Foodability

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Foodability
Visioning For Healthful Food Access In Portland

COMMUNITY FOOD CONCEPTS

CFC
Community Food Concepts gives a special thanks to all who contributed and made this project possible.

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"All effective planning is therefore a negotiated process among affected parties who have different values, concerns, and interests at stake."

- John Friedmann, from Classic Readings in Urban Planning
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Executive Summary

Interest in Food Access
Food access is a timely issue, with current economic conditions affecting the ability of many households to access sufficient food. Advocates from a broad spectrum of professions are also examining the relationship of food access to other issues, including:

- community health
- livability (walkable neighborhoods)
- equitable access to services and assets
- sustainability (climate change)
- support of local food systems

Project Goals
The Bureau of Planning and Sustainability is interested in addressing food access in the Portland Plan, but lacks a clear, stakeholder-supported vision for food access in Portland. BPS also needs a better understanding of how variables affecting food access play out across the City's landscape.

The Foodability project provides BPS with a vision for food access that may be incorporated into the Portland Plan update, a measurement of the current spectrum of food access across the city, and recommended strategies to improve food access in Portland. This project considers food access largely as an issue of socioeconomic equity, and its strategies and recommendations reflect this.

The Foodability Score
In order to better understand and assess food access issues in Portland, Community Food Concepts (CFC) identified five variables that significantly impact residents’ ability to access food.

- Affordability
- Accessibility
- Availability
- Awareness
- Appropriateness

The project's Advisory Committee and visioning participants also provided feedback and suggestions about how to measure these variables specifically and food access in general, and helped shape the weighting of the final Foodability score.

Development of the Foodability score was informed by previous studies and other research, and used GIS data along with data collected through market basket surveys conducted during this project, to assess and map four of these variables. Awareness is an individual, knowledge-based aspect of food access, and was partially assessed with a small-scale case study with Hacienda CDC residents.

The Foodability score was created using an aggregate of affordability, availability, and accessibility for each block group in Portland, and approximates the level of food access in neighborhoods across the City.
Vision
In order to develop a vision for food access in Portland, CFC held two visioning meetings bringing together participants from a variety of stakeholder groups, including emergency food organizations, grocery stores, private industry, food distribution, and community advocacy groups. These participants provided input and feedback about what a potential vision for food access in Portland should be, as well as goals and strategies to reach that vision.

A draft vision was produced after the first visioning meeting, and feedback from the second meeting helped define possible strategies and prioritize recommended alternatives.

“In 2030, every Portlander has convenient access to a variety of quality, affordable food. People are able to make informed choices about available food options which contribute to a healthful lifestyle.”

Goals & Priorities
Education and awareness emerged as very important themes in discussions of goals and priorities, but improving health, feeding hungry people, focusing on vulnerable populations, building partnerships, and connecting neighbors were also strongly supported by visioning participants. These themes are captured in the following goals:

- Availability: Improve food quality and options
- Affordability: Improve affordability of food
- Accessibility: Improve physical access to food sources
- Awareness: Improve awareness of food options
- Appropriateness: Increase the availability of appropriate food options

A variety of strategies to improve food access in Portland were developed using participant feedback and suggestions as well as best practices found in other cities across the nation. Strategies fell into four general categories—City Initiatives, Incentives, Regulations, and Partnerships.

Findings and Recommendations
The Foodability score and its supporting measures were analyzed, alongside demographic data, to make an initial assessment of food access in Portland and its geographic and economic equity.

Overall, Portland is well served by the private market and does not suffer the sort of ‘food deserts’ that impact other cities. Most parts of the City are accessible, with a number of food points offering a fairly affordable range of food.

In Portland, areas with poor and very poor food access are largely located in neighborhoods with high median household income. Residents in these neighborhoods are unlikely to perceive their food access as poor because they rely on auto travel to do their food shopping and are comfortable doing so.

Most residents live in areas in which the available food is accessible and affordable—though some communities may still desire improvements in their neighborhoods, and vulnerable populations may struggle to access food, even in well-served communities. According to input received during visioning meetings and other community projects, residents feel that Portland could improve food access, especially for low-income households and other vulnerable populations.
There are a few underserved areas within Portland that are not within a one mile radius of an affordable full-service grocery store, including sections of north and northeast Portland and outer east Portland. Recommendations for underserved neighborhoods include strategies for improving availability and affordability of existing food sources when possible, and conducting community food assessments to accurately determine if additional food stores are feasible. Awareness-focused strategies to help residents make informed choices among their existing options are also recommended.

**Neighborhood-level recommendations**

- Create “Community Food Development Zones” to foster pockets of innovative food access practices in underserved areas of the City.
- Provide incentives to small grocers and convenience store owners to stock fresh produce and other healthful food options at affordable prices, including grants for energy-efficient lighting and refrigerators.
- Encourage small grocers and convenience store owners to become licensed to accept OR Trail cards and WIC coupons.
- Provide free or reduced-cost classes on shopping and cooking healthfully and affordably, especially for recent immigrants and low-income households.
- Provide free or reduced-cost classes on growing your own food and preservation techniques, especially for youth and low-income households.
- Require a food access impact assessment before reducing transit service.
- Require new multi-family residential developments to set-aside a portion of land for growing space, or provide incentives for developments to do this.
- Encourage urban agriculture initiatives on City owned property, as well as at Portland Public School properties.
- Conduct food assessments as part of the community planning process, especially in underserved areas.
- Require a food access impact assessment before reducing transit service.

Citywide recommendations seek to improve access for all residents, and focus on awareness of options that may already exist in their neighborhoods. Citywide strategies also target vulnerable groups, such as children or low-income households, regardless of the level of food access in their residential location.

**Citywide recommendations**

- Create an online community forum for residents to connect and exchange information and food resources.
- Develop comprehensive marketing and educational campaigns to promote awareness of quality food options.
- Expand the reach of Farm-to-School programs to include nutrition and agricultural education.
- Work with healthcare organizations to promote direct access to quality food through coupons, vouchers, or even prescriptions.
- Convene organizations, agencies, and neighborhoods on an ongoing basis to brainstorm, share program ideas, and interact professionally.
INTRODUCTION

PROJECT OVERVIEW

Who We Are
Community Food Concepts (CFC) is a group of six graduate students in the Masters of Urban and Regional Planning program of Portland State University.

The Client: Bureau of Planning and Sustainability
Our client is the City of Portland’s Bureau of Planning and Sustainability (BPS). Our point of contact for this project was Amanda Rhoads.

Problem Statement
The Bureau of Planning and Sustainability is beginning work on the Portland Plan, a planning process including a state-mandated update of the comprehensive plan as well as other projects that acknowledge the City’s current physical and socioeconomic conditions. The Portland Plan will help establish shared visions, goals, and policies to guide the efforts of BPS and other City agencies over the next twenty years.

BPS is interested in addressing food access in the Portland Plan, but lacks a clear, stakeholder-supported vision for food access in Portland. BPS also needs a better understanding of how variables affecting food access currently play out across the City’s landscape. Where are we now, and where do we want to be? This report will help BPS answer these questions and recommend strategies for achieving its vision.

PROJECT BACKGROUND

What is Food Access?
Food access is the ability of a household to consistently acquire, both physically and economically, sufficient amounts of healthful food for all its members. Food access is not a simple yes/no issue, but a spectrum of possibilities, ranging from ‘food deserts’ with no food access, to communities with convenient, abundant, affordable, local and sustainable food options. (See Appendix D for a definition of food access and other related terms in the Common Vocabulary.)

Why is Food Access Important to a Community?
Food access plays a central role in healthy, livable, environmentally sustainable, and economically vital communities. Specifically, hunger and poor nutrition have been linked to inadequate access to affordable, healthful food. More broadly, poor food access drains the physical, economic, and social resources of affected individuals and households.

Why is Food Access a Planning Issue?
Until recently, food access was largely overlooked by the planning community. American Planning Association research suggests that planners often do not consider food a planning issue, believing it to be outside the scope of planners in general and urban planning specifically. In recent years, however, members of both the academic and practicing sectors of the planning field have increasingly realized that access to healthful food is as important to urban life as access to transportation or housing, subjects which have long been central to city, regional, and even national planning policy. Adequate access to food is a key factor in providing an equitable and healthy place to live. (See Appendix A for more information on our background motivation and research.)
**Why is Food Access a Planning Issue for the Portland Bureau of Sustainability?**

Food access contributes to several of the Portland Plan’s key objectives, including:

- community health
- livability (walkable neighborhoods)
- equitable access to services and assets
- sustainability (climate change)
- support of local food systems

In addition, many comments captured in VisionPDX’s Voices from the Community touched on food access. Lack of access in some communities and a desire for easier access to sustainably and locally produced foods were two of the issues most frequently mentioned. (See Appendix C for commentary from VisionPDX as it relates to food access.)

Finally, a growing number of local and regional public, private, and non-profit groups have begun to address food access issues in a variety of ways. A clear vision and useful assessment of current conditions would increase BPS’s ability to coordinate implementation efforts with other organizations for increased efficiency, effectiveness, and mutual benefit.

**The Structure of This Report**

This report is organized into four parts. The first provides an overview of the framework used to assess varying levels of food access across Portland and create the Foodability score. The second part presents the vision statement and list of supporting priorities that emerged from our participation process. The third part details our recommended strategies for improving food access in Portland. These recommendations were chosen from case studies and best practices (see Appendix B) based on their ability to address the concerns and priorities voiced by our stakeholders and by VisionPDX participants. The final part uses the Foodability model and other data to make specific recommendations for strategies to improve food access in specific circumstances seen in some Portland neighborhoods, as well as making recommendations that may be useful for the city as a whole.
“An example is Fish Track – part of a seafood initiative where a bar code on your fish gives the whole story of the fish including where it was caught and by whom.”

- Visioning participant
THE FIVE A FRAMEWORK

In order to better understand and assess food access issues in Portland, CFC sought to identify variables that impact Portlanders’ ability to access food. After researching existing local food access studies, reviewing recent academic literature, and gathering input from the project’s Advisory Committee, CFC identified five variables that significantly impact residents’ ability to access food.

- **Affordability**—
  The product of a seller’s stated prices and the consumer’s purchasing power.

- **Accessibility**—
  A consumer’s ability to physically travel to a food source and return with his/her purchases. Primary determinants include geographic distance, transportation choices, and urban form variables such as terrain and the quality of all modes of transportation infrastructure.

- **Availability**—
  Presence of sufficient variety of foods needed to meet the consumer’s dietary requirements and personal preferences.

- **Awareness**—
  The knowledge or skills necessary for locating, buying and/or cooking affordable, appropriate foods from scratch, including the knowledge necessary to grow and process one’s own food.

- **Appropriateness**—
  The ability of available goods to satisfy the preferences of specific groups of people with distinctive food preferences, primarily ethnic groups, but also others such as local food advocates who prefer to buy locally produced foods.

These variables served as the basis for our data collection and analysis, and helped inform and anchor our visioning dialogues. Although the five As are discussed individually in this report, it should be noted that model development, data gathering and analysis paralleled the participation process, which informed our understanding of these measures of food access and shaped the weighting of the final Foodability score. The participation process is discussed in Appendices J, K, and L, but quotes and comments from participants are displayed throughout the report in order to reflect input received during discussion of the five As with the Advisory Committee and visioning participants.

ASSESSING THE FIVE A S

The next section contains an overview of how variables were measured, ranked, and used to determine scores for each block group. Block groups were chosen as the unit of analysis in order to allow consideration of demographic data available at the block group level. Affordability, accessibility, appropriateness, and availability scores were developed for each block group, and the Foodability score was developed by combining the scores for affordability, availability, and accessibility.
AFFORDABILITY

The product of a seller’s stated prices and the consumer’s purchasing power.

The data for calculating a food point’s level of affordability came primarily from market basket surveys that were conducted at 47 different stores of varying types across Portland. The market basket survey used for this project is based on the USDA’s Food Store Survey Instrument, as part of their Community Food Security Assessment Toolkit. The list of food items surveyed is taken from the Thrifty Food Plan (TFP), a representative healthful and affordable meal plan formulated by the USDA. The Thrifty Food Plan provides a list of nutritious items that are affordable for a household with limited resources (a gross monthly income of about 165 percent of the federal poverty level, of which 30 percent of net income is assumed to go towards food, all of which is assumed to be prepared and eaten at home), and serves as the basis for food stamp allotments. It is essentially a grocery list that, if adhered to, would provide a household with a balanced, nutritious diet affordable at most mainstream full-service grocery stores. (Consult Appendix H for a complete copy of the market basket survey form used in this study, and Appendix F for a full explanation of the survey methods.)

“There is a misperception that local and organic produce are necessarily more expensive than other produce. We need to educate the community about their choices.”

- Visioning participant

<table>
<thead>
<tr>
<th>Retail Food Access Points</th>
<th>City Total</th>
<th>Number Surveyed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-service Grocery Stores</td>
<td>79</td>
<td>11</td>
</tr>
<tr>
<td>economy</td>
<td>21</td>
<td>3 (17)1</td>
</tr>
<tr>
<td>non-economy</td>
<td>58</td>
<td>8 (40)1</td>
</tr>
<tr>
<td>Other Grocery Stores</td>
<td>133</td>
<td>10</td>
</tr>
<tr>
<td>Convenience Stores</td>
<td>190</td>
<td>8 (46)1</td>
</tr>
<tr>
<td>Ethnic Stores</td>
<td>55</td>
<td>10</td>
</tr>
<tr>
<td>Specialty Stores</td>
<td>28</td>
<td>7</td>
</tr>
<tr>
<td>produce</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>meat</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>seafood</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Farmers Markets</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>605</td>
<td>43</td>
</tr>
</tbody>
</table>

1The number in parentheses includes all stores belonging to the same chains as the stores surveyed, assuming that all of the stores in each chain have the same selections and prices as the store surveyed.
The affordability score for surveyed retail food points was based on relative total cost of the surveyed items present compared to the total cost of the same items based on benchmark “affordable” prices for each item (determined by USDA guidelines). Stores not surveyed were assigned scores based on averages from surveyed stores of the same category (see Table 1 for breakdown). Non-retail food access points—emergency food locations and community gardens—were assigned an affordability score of 10, since emergency food is free, and growing one’s own produce is generally cheaper than buying it. The affordability score for each block group was calculated by averaging the scores of all of the food points within 1,000 meters of the block group centroid, which is considered a 15-minute walk for an adult in an urban setting.\(^3\)

ACCESSIBILITY

A consumer’s ability to physically travel to a food source and return with his/her purchases. Primary determinants include geographic distance, transportation choices, and urban form variables such as terrain and the quality of all modes of transportation infrastructure.

The accessibility score for each block group has four main components: walkability, food point supply capacity, level of transit service, and vehicle ownership.

“Walking with groceries is not a realistic scenario.”

- Visioning participant

- **Walkability** reflects the ease of traveling by foot within the block group, and was determined by combining measures of three different urban form variables: street connectivity, slope, and sidewalk coverage. These three measures were ranked and scored, then combined and weighted equally to create a walkability score which was factored into the overall accessibility score. (Consult Appendix F for a detailed explanation.)
- **Supply capacity** refers to the relative volume of food that each type of food point can supply. Each food access point was ranked and scored according to inherent constraints (e.g., Farmers Markets are seasonal, small stores often have limited hours of operation, etc), with emergency food sites and small community gardens receiving the lowest scores, and full-service grocery stores receiving the highest scores. The resulting score was normalized by population for each block group.

- **Level of transit service** for each food point was measured by counting the number of transit stops within one block (530 feet) of a food point.

- **Vehicle ownership** for each block group area was based on 2008 projections of US Census data.

Different weightings of the four accessibility components provide different pictures. The final weighting of the accessibility measure is based on feedback from two visioning meetings. In Map 3, supply capacity of food points is given twice as much weight as the other three factors, to emphasize the importance of supply capacity in determining food access.

Map 3: Accessibility Scenario considers both walkability and vehicle ownership as important factors.
**AVAILABILITY**

*Presence of sufficient quantity of foods needed for meeting the consumer’s dietary requirements.*

The availability score is essentially a measure of the variety of a food point’s offerings. Its contribution to an area’s food access, or Foodability, is based on the premise that a greater variety of foodstuffs enables consumers to find foods suited to their personal preferences and dietary habits. For retail food points, the availability score was calculated as a percent of market basket survey list items present, plus percent of total ‘variety points’. For non-retail food points—emergency food outlets and community gardens—scores were assigned based on estimated ability of users to get foods matching their personal preferences. (Consult Appendix F for a detailed explanation.) Block groups were assigned availability scores based on the maximum availability score of all the food points within the block group.

“The City can’t control what is on the shelf, but the store can tell a story with its products.”
- Visioning participant

Map 4: Availability of food points by block group, based on the market basket survey.
**Appropriateness**

Available goods satisfy the consumer’s taste preferences and/or cooking ability, with an emphasis on ethnic foods for ethnic populations.

Appropriateness was considered to include preferences for ethnic and/or local foods that may require a trip to a specialty store.

When appropriateness is scored as a combination of measures for multiple ethnic groups as well as for local foods, it appears to repeat the availability measure rather than capturing any new aspect of food access. As a result, it was removed from the final Foodability score. However, it is worthwhile to examine appropriateness by considering the distribution of ethnic groups and ethnic food stores. Considering appropriateness of available food, especially for ethnic populations, is supported by suggestions in visioning meetings that appropriateness should be tied to residents and consumers in the area. Who is the food appropriate for?

---

**Map 5: Appropriateness of food points by block group, based on the market basket survey.**

Sources: City of Portland Bureau of Planning GIS data current 10.31.2008, InfoUSA, Metro RUIS, USDA Thrifty Food Plan Marketbasket Survey (current 3.1.2009)
A food access point’s level of appropriateness was determined by the amount of offerings it had for East Asians (Map 6), Latinos (Map 7) and people interested in buying locally produced foods (see Appendix G for supplemental maps).

All emergency food points were assigned an Appropriateness score of 2.5, and community gardens a score of 7.5. The score of the highest-scoring food point in a block group was assigned to the block group.

Map 6: The 2008 projected populations for Asians across the City and block groups scoring Excellent or Good in East Asian appropriateness, based on the market basket survey.
Map 7: The 2008 projected populations for Latinos across the City and block groups scoring Excellent or Good in Latino appropriateness, based on the market basket survey.

“Ethnic stores shouldn’t be weighted equally in every neighborhood, because they are more important in ethnic neighborhoods.”

- Visioning participant
Awareness

The nutritional knowledge or skills necessary for locating, buying and/or cooking affordable, appropriate healthy foods from scratch; the knowledge necessary to grow and process one’s own food.

Awareness is the most difficult variable to display spatially. It could be a matter of personal preference, cost or other factors that influence a consumer to shop at a store that is not the store closest to their home. Awareness also includes education-based issues, such as a consumer’s ability to make informed decisions about nutrition and prepare healthful food at home.

Visioning participants identified Awareness as either the most important or second most important variable in food access. However, because awareness is an individual, knowledge-based aspect of food access, we were unable to map this element on a citywide scale.

“We need to educate the community about their choices. We need locally produced produce to support our local economy. Starting with children at a young age, we need to build an internal knowledge system for the community of their choices and where foods are available.”

- Visioning participant
Awareness Case Study

In order to inform the appraisal of food access in Portland and provide suggestions for addressing awareness issues, a case study of resident awareness of local food options was conducted with the help of Hacienda CDC. Working with Hacienda CDC allowed rapid access to a group of low-income, ethnic residents. Most other community studies of this nature take a year or two to conduct in order to build trust with the residents, time which was not available in the scope of this project. Further work should be done with other ethnic, minority and low-income groups, and is discussed in the Next Steps section of this report.

Seven female residents of Hacienda CDC’s Villa de Mariposas housing complex were interviewed for this project. They were a self-selected group attending an exercise and nutrition class sponsored by Hacienda. All of the women were Latinas and had children of school age or younger. The interview session was conducted in Spanish.

Map 8: Hacienda properties within the Cully neighborhood as well as food points and bus stops.
CFC learned that resident perception of food access differed from our Foodability variables, and that individual consumer behavior may not be reflected by the Foodability model. Residents emphasized that they were unlikely to shop at the two full-service grocery stores or ethnic markets in their neighborhood except in emergency situations. They were willing to travel a distance of 5 to 8 miles in order to shop stores perceived as more affordable. They typically shopped for groceries every two weeks by car. One woman said, and others agreed, that they would pay $200 at the nearby full-service grocery stores for the same amount of food they could buy for $150 at a more affordable grocery store. This reflects a 33 percent difference in price in favor of the lower priced store. According to our market basket survey and a previous basket survey conducted by the Lents Community Food Assessment, the difference between these two stores was 29 percent, revealing a fairly accurate perception on the part of these consumers.

Another interview with the owner of a Latino market also revealed an awareness of the ranking of full-service grocery stores according to the price of goods offered that was impressively accurate according to our market basket surveys. This suggests price sensitivity in the Latino community that greatly effects purchasing decisions.

Map 9: The Foodability score with the Cully Neighborhood and the Hacienda residents' most frequently visited food access points.
Interviewees also mentioned that ethnic markets in their neighborhood had little to offer in the way of fresh vegetables, and that the produce that was available was “expensive and rotten.” This statement may be true, but may also reflect a different type of awareness issue. Most of the small stores in the neighborhood are Asian markets and may have a selection of vegetables unfamiliar to Hispanic women, which may influence their perception of freshness. It also speaks to the importance of having ethnic foods located near appropriate ethnic groups.

One woman expressed an interest in purchasing organic goods and named preferred stores for finding these goods. She and others reflected that while they felt that purchasing organic food was better for their health, the increased cost of organic food limited their ability to purchase it regularly.

Two of the women told us that they had garden plots in a community garden at a local church, which we were not aware of, adding local knowledge to our mapping efforts. They enjoy growing their own produce, as it increases access to fresh, chemical-free produce. All interviewees attested to the benefits of teaching children to garden and eat fresh produce.
The Foodability Score

**Importance**
The Foodability score is intended to provide a rough but meaningful indication of a block group’s level of food access. It does so by measuring the availability and affordability of the range of food present at each non-restaurant food point within walking distance (1,000 meters) of the block group centroid, as well as the physical accessibility of these food points. The Foodability map displaying scores for Portland’s block groups provides a spatial illustration of the current geography of food access across the City. The Foodability map, along with maps displaying scores for each supporting variable, were instrumental in the visioning process. The maps helped stakeholders to identify areas of concern, discuss possible strategies for improving food access, and consider priorities and preferred strategies for Portland.

**Evolution of the Foodability Score**
Mapping food access in the Portland region has been pursued through previous studies, all of which implicitly rely on a gravity model approach. This approach assumes people gravitate to the food points closest to home when shopping for food, and that consumers chose food stores based on the affordability and availability of that store’s offerings. The model we developed using the Foodability score is also a gravity model, but tries to makes these assumptions more explicit and examine them more systematically. CFC developed the Foodability score to provide a more nuanced picture of the physical and economic accessibility of Portland’s non-restaurant food points and a better sense of the type and variety of food available at these food points.

Map 11: The Foodability Score.
Through the measures developed for accessibility, availability, and affordability, the Foodability score captures physical and socioeconomic factors that influence food access such as transit service, vehicle ownership, and food prices, as well as price and availability data for the food points themselves (derived from market basket surveys). Each measure was mapped separately, and then aggregated and weighted equally to produce the Foodability score.

**The Mapping Process**

The Advisory Committee meeting in February 2009 provided feedback on how each of the five As could be measured. Those suggestions were used to develop measures for a preliminary Foodability score. The Advisory Committee was primarily composed of food advocates, who presented suggestions informed by their expertise in particular areas of food access. Advisory Committee suggestions included using the USDA Thrifty Food Plan as a measurement tool, considering special needs of low-income households and ethnic groups, and measuring neighborhood “walkability” as part of the accessibility score.

At the second Visioning meeting, the preliminary Foodability score and accompanying component maps were presented, and participants were asked how measures should be refined and weighted to develop the final score. Feedback emphasized that the final scoring system should place less weight on walkability, more weight on affordability and transit, and highlighted concerns with including convenience stores, ethnic stores, and emergency food points.
The scoring system developed after taking this input into consideration is shown in Table 2. (Consult Appendix F for a detailed explanation.) The series of maps developed with the Foodability scoring system provide an indication of the City’s current food access spectrum, and may be used to guide future policy-making processes. The Foodability score and its indicators may not directly influence the City’s planning process, but the course of their development revealed pertinent issues and fostered and informed dialogue around food access.

Although some visioning participants felt that convenience stores should not be included in the list of food access points they were included in our analysis not only because households may be accessing food there and convenience stores have the potential to carry more affordable, healthful foods that can meet the needs of an area, but also because of methodological reasons, in order to capture all smaller corner stores and neighborhood type groceries. Convenience stores were obtained by their NAICS codes, and many smaller stores fell under the same codes as being small food marts or stores less than 2,500 square feet in size. Without assessing each store we could not separate convenience stores without also losing some small grocery stores and ethnic food markets.

<table>
<thead>
<tr>
<th>Table 2. Foodability Scoring System</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACCESSIBILITY</strong></td>
</tr>
<tr>
<td><strong>MEASURES</strong></td>
</tr>
<tr>
<td><strong>RANKING</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>10 points</td>
</tr>
<tr>
<td>(Excellent)</td>
</tr>
<tr>
<td><strong>Accessibility</strong></td>
</tr>
<tr>
<td><strong>Measure 1.</strong> Supply capacity of food points (volume served + temporal constraints / population)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Measure 7.</strong> Market basket survey prices relative to TFP market basket price</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Measure 8.</strong> Percent of items available in each surveyed food category</td>
</tr>
<tr>
<td><strong>Foodability Score</strong></td>
</tr>
<tr>
<td>7.6 – 10 points</td>
</tr>
</tbody>
</table>
**Foodability and Income**

The Foodability score gives a geographic indication of food access across Portland. However, to meaningfully consider how Portland residents are impacted by food access, it is necessary to examine food access across income levels as well as geographically.

“*It is more important at the beginning to target the low income and minorities (vulnerable populations) and later raise the bar. Community Food Assessments have shown that after price, transportation barriers are the second most important.*”

- Visioning participant
Foodability scores for low-income block groups suggest that most low-income households have fairly good food access. Sixty-three percent of low-income block groups have a Foodability score of Good, with another 10 percent scoring Excellent. Only 1 percent have a Poor Foodability score.

On the other hand, the distribution of Foodability scores for high-income block groups shows quite a different picture. None of the high-income block groups shows an Excellent Foodability score. Twenty-nine percent of them score Very Poor, and another 20 percent score Poor.

Moderate-income block groups, which make up most of Portland, have generally good food access as well. Forty-five percent of the moderate-income block groups have a Good score, and another 35 percent have a Fair score. Only 12 percent of the moderate-income block groups have a Foodability score of Poor or Very Poor.
What The Foodability Score Doesn’t Show

The Foodability score is an aggregate of scores for each block group. The block group’s affordability score is an average of affordability scores for each food access point within that block group. The availability score for each block group reflects the maximum availability score out of all the food access points in the block group.

When there is only one food point within a block group, or all the food points within the block group have a similar variety of food and similar prices, aggregate scores will do a good job of reflecting the overall food access scenario for the block group. However, if there is a wide disparity between food access points in one block group—for example, the block group has one full-service grocery store with a large variety of items and high prices, and several small stores with limited offerings and low prices—the Foodability score for that block group may not accurately represent food access for all residents, particularly low-income residents, or those searching for specialty items, such as ethnic or locally grown food.

In order to surface some of the potential problems facing low-income residents, it was necessary to consider median income level and access to affordable stores that offer a variety of foods—specifically, access to low-cost, full-service grocery stores. Block groups with low median income but no nearby low-cost grocery store may have other accessible food options—community gardens, small shops, or emergency food sources. However, the lack of a low-cost, full-service grocery store means that low-income residents are likely to have unreliable access to sufficient affordable food nearby, and may be forced to travel to another location to purchase food. As seen in Map 13, there are several areas of Portland that are not within a one-mile radius of a low-income, full-service grocery store.

Map 13: Coverage of Low Income food points within a one mile buffer and convenient stores and small grocery stores with a half-mile buffer.
**The Vision**

*In 2030, every Portlander has convenient access to a variety of quality, affordable food. People are able to make informed choices about available food options which contribute to a healthful lifestyle.*

Twice during this project CFC convened a diverse group of people with connections to food access and encouraged a dialogue, framed by the Five As, about what a potential vision for food access in Portland should be, as well as goals and strategies to reach that vision.

Visioning participants represented a spectrum of perspectives on food access. For some, such as those representing emergency food organizations, this topic was not new and in fact, ours was one of many conversations about food policy that they had been a part of. For others, however, understanding their place at the table and knowing that their perspective was valued was a crucial first step in joining the conversation.

When discussing what type of language the vision statement should include, participants felt that words such as organic and local, while valuable, were better suited as part of goal statements, rather than part of the larger vision statement. The word healthy also sparked much debate. Many noted the importance of health, especially as it relates to children and obesity, but for the most part participants felt that it was not up to the City to decide what was or was not “healthy” for an individual. Instead the phrase “healthful lifestyle” was mentioned, as was the phrase “informed choices,” which again came up as a result of thinking about the City’s role not necessarily as an enforcer of dietary rules, but as ensuring a wide range of options for people.

**Goals & Priorities**

Education and awareness emerged as very important themes in discussions of goals and priorities, but improving health, feeding hungry people, focusing on vulnerable populations, building partnerships, and connecting neighbors were also strongly supported by visioning participants. These themes are captured in the following goals:

- Availability: Improve food quality and options
- Affordability: Improve affordability of food
- Accessibility: Improve physical access to food sources
- Awareness: Improve awareness of food options
- Appