Artichoke Food Cooperative.

While the winter growing project was happening, a Garden Committee of teachers and staff from the Fanning developed and planned the spring planting of the garden. Teachers engaged students in measuring the beds, deciding what to grow and planting seedlings that grew in the classrooms. In the late spring, the various project partners, including REC, LSS, NESF and HFH provided short workshops on gardening for all the classes, leading them each in planting, weeding and watering the garden. Because many students at the Fanning have emigrated from other countries where agriculture is a more prominent occupation and way of life, many students had agricultural knowledge that they were able to apply, while learning about this growing climate.

The WE Garden has been an important resource for both staff and students. Approximately six staff members and their classes of roughly ten students each participated in preparation, planting, maintenance, and harvesting the garden during 2010 and 2011. Seven students actively and consistently maintained the garden during the summer months, while at least seven others came to the garden to work at least twice. Students and staff participated in a fall planting of garlic and spinach with REC's School Gardens Coordinator in the fall of 2010. These crops were ready in early spring and helped jumpstart the gardens into action.

After seeing the excitement generated by the WE Garden in 2009, HFH worked to incorporate more school gardens into its implementation process. In 2010, HFH funded the REC to establish a School Gardens program where outreach was done to Worcester Public Schools that had established school gardens, as well as to schools that were interested in developing new school gardens. In 2010 seven new school gardens were constructed at six schools and one community center that runs an afterschool program; these included Jacob Hiatt, Belmont Elementary, Columbus Park, South High Community School, Doherty

Memorial High School, Mill Swan Head Start and Quinsigamond Village Community Center. All the gardens were outfitted with signage and garden tools. Four of the gardens were built and planted in the spring of 2010 and had successful seasons where students, teachers and community members were involved. Three gardens were built in the fall of 2010 in preparation for a planting in spring of 2011. All seven gardens engaged in a fall planting and spring planning.

In 2010 a survey was developed by the HFH evaluation team and distributed to all the known Worcester Public Schools with gardens. A total of 17 surveys were returned from 7 schools. Four schools were new to school gardens that year (Columbus Park, Doherty Memorial HS, Jacob Hiatt and South HS), while three were schools that had previously established school gardens (Elm Park, Sullivan Middle and the WE Garden). The surveys were filled out by a variety of people, including principals, custodians, teachers, secretaries and youth programming staff.

The data from the surveys let us know that:

- 3 schools had afterschool programs that can use the garden
- The two high schools had summer programs that could use garden
- 3 schools asked for assistance with curriculum development
- 3 schools asked for technical assistance with setting up the garden
- All needed help with seedlings, tools and equipment
- 3 schools wanted to use the garden to enhance curriculum
- 3 schools wanted to create outdoor classrooms
- All wanted to provide hands-on, experiential learning
- Only 1 school (Jacob Hiatt) checked “encourage healthy eating” as a reason to have the garden; but South High listed “improve nutrition” as well
- Schools interested in expanding gardens included: Elm Park, Jacob Hiatt, South High School and Sullivan Middle School.

The REC School Gardens Coordinator shared some of her successes in the first year of planting the four new gardens in 2010: A 5th grade teacher at Jacob Hiatt has used the garden to engage roughly 20 students. Fifteen students from her class helped to build the garden, and planted it before the end of the school year. During the summer, eight students regularly watered and weeded the garden. At Doherty High School, the very active afterschool program titled Promoting Exercise And Continuous Health (PEACH) enjoyed a bountiful summer’s harvest. A group of twenty students built and maintained the garden. During the summer they worked with fourteen children from the Elm Park Childcare Center to harvest produce. The garden at South High Community School attracted unexpected attention from many of the elderly neighbors that frequently walk around the track during the

summer. As a result of their obvious support and desire to be a part of the garden the students decided to deliver their summer's harvest to their enthusiastic neighbors, some of whom self-identified as not being able to afford to buy enough fruits and vegetables.

2011 was even more productive due to the organized efforts of the REC's School Gardens Coordinator and funding from AmericorpsVISTA that enabled the REC to have a full-time staff person as the School Gardens Coordinator. During the spring, she recruited an additional 5 schools to build gardens, bringing the total number of gardens to 14 (13 schools and 1 community center) (Table 1).

**Table 1. School Gardens Developed by the Regional Environmental Council as part of Hunger-Free and Healthy**

Spring 2011	Belmont Street Community School
	Grafton Street School
	Greendale Head Start
	May Street School
	Worcester Technical High School
Fall 2010	Mill Swan A & B Head Start
	Quinsigamond Village Community Center
Spring 2010	Columbus Park Elementary School
	Doherty Memorial High School
	Jacob Hiatt Elementary School
	South High School
2009 and earlier	Goddard School of Science & Technology
	Sullivan Middle School
	Worcester Educational Garden

To assist existing school gardens, as well as schools thinking about starting a garden, the REC developed a School Gardens Project Coordinator Packet that was distributed in March 2011. This manual contained helpful information and suggestions, such as what to consider in starting a new garden, how to plan, dates to start seedlings and planting, seedlings available through the REC, transplanting, growing seasons for various vegetables, information about blight and how to manage it, harvesting and cleanup, and a section on food justice. Contact information, both for REC and for all school garden projects was also listed.



Between April and May 2011, the School Garden Coordinator met with every school garden committee to discuss individual schools' needs, to plan and organize "build days" as appropriate, plan garden layouts, identify specific seeds/seedlings needed and discuss ongoing maintenance, both during the school year and summer months. By the end of each meeting, task lists and timelines were developed and all participants were clear on exactly what was needed, what would happen and when, and who was responsible.

In addition, the Garden Coordinator developed month-by-month calendars from April through December for schools to record their plans. Each month was an 8 X 11 standard calendar with space to make notes, overall instructions for that month, helpful tips, block-out times for school vacations/holidays (for planning purposes) and local events related to gardening. A sample of messages from school garden calendars can be found in Appendix 2.

The REC supplied seeds and seedlings to schools for a wide variety of vegetables, including:

- |   |                                       |                               |
|---|---------------------------------------|-------------------------------|
| • Beans   | • Broccoli                            | • Brussel Sprouts             |
| • Butternut squash                                      | • Cabbage                             | • Carrots                     |
| • Cucumbers   | • Eggplant                            | • Garlic                      |
| • Herbs: Basil, Parsley, Mint, Oregano, Thyme, Cilantro | • Kale, Red Russian Kale              | • Lettuce                     |
| • Onions  | • Peppers, Amish Peppers, Hot Peppers | • Potatoes                    |
| • Pumpkins  | • Radish                              | • Slicing and Cherry Tomatoes |
| • Spinach   | • Sugar Snap Peas                     | • Summer squash               |
| • Winter squash   | • Yams                                |                               |

Evaluators conducted key informant interviews in the fall of 2011 to determine progress over the past year, challenges, how the gardens been utilized and how the garden might be sustained over time. Representatives from all schools were contacted to participate. Seven people from 6 different schools<sup>28</sup> shared their thoughts, including 3 teachers, a secretary, a principal, an interim director, and a department head. Except for the principal (who had authorized and supported the garden), all others were garden coordinators. All respondents were enthusiastic about their garden experiences and credited the REC for the assistance

*It's just been a great thing because many of the students have never had vegetables. It's new to kids - We're an inner city school (90% free lunch), kids come from poverty and don't have vegetables in their diet. – School Teacher*

<sup>28</sup> Participating schools included Belmont Community School, Columbus Park Elementary School, Doherty Memorial High School, Jacob Hiatt Elementary School, Worcester Technical High School and Quinsigamond Village Community Center.

provided. Most important to their success was help with planning and thinking through all the necessary steps, and provision of supplies, including building materials, compost, seedlings and tools.

When describing the impact that the gardens have on students, the most common observation was that the hands-on and experiential learning about vegetables was completely new and quite powerful for many of their

students. Students were excited about the process and gained confidence through working in the gardens. Both students and teachers learned about vegetables and nutrition. They enjoyed

*Two weeks ago, I took 20 kids to the apple orchard in Charlton, MA and they picked 2400 pounds of apples for the Worcester County Food Bank. So I not only depend on the garden, but I need to get them out of the classroom and into the community and seeing the bigger picture. – Health Teacher*

harvesting and tasting the produce. Several commented that this was especially important for inner city children who had no idea where food came from and were unfamiliar with common vegetables such as green beans or cucumbers. Teachers consistently commented that the students had been unaware that freshly picked vegetables were delicious!

*...they eat them (green beans/tomatoes) right off the vines - they had never eaten anything that fresh. They are surprised to find out that a raw green bean is as tasty and sweet as a candy bar. That was an awakening - for me too! It turns kids on to vegetables. – School Teacher*

School gardens impacted other aspects of the schools as well. For example, the National Association of Schools and Colleges recently evaluated Doherty Memorial High School. In the component on school culture and leadership, the school used the work of the garden as a way to demonstrate strong communication, collaboration, and to expand students' thinking about community. An after-school club at Doherty Memorial High School called

PEACH (Promoting Exercise And Continuous Health) manages the garden and gave one bed to a nearby child care center. The center brought their 3-5 year old children over to plant and pick, and incorporated their experiences into their reading and writing curriculum. The garden is also a gateway to increase students' awareness about agriculture and civic engagement. The PEACH club, for instance, expanded the experience by picking apples for Community Harvest Project in Grafton, which all goes to the Worcester County Food Bank. In other schools, food was donated to the cafeteria, sent home with students to share with their families, or used for fundraisers to support a cause.

*We had the hose outside with the nozzle and some people said, oh, that's going to get stolen or destroyed. I said no, I don't think so. People respect school and garden, they know the hard work that's been put into it and it's never been disturbed - People that walk by always comment. They're very proud of it. – School Teacher*

School gardens also impacted surrounding neighborhoods. Community people expressed pleasure and pride in the schools' work. Although there were a few challenges with people from the outside picking the vegetables, for the most part, neighbors and passers-by admired the gardens, but did not disturb them.

Curriculum integration is crucial to the gardens’ sustainability, as schools strive to abide by “every minute counts.” This was recognized by all respondents, and was consistent with survey results from the previous year. Schools and the REC have discussed at length opportunities for integrating school gardens into curricula based on Massachusetts Curriculum Frameworks. This year, teachers have begun to formulate ideas on integrating the garden into the curriculum, including science, math, English/literature/writing, health, community and environmental health, and growth and development. School gardens were incorporated into vocational studies as well. This was beautifully expressed by one teacher:

*... There’s a lot that we can take from there. You know, on those beautiful mornings when the sun comes up and the dew is going down and the colors of the vegetables and the crops are coming in and the insects are there...that’s an English essay! If I was an English teacher, I’d have my kids out there! If I was an art teacher, I’d be out there! Get out in the sunlight and fresh air and paint something!... I want to make this real.” – School Teacher*

Table 2. illustrates ideas for curriculum integration, some of which have already been implemented.

The REC Garden Coordinator also brainstormed with teachers about possible strategies to increase enthusiasm and gain wider acceptance school-wide. For example, in one school, she will work with the school garden committee coordinator to present ideas to the principal that demonstrate the garden’s alignment with curriculum frameworks. Another school just received a new science curriculum, and the Garden Committee Coordinator, a 3<sup>rd</sup> grade teacher at the school, has already begun to look for ways to integrate the garden into the curriculum.

*Children that have participated in putting the dirt in are not the same ones picking [the vegetables] this year. That’s the sad thing. Because my third graders last year were the ones building it, and my third graders this year are not the same children getting to pick them. – School Teacher*

Evaluators questioned interviewees about challenges they experienced. Although teachers were finding ways to integrate the garden into their curriculum as discussed

above, this was still a major challenge for most. This is at least partially due to the timing of the garden season compared to the timing of various classes. Health classes at the high school, for example, are 20 weeks long and may not coincide with seasonal activities related to the garden. Elementary school teachers did find ways in which to integrate the garden into various lessons. However, when children were involved in spring planning and planting, those same children were not necessarily the ones to benefit from harvesting and putting the garden to bed in the fall, thus losing opportunities for continuity and completing the cycle.

**Table 2. 2011 Utilization of School Gardens**

<b>English</b>
<ul style="list-style-type: none"> <li>• Literature: Teachers selected books related to vegetables and gardening <ul style="list-style-type: none"> <li>◦ Visits to the garden to observe, pick and taste made books come alive</li> </ul> </li> <li>• Children incorporated gardening experiences into stories and other writing assignments</li> </ul>
<b>Science</b>
<ul style="list-style-type: none"> <li>• Biology</li> <li>• Life cycles and growth</li> <li>• Meteorology, climate</li> <li>• Environmental studies</li> <li>• Development of observation skills</li> </ul>
<b>Math</b>
<ul style="list-style-type: none"> <li>• Measurements for building gardens, greenhouses (i.e., includes fractions, geometry)</li> </ul>
<b>Vocational studies</b>
<ul style="list-style-type: none"> <li>• Shop class built greenhouse (Doherty High School)</li> <li>• Juniors/seniors designed and implemented curriculum about seasons for preschool children (Worcester Technical High School)</li> <li>• Culinary class used fresh vegetables from their own garden in their restaurant (Worcester Technical High School)</li> <li>• Carpentry students participated in building gardens (Worcester Technical High School)</li> </ul>
<b>Health</b>
<ul style="list-style-type: none"> <li>• Nutrition</li> <li>• Community health</li> </ul>
<b>Civic engagement</b>
<ul style="list-style-type: none"> <li>• Donated food to food pantries and soup kitchens (Worcester County Food Bank and Mustard Seed)</li> <li>• Raised money to support school functions and donate to charities</li> </ul>
Other uses:
<b>After school activities</b>
<ul style="list-style-type: none"> <li>• Building</li> <li>• Planting</li> <li>• Maintenance</li> <li>• Harvest</li> </ul>
<b>Summer programs</b>
<ul style="list-style-type: none"> <li>• Summer school programs contribute by watering, weeding, harvesting</li> <li>• Food production</li> </ul>

Those starting new gardens expressed some disappointment in not being able to use the garden for curriculum because they started too late. Insufficient space was also cited as a challenge as it limited the number of students who could participate. In spite of these challenges, teachers continue to seek solutions and try different ideas. Enthusiasm and support for school gardens in general appeared to be increasing.

*Some of the classrooms were able to utilize the garden at the beginning of this year, but not to the extent that we would have liked. We only have 3 beds, so I'm not sure how I'm going to break it down, but I'd like to go to each grade level and give them seed packets and have them actually physically start the seed in March with children and grow them on the windowsill. – School Teacher*

Respondents' outlook on sustainability of the gardens were generally positive. Because of the support from the REC and HFH, they had been able to accomplish the most intensive parts of the project: initial planning, organizing, building, obtaining supplies and seeds/seedlings. Compost was one of the most important contributions and was mentioned by nearly everyone. People from at least 3 schools said they would also like to expand their current gardens so that more students could be involved. Schools also appeared to have abundant support in ongoing maintenance and had already thought about how to finance future expenses (i.e., sell plants as fundraisers, obtain donations from both individuals and retailers). Summer months were covered by custodians, summer school programs, parent volunteers and the garden coordinators themselves. Several people mentioned that creating ownership among both students and staff by promoting direct involvement was important to sustainability. All those who were directly involved in the school gardens expressed interest in getting together with others to ask each other questions, and share ideas and best practices. The biggest challenge in terms of long-term sustainability was in keeping up momentum. Because of limited time and resources, as well as concurrent demands, it is difficult to get sustained commitment.

As HFH comes to a close in 2012, REC's School Gardens Coordinator and HFH staff will continue to work with Worcester Public Schools to develop additional curriculum support for teachers wanting to integrate the garden into their lesson planning. This will have far-reaching effects on promoting sustainability, as school gardens become an integral part of meeting requirements for curriculum frameworks throughout the K-12 system.

### **Cooking Classes**

Developing the skills to cook healthy foods that taste good and are inexpensive to prepare is a vital piece to a family's and a community's food security. Cooking meals from whole, simple ingredients is often less expensive and much more healthy than eating frozen meals, fast food or meals in restaurants. Many people that have grown up in the U.S. over the past generation have not been exposed to skills and habits necessary to cook from scratch.

Meanwhile people are immigrating to the U.S. from countries around the world where they often learned the skills of preparing meals from whole food ingredients. As they arrive in the U.S. where our large supermarkets are full of many processed foods, and fast foods are

*Well I didn't go to McDonalds for 4 weeks and that was amazing for me. Before we ate pancakes two to three times a week and we reduced to 1 time and 3 weeks – Participant 2011*

extremely popular, many often struggle with preparing affordable healthy meals that their bi-cultural children will enjoy. Because of this, HFH partnered early on with Cooking Matters (formerly

Operation Frontline), a nationally renowned nutrition-based cooking program that teaches low-income families, children and teens how to cook affordable, healthy meals, while also giving them the tools to navigate the complicated world of nutrition and food budgeting.

*This class has made a huge difference in my home and the health of my family. I find myself reading labels, eating whole grains, and making better decisions about the foods that I purchase. I am more confident in my kitchen. – Participant, 2010*

The Cooking Matters class series runs for six weeks, with classes taking place once a week for two hours. Participants must attend at least four classes to graduate from the series. Each class session is taught by volunteer professional chefs and nutritionists and explores a different nutrition topic, ranging from whole grains to fats, reading nutrition labels, proteins and more. Paired with each nutrition lesson is a hands-on cooking lesson where participants prepare and eat a balanced, healthy meal that costs roughly \$10 to make for a family of four. Participants take home the recipes of the day as well as the basic ingredients to replicate the meal at home. All graduates receive a copy of the Cooking Matters Book, which includes all the nutrition information covered in class as well as more than 60 recipes that are healthy and inexpensive to make.

*This class affected my life A LOT, because now I eat most healthy and I'm feeling so better. Moreover, I improved my English. Thanks! – Participant, 2011*

HFH worked with Cooking Matters to offer classes during the pilot in 2008, and during the implementation phase in 2009 - 2011. The classes were so successful that the REC became a satellite partner of Cooking Matters at the end of 2010 and has integrated the classes into their Food Justice programming. This is supported by a small amount of funding from HFH in 2011 as well as a Massachusetts Promise Fellow, which provided the staffing necessary to coordinate classes. Because of the growing demand for classes throughout the region, Cooking Matters hired a full-time staff person to continue to develop the Cooking Matters program throughout central and western Massachusetts. This staff person paired with the MA Promise Fellow position housed at the REC will provide ongoing sustainability for the classes over the coming years.

The Cooking Matters class series of has graduated 161 adults youth since 2008 and has maintained a 87% graduation rate. During 2008 – August 2010, the classes were held exclusively at the Fanning Building kitchen, which offers an ideal educational space equipped with multiple stoves and large table space. However, in order to expand the reach of the classes, during the Fall and Winter of 2010 we offered a class at Plumley Village, a low-income housing complex, and at the Worcester Housing Authority property at 40 Belmont, which offers subsidized housing to elderly and people with disabilities. This model of bringing the classes “on the road” was extremely successful and continued throughout 2011. Table 3 lists all of the locations classes have been offered since 2008.

**Table 3. Class location and graduation rate**

<b>Class Location</b>	<b>Number of classes at this location (2008-2011)</b>	<b>Graduation Rate</b>
Elm Park Community School (Pilot Year Only)	2	94%
Fanning Building/Adult Learning Center	10	72%
Plumley Village	1	75%
Worcester Housing Authority – 40 Belmont St.	1	92%
Boys and Girls Club (Main South location)	1	82%
Worcester Housing Authority – Great Brook Valley	2	95%
REC YouthGROW Program	1	100%

From a random sample of students that participated during 2011, survey data show that by the end of the course, graduates reported that:

- 100% would recommend Cooking Matters to a friend
- 93% made a Cooking Matters recipe at home
- 90% improved their cooking skills
- 80% are eating more whole grains
- 73% are eating more vegetables
- 62% are eating more fruits
- 49% are eating more lean meats
- 47% are eating more low-fat or fat-free dairy

From the participant surveys filled out between 2008-2011, we have been able to collect demographic data on class participants. Because not all participants answer each question in the survey, the total numbers and percentages are based on the number of responses, which varies by question. Table 4. shows adult participants and Table 5. shows youth participants.

**Table 4. Adult Demographics: Cooking Matters Participants**

	Totals	Percentage
<b>Sex</b>		
Male	9	6%
Female	144	94%
<b>Age</b>		
Under 18	1	1%
18-29	33	22%
30-39	42	28%
40-49	41	27%
50-59	22	15%
60 and over	11	7%
<b>Ethnicity</b>		
Non-Hispanic/Non-Latino	23	27%
Hispanic/Latino	61	73%
<b>Race</b>		
White	78	64%
Black/African American	25	20%
Asian	0	0%
Native Hawaiian/Pacific Islander	0	0%
American Indian	4	3%
Other	15	12%
<b>Education</b>		
8th grade or less	7	5%
9th to 11th grade	22	15%
12th grade or GED	43	29%
Attended college	39	26%
Received degree	38	26%
<b>Participation in USDA Programs</b>		
WIC	37	14%
Food Stamps	92	35%
Free or Reduced Price School Meals	38	15%
Head Start	28	11%
Food Pantry or Commodities	41	16%
None of these programs	26	10%



**Table 5. Youth Demographics: Cooking Matters Participants**

	Totals	Percentage
<b>Sex</b>		
Male	5	19%
Female	21	81%
<b>Age</b>		
Under 13	17	65%
13-15	5	19%
16-17	2	8%
18-20	2	8%
<b>Ethnicity</b>		
Non-Hispanic/Non-Latino	13	59%
Hispanic/Latino	9	41%
<b>Race</b>		
White	10	34%
Black/African American	10	34%
Asian	3	10%
Native Hawaiian/Pacific Islander	0	0%
American Indian	0	0%
Other	6	21%
<b>Participation in USDA Programs</b>		
WIC	12	27%
Food Stamps	14	32%
Free or Reduced Price School Meals	15	34%
Head Start	2	5%
Food Pantry or Commodities	1	2%
None of these programs	0	0%

In combating hunger and food insecurity it is important to work on both an individual level and a systems approach level. While teaching healthy cooking skills alone may not solve issues of food access, coupling it with the systemic changes made through the HFH project areas of improving school food, increasing SNAP outreach, establishing farmers' markets, and establishing school gardens makes it an even more powerful strategy.

### **Policy Advocacy**

In order to clearly align our policy advocacy goals with the project-based work of HFH, a Policy Advocacy Working Group was established in 2010. Prior to 2010 the HFH Steering Committee explored ways to support state and federal policy initiatives and legislation. With

the formation of the Policy Advocacy Working Group, members and staff were able to dedicate more time to exploring the policy advocacy opportunities that existed at the federal, state, and local level.

During 2010 the working group went through a process of prioritizing policy initiatives organizing our advocacy efforts, beginning by working with a list of current policy initiatives in the state and federal legislature that were sponsored by project partners. This served as a starting point for the group (See Table 6).

**Table 6. 2010 Policy Priorities**

<b>Proposed Bill/Legislation</b>	<b>Partner Agencies leading advocacy</b>
2009 Child Nutrition and WIC Reauthorization Act	Food Research and Action Center (FRAC), Congressman McGovern's Office
HB 4255 An Act Establishing the Massachusetts Food Policy Council	Mass. Food Policy Alliance, Rep. Kulik's office
HB 101 An Act Providing Emergency Measures to Assist the Commonwealth's Fiscal Recovery (Section 13 & 32 only) / HB 2701 An Act to Establish a Wellness Trust	Project Bread, MA Public Health Assoc. (MPHA)
HB 448/Senate Bill 260 An Act to Promote Healthy School Meals	Project Bread and MPHA.
HB 4111 An Act Relative to School Nutrition	MPHA
HB 2107 An Act to Improve Public Contracting with Massachusetts Farmers	MPHA
HB 450 An Act Relative to the Public Health Impact of Commercialism in Schools	MPHA
(Line Item 4513-1111) State Funding for Obesity and Chronic Disease Prevention	MPHA
HB 3595 Trans Fat Bill	MPHA

During 2010 the Policy Working Group focused on the bills that were gaining the most momentum: the 2009 WIC and Child Nutrition Reauthorization, the Act to Establish the MA Food Policy Council, and the Act Relative to School Nutrition (which eventually contained the language of the Act to Improve Public Contracting with MA Farmers as well). The members of the working group, as well as the broader members of Hunger-Free & Healthy received "Action Alert" emails and updates from the HFH Project Manager throughout the legislative process, where they were instructed to call and email elected officials advocating for their support, as well as thanking them when they voted favorably.

The Child and WIC Nutrition Reauthorization (the Healthy and Hunger-Free Kids Act of 2010) was a long and arduous federal legislative process, during which Congressman McGovern fought tirelessly to support adequate funding and program support, as well as improved guidelines to support healthy school meals. In the end, the Healthy and Hunger-Free Kids Act of 2010 was partially funded through cuts to the SNAP program, something Congressman McGovern and many advocates, including the HFH partners, fought against. During 2011 when the new school meal guidelines were being established by USDA as part of the passed legislation, HFH provided testimony in support of strong regulations that supported whole grains, fresh fruits and vegetables, low-fat dairy, and more.

In the MA state legislature, members of HFH worked with partners to pass the Act to Establish a MA Food Policy Council and an Act Relative to School Nutrition. Both passed in the summer of 2010 after several years of advocacy by partners across the state. HFH participated in the advocacy through email “Action Alerts” to our network of partners, phone calls to legislators and participation in strategy planning sessions with groups such as the MA Food Policy Alliance (MFPA) and the MPHA. The Project Directors and Project Manager have participated in the implementation of both pieces of legislation, again in partnership with the MFPA and MPHA, as well as other partners across the state.

After the end of the 2010 legislative session, the Policy Working Group of HFH began to plan for the next round of policy priorities. After state representatives and senators filed legislation in early January 2011 and the Policy Working Group had a chance to assess our priorities locally as well as at the state and federal level, the group determined its 2011 priorities as shown in Table 7 (a detailed version appears in Appendix 2):

**Table 7: 2011 Policy Priorities**

<b>Policy Issue</b>	<b>Partners</b>
<b>Local</b>	
Worcester Public Schools Wellness Policy: Implementation	WPS Wellness Committee
Recess Before Lunch	
<b>State</b>	
The Act FRESH Campaign	MPHA
An Act Relative To Foods Containing Artificial Trans Fats (H.1494/S.1154)	American Hearth Association
<b>Federal</b>	
2012 Farm Bill	The Office of Congressman McGovern

With each item in our policy priority agenda we are working with an array of partners, both local and statewide to advocate for the passage and/or implementation of policy.

At the end of 2011 we determined that advocating for an increased state budget allocation to the MA Department of Transitional Assistance for the administration of the SNAP program was a major priority. Members of HFH are leading this effort in Worcester with our delegates, and partnering with the Food SNAP Coalition as well. This will continue to be a major advocacy focus for us through 2012.

### **Outreach and Communications**

Working to end hunger and establish more opportunities for healthy food access throughout the city requires a holistic approach that includes not only successful projects and policy and systems change, but also education and outreach. By communicating effectively about the issues and our work we are able to find potential partners, as well as develop a base of community support to move forward the systems, policy and environmental change needed. Hunger-Free & Healthy has done this by participating in various coalitions targeting hunger and health, distributing a quarterly electronic newsletter, developing social media outreach through Facebook, Twitter and a blog site, and working with local media for coverage of specific project strategies and events.

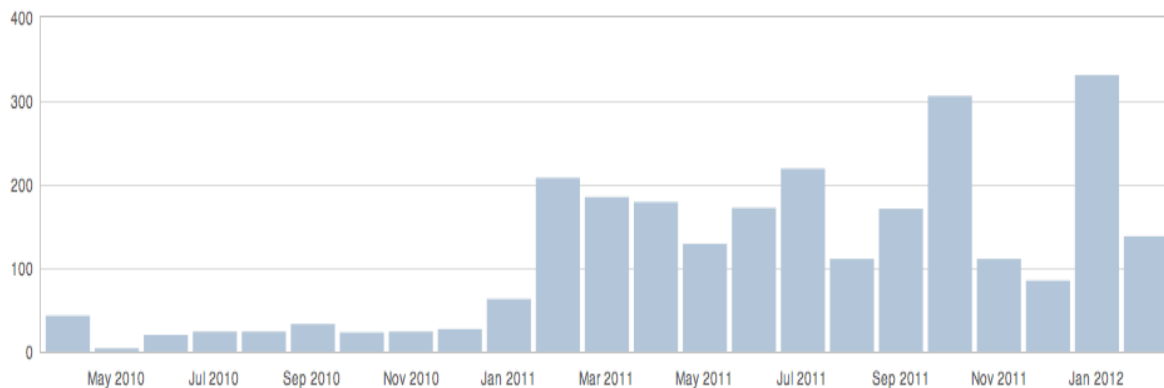
The HFH Project Manager and/or Project Directors participate in six coalitions dedicated to improving the health of the local Worcester community, as well as three statewide coalitions that focus on policy change. The local coalitions include Common Pathways Public Health and Medical Services group, Pioneering Healthier Communities, Mass in Motion, PASA Coalition, Men's Health Alliance, and the Health Equity Task Force. The statewide coalitions in which HFH participates are the Massachusetts Food Policy Alliance, Mass. Public Health Association Act FRESH Leadership Team and the Food SNAP Coalition. While each coalition has slightly different goals, there is a common thread of the affect of food access and diet on health. Participating in each coalition fosters communication and collaboration and lends strength to the larger movement of building a healthier Worcester.

During 2010 HFH began to engage with social media as a way to increase its presence in online communication. A Facebook page ("Hunger-Free & Healthy") was developed in early 2010 and more recently a Twitter account (@WorcesterFood). These social media sites are used to communicate about HFH specific projects and events, as well as general news and research regarding hunger, food security, and the food system. Over the course of 2010

an electronic newsletter was distributed to more than 100 people. At the end of 2010 a blog page was launched to support the quarterly newsletter ([www.hungerfreeandhealthy.wordpress.com](http://www.hungerfreeandhealthy.wordpress.com)). As the end of 2011 approached, the Facebook page and the Twitter account were renamed to reflect the parent organization of Hunger-Free & Healthy – the Worcester Food & Active Living Policy Council. This was done so that our online communications could continue in a way that did not confuse followers between the organization and the HFH project. Our current Facebook Page (Worcester Food & Active Living Policy Council) and our Twitter Page (@FoodnActiveLivin) are active. The Twitter account allowed us to transfer all “followers” to our new page, while on Facebook we had to create a new page and re-recruit followers. At the end of 2011 the old Hunger-Free & Healthy Facebook page had 179 followers; the current Worcester Food & Active Living Policy Council page has 50. The current Twitter page has 93 followers.

The Hunger-Free & Healthy blog page has steadily increased its readership since its launch in April 2010. Between April-December 2010, the blog was viewed a total of 222 times. During 2011, that number increased considerably to 1,939 views over the course of the year. In 2010 the blog averaged one view per day; in 2011 it averaged 5 views per day. Figure 7. depicts the monthly views of the blog from April 2010-January 2012.

**Figure 7. Monthly Blog Views**



## Sustainability

In order to affect long-term change, programs need to be sustainable. In addition to sustainable programming, systems, policy, and environmental change need to be key components in a sustainability plan. Our goal is to sustain HFH programs either by embedding them within partner organizations or through public policy change.

## **School Meals**

The changes that the Director of Child Nutrition in the Worcester Public Schools has made since the inception of the Hunger-Free & Healthy project have been done without funding support from HFH or other outside sources. The changes have slowly been integrated into their school food system, making them potentially very sustainable.

In addition, the passing of the School Nutrition Bill in the summer of 2010 creates policy that in many instances support the changes that the Worcester Public Schools had already made in improving the school food environment. Specific guidelines established by the Massachusetts Department of Public Health (DPH) through that legislation expand the idea of healthy school food beyond the cafeteria and the federal school breakfast and lunch; the regulation will provide guidance for food that is sold through fundraisers, is served at school events, in classroom parties, in vending machines, and in school stores. The new standards will help create an overall healthy school food environment that reinforces the healthfulness of the school breakfast and lunch. Those regulations will be implemented beginning in August 2012. The HFH Project Manager has been actively working with a statewide group that is collaborating to ensure effective communication and implementation of the standards. This group includes the MA DPH, the School Nutrition Association, the MA Dept. of Elementary and Secondary Education, the Association of School Business Managers, the Association of School Principals, the Association of School Superintendents, the Association of School Nurses, the MA Public Health Association, Harvard Pilgrim Health Care Foundation, Boston Public Health Commission, and others.

Locally, changes were made to the Worcester Public School Wellness Policy during 2010-2011. The changes reflect much of what was passed through the School Nutrition Bill, with an overall focus of creating a healthy school food environment, in the cafeteria, in the classroom, and throughout the school. The HFH Project Manager worked with the School Health Council to develop a clear implementation and monitoring plan to help the district collect both district-wide and school-based information on the successes and challenges in the implementation of the updated Wellness Policy. The HFH Project Manager will continue to participate in the School Health Council to support the implementation and monitoring of the policy, as well as the coming implementation of the statewide school nutrition standards.

## **SNAP Outreach**

In order to sustain both the good outreach work and the relationships that have come out of this component of the project, a SNAP Outreach Working Group was established in early 2010 and continues to the present. It includes a number of community partners, including

UMass Memorial Health Care, Project Bread, Worcester State University, Catholic Charities, the Worcester County Food Bank and the Department of Transitional Assistance. The group collaborates to overcome barriers in the application process, identify effective outreach strategies and share information regarding best practices, policy changes and resources. In 2010 language was worked into the MA state budget that will allow non-profit organizations conducting SNAP application assistance to be eligible for Federal reimbursement. This greatly increases the ability of an organization to take on a more permanent SNAP Outreach position within their organization. Currently Project Bread and the Worcester County Food Bank are collaborating to maintain a SNAP Outreach Worker in Worcester, using reimbursement funds from the USDA. Beyond 2012 the two organizations intend to explore ways to collaborate to maintain that important SNAP Outreach presence.

In addition to sustaining an outreach worker, a key component in maintaining good SNAP participation during this continued time of economic challenge is the ability of the Department of Transitional Assistance (DTA) to continue to administer the SNAP program amidst increasing caseloads and state-level budget cuts. The SNAP program is a federal program, with all client benefits coming from the federal government; yet the program is administered with 50% state monies and 50% federal monies. Over the past five years the caseload has increased 300%, while the administrative budget for the DTA has decreased 30%. This has resulted in larger than manageable caseloads for DTA workers (averaging 800 cases per worker) and outdated technology systems that result in lost paperwork, duplicate applications, wrongly denied benefits, as well as frustrated and overwhelmed caseworkers and clients alike. Members of the HFH project began actively advocating to increase state funding for the administration of the SNAP program in the fall of 2011, prior to the beginning of the Fiscal Year (FY) 2013 budget process. This included developing a letter addressed to Executive Office of Health and Human Services Secretary Dr. JudyAnn Bigby and enlisting the support of Congressman James McGovern and local Worcester Representatives Jim O'Day, Vincent Pedone, John Fresolo, John Mahoney, and Senators Michael Moore and Harriette Chandler. The members will continue to be active advocates on this issue throughout the budget process.

### **Farmers' Markets**

The REC, the primary partner in the farmers' market program, is collaborating with many community partners to develop the continued viability, efficacy, and sustainability of the markets through partnerships and business planning. The REC is committed to bringing healthy, affordable food to communities that lack access. Because of its inherent mission-driven nature, the REC will likely require ongoing funding from outside sources for some

time, as do most markets in low-income communities.<sup>29</sup> Given the early success of the markets, the steady increase in sales, we are confident that the REC will continue to attract the attention of funders.

In 2011 the REC was successful in securing new multi-year funding, with a portion of this new funding going to support the farmers' market program. This included a 2-year commitment from United Way of Central MA and a 3-year commitment from the USDA Community Food Project Competitive Grants Program. This new funding will cover a portion of the total farmers' market program budget over the next 3 years of program development. In addition, the REC is also implementing a corporate sponsorship campaign for the 2012 season (piloted in 2011) to supplement grant funding. The REC has had long-standing success in attracting corporate sponsorship to its Annual Earth Day Cleanup program and to their Slow Food Gala and they anticipate similar success in attracting sponsors to the farmers' market program. In 2010-2011 REC staff also worked in partnership with WPI students and faculty to assess best practices for financial sustainability of the market and to create a brief business plan for the program. In 2012 the REC intends to seek an additional partnership with a business program at an area university to build a more robust business plan from this initial effort.

For the 2012 season the REC will continue to expand and improve the full-season Main South Farmers' Market with continued in-kind support from the YMCA to use their facilities. Efforts are underway to increase the number and diversity of vendors as well as the number of special events and educational components of the market. A marketing plan will once again include signage, advertising (via media sponsorships from print, television and radio outlets), grassroots door-to-door canvassing, flyering and tabling initiatives. This year the YMCA has agreed to move the market to the YMCA Family Park on Murray Ave behind their main building as both vendors and customers provided feedback that they favor this location.

In 2012 the Great Brook Valley market and the 1-day "mini-market" initiative will transition to a regularly-scheduled "mobile market"—utilizing a van donated by the Worcester Regional Transit Authority in 2011 for this purpose — with regular stops 2 days per week at up to 10 locations across the city. These stops will include Great Brook Valley and several of the successful mini-market locations from 2011 (e.g., Plumley Village, Crompton Park, etc.) in addition to some new locations. This will enable the program to reach many more food-insecure residents and neighborhoods without exceeding the REC's human and financial resources capacity. Several vendors are interested in supplying produce to be sold via the mobile market.

---

<sup>29</sup> Fisher, A. Hot Peppers and Parking Lot Peaches: Evaluating Farmers' Markets in Low-Income Communities. Community Food Security Coalition, 1999.



Figure 8. displays the projected revenue of the REC’s YouthGROW booth located at the Main South Farmers’ Market, a piece of the overall financial sustainability and growth of the market.

**Figure 8. YouthGROW Booth Project Revenue**

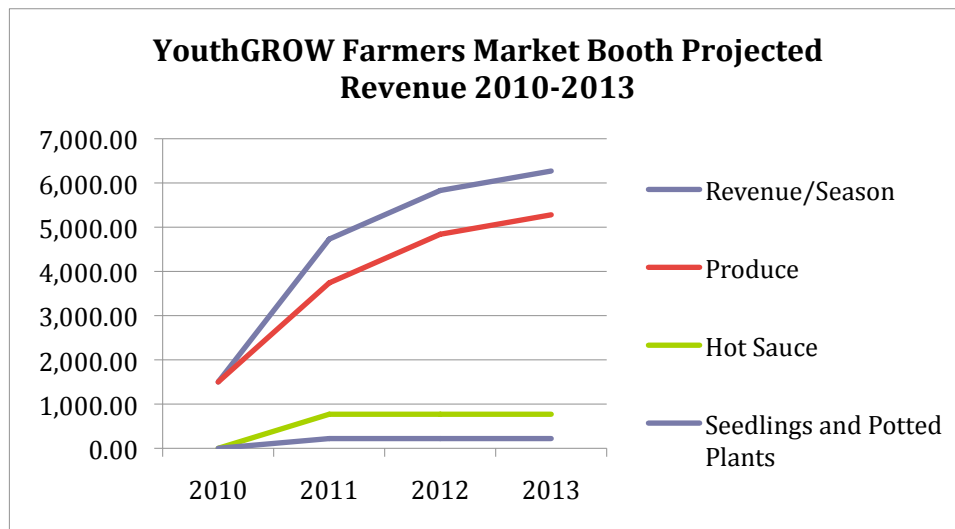
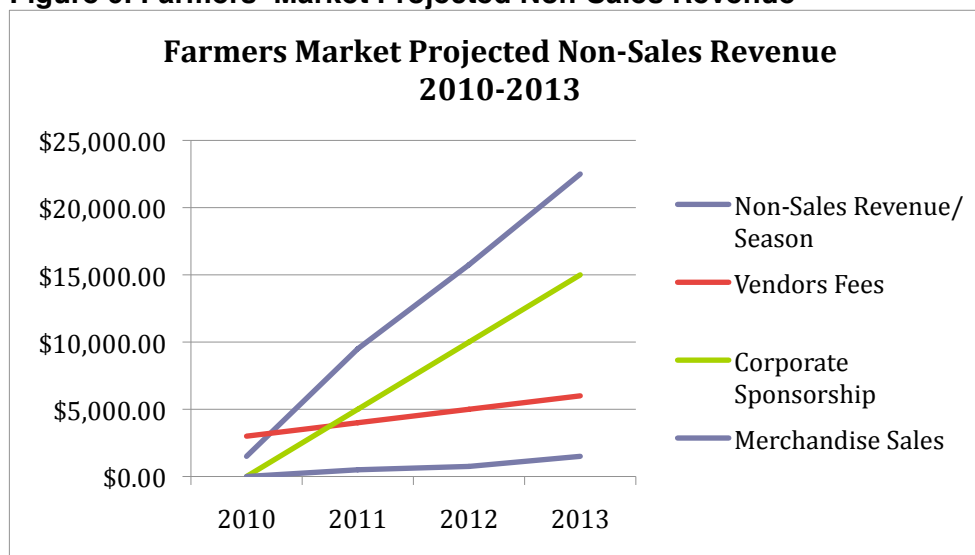


Figure 9. below displays the projected non-sales revenue of the REC Farmers’ Market program, which includes vendor fees, corporate sponsorship and merchandise sales.

**Figure 9. Farmers’ Market Projected Non-Sales Revenue**



### **Cooking Classes**

The Regional Environmental Council became a satellite partner of Cooking Matters/Share Our Strength Massachusetts in 2010 and began coordinating classes independently at the start of 2011. The REC obtained funding from the Massachusetts Promise Fellows, a program of AmeriCorps, to staff coordination of those classes. Funding was once again obtained for 2012 and is currently being sought for 2013 to continue that role and position. By incorporating the cooking classes into their Food Justice programming, the REC has been able to offer more classes to a wide range of audiences in Worcester, including residents of the Worcester Housing Authority properties and members of the Boys and Girls Club. Also, in 2011 Cooking Matters Massachusetts hired a Central Massachusetts Organizer who is working to expand the Cooking Matters program throughout the state. This position provides additional support to the REC's staff person and is also working to recruit more organizations in the region to become satellite partners of Cooking Matters. These classes have been in such high demand that having an established staff person for Central MA will contribute greatly to the long-term sustainability of the classes in Worcester and throughout the county.

### **Educational Gardens**

The Regional Environmental Council received funding for an AmeriCorps VISTA to run the School Gardens program in 2010. This full-time position is funded for up to three years and continues to be able to support and expand the program, as well as provide support to the Fanning Building Adult Learning Center for the Worcester Educational Garden. In addition, the HFH Project Manager and the REC continue to work with the Worcester Public Schools to integrate the gardens into the curriculum so that teachers will have a way to use the garden as a "learning lab" to complement classroom instruction. Hands-on participation is key to student engagement, and once the connections between gardening and curricula are more firmly and officially established, schools will be more motivated to expand and sustain their gardens. Administration of the Worcester Public Schools as well as members of the School Committee have expressed great interest in building this program into curricula; due to the many competing needs and demands on school administration it has not yet come to fruition. The HFH Project Manager and REC staff will continue to advocate for this process to continue and for real outcomes to be achieved. Local models, such as the one between Cambridge Public Schools and the organization City Sprouts, have provided great inspiration and guidance and we are confident that a similar outcome can be achieved in Worcester.

### **Policy Advocacy**

The Policy Advocacy Working Group of HFH will be wrapped into the HFH Steering Committee for the last project year, which will meet quarterly to ensure sustainability and

policy advocacy goals are being met. It is also simultaneously being wrapped into the overall work plan of the Worcester Food & Active Living Policy Council which is staffed by the HFH Project Manager as well. This transition over 2012 will ensure that no policy issues are abandoned, nor that at the end of the project the priorities and processes are forgotten. Many of the same individuals that sat on the Policy Advocacy Working Group of HFH also sit on the Steering Committee of the Policy Council and will continue to provide great support for the issues of hunger and healthy food access.

### **Communications and Outreach**

The communications and outreach work of HFH has already been rolled into the work of the Food & Active Living Policy Council, which is staffed by the HFH Project Manager. The Project Manager also continues to manage the electronic communications and social media tools that originated with HFH. This transition has been relatively seamless and we expect it to be very successful.

### **Conclusion**

The work of the Hunger-Free & Healthy project is neither the beginning nor the end of solving problems of hunger and healthy food access in Worcester. It has, however, brought together new partnerships and created stronger systems that will be able to address these issues in more organized, collaborative, and effective ways. More families now have access to SNAP benefits; more children are eating wholesome meals in school; more residents have access to healthy, affordable food where they live; more people have the skills and knowledge they need to make affordable, healthy meals for their families. Ongoing activities to advocate for food security and health nutrition have been strengthened and expanded. Our community is now more informed, more engaged, and truly on the right path to make Worcester a city that is hunger-free and healthy for all people who live here.



## Appendix 1. SNAP Outreach Project Component Summary by Year

		2009*	2010**	2011***	Total†
Number of sites		23	26	12	38 (unduplicated year to year)
Number of site visits		77	139	163	379
Outreach Materials distributed		NA	4295	2858	7153
Contacts (including non-applicants)		NA	396	505	901
Number of applications		184	152	216	552
Number of approvals		93	81	122	296
Number of denials		--	55	21	76
Number known status		146	136	190	472
Number withdrawn/incomplete		NA	NA	47	47
% approved of total applications		51%	53%	56%	54%
% approved of applications w/known outcome		64%	60%	64%	63%
<b>Amount of benefit</b>					
Mean		\$183	\$185	\$194	\$188
Range		\$16 to \$720	\$16 to \$535	\$16 to \$535	\$0 to \$720
Total benefits procured††		\$76,764	\$89,868	\$118,549	\$285,181
<b>Race/Ethnicity #(% )</b>	2010: % in Worcester				
White	81%	52 (29%)	76 (50%)	68 (31%)	196 (36%)
Black	4%	12 (7%)	10 (7%)	31 (14%)	53 (10%)
Hispanic/Latino	9%	61 (34%)	44 (29%)	97 (45%)	202 (37%)
Asian	4%	3 (2%)	4 (3%)	4 (2%)	11 (2%)
Unknown/Other	2%	47 (26%)	15 (11%)	16 (7%)	78 (14%)
<b>Age of applicants</b>					
Mean		49.1	46.6	41.9	45.6
Range		21 to 82	20 to 90	18 to 93	18 to 93
<b>Household size (Adults and Children)</b>					
Mean		1.8	1.9	2.0	1.9
Range		1 to 6	1 to 7	1 to 7	1 to 7
<b>Number of children in Household</b>					
Mean (of HHs for which info was available)		.46	.68	.78	.65
Range		0 to 6	0 to 6	0 to 5	0 to 6
# of Households with Children		51	56	96	203
% Households with Children		28%	37%	44%	37%
Total number of children served		111	99	166	376

\* May – December 2009

\*\* January – December 2010

\*\*\* January – November 2011

† Calculated values in this column are weighted based on number of applicants for each year

†† Calculations based on monthly benefits obtained assuming 6 months duration per approval

## Appendix 2: 2011 Sample Messages from School Garden Calendars

Month	Messages from Calendar
April	Begin planting such as spinach, lettuce, onions, beets and carrots, outside Apr 16: Spring Garden Festival; Apr 30: Earth Day Cleanups (Citywide)
May	Start hardening off tomato, melon, pepper, and eggplant seedlings Your garden should be planted by the end of the month
June	Re-pot seedlings into bigger containers. At night, keep them covered outside in their pots. Wait until soil is warm to put sensitive seedlings in the ground. Plant remaining seedlings outside. Jun 18: REC Farmers Markets Kickoff; Jun 23: Last day of school!
July	Water, water, water...Be sure the garden gets at least an inch of water per week Watch out for Japanese beetles!...Handpick them off, squish them or drop into soapy water
August	Think about ways to preserve your summer harvest. Turn those cucumbers into pickles or that cabbage into sauerkraut!
September	Start saving seed! Many plants are forming seed pods or are dispersing their seeds. Now is a good time to collect seeds to grow next year, teach the plant lifecycle, parts of a seed and how seeds travel.
October	Before the first frost, harvest any tomatoes that remain in your garden... Plant garlic and spinach just after the first frost, but before the ground freezes.
November	Time to clean up and put the garden to bed. To maintain healthy garden beds and reduce the chance of plant disease and insect problems next summer, clean up fallen leaves and fruits...
December	Schedule a time to discuss the challenges and successes of this year's growing season, and start planning for next year...put your ideas on paper...start wish list for next spring.

## **Appendix 3: HFH 2011 Policy Priorities**

### **WORCESTER PUBLIC SCHOOLS WELLNESS POLICY: IMPLEMENTATION**

We advocate for the implementation of the Worcester Public Schools Wellness Policy, including monitoring and evaluation of the implementation of the policy. The Wellness Policy sets a framework for ensuring a healthy school food environment, including guidelines in relations to both the food environment and physical activity. Though Worcester first wrote a strong wellness policy in 2006 and an updated version was approved in 2011, an implementation plan has never been carried out. Neither the school system nor the community has a clear idea of what has and has not been implemented, what the successes have been, nor what the barriers to full implementation are. By establishing a clear system of implementation, monitoring and evaluation, we will better understand the strengths and weaknesses of the school environment in relation to supporting health and wellness.

### **RECESS BEFORE LUNCH**

We advocate for the Worcester Public Schools to support the voluntary implementation of holding the mid-day recess before lunch (as opposed to after lunch). Holding recess before lunch has been shown to increase consumption of proteins and many vitamins and minerals. Students are often more hungry after recess and are more focused on eating rather than on getting out to recess. In a school district where 72% of students qualify for free or reduced price meals and therefore are at a higher risk of being food insecure, it is important to ensure that students are eating adequate amounts of healthy foods. Because the Worcester Public Schools meals are very healthy and wholesome, implementing recess before lunch is a strategy that could help increase consumption of the healthy, nutritious foods that students need to be better learners.

### **ACT FRESH**

The Act FRESH Campaign is working to improve access to healthy, affordable food and safe public spaces for physical activity. The state-wide campaign is led by a diverse group of Massachusetts Public Health Association member organizations - grassroots organizations and statewide associations from every region of the Commonwealth. The Worcester Food & Active Living Policy Council/Hunger-Free & Healthy is a part of the leadership team of this campaign. The four-pronged campaign includes working to promote Zoning for Healthy Community Design, Access to Healthy Food Stores, Healthy School Food for Every Child, and Strong Physical Education Programs in Every School. Within this campaign, Hunger-Free & Healthy will help lead the effort to ensure successful implementation of the new school food regulations.

### **AN ACT RELATIVE TO FOODS CONTAINING ARTIFICIAL TRANS FATS (H.1494/S.1154)**

We advocate for the passing of legislation at the State level that would ban the use of artificial trans fats in prepared foods sold and served in restaurants, fast food outlets, cafeterias, bakeries, mobile food trucks/carts, and other places where prepared foods are sold across the state. Artificial trans fats cause significant and serious lowering of HDL (good) cholesterol and a significant and serious increase in LDL (bad) cholesterol. They are also directly connected to clogging of arteries, insulin resistance, type 2 diabetes, and other serious health problems. Most chain restaurants have eliminated the use of trans fats, as well as Worcester Public Schools, Saint Vincent Hospital and UMass Memorial Health Care.

Cities and even states throughout the nation have banned their use.

## **2012 FARM BILL**

We advocate for a fair Farm Bill that supports: 1.) Access to healthy food for all people, especially low-income and 2.) Strong infrastructure to support local and regional food systems. Supporting healthy food access for all includes: support for community-based agriculture across the urban-rural spectrum; support for Farm-to-School purchasing; protect SNAP from cuts and changes to its entitlement status; support for SNAP redemption at Farmers' Markets; developing and implementing incentives for purchasing fruits and vegetables through federal nutrition programs. Supporting local food systems infrastructure includes technical assistance for local and regional food systems; Farm-to-Institution programs; support for Community Food Projects grants; protecting the Farmers' Market Promotion Program; and support for local agriculture including specialty crops, dairy, and livestock.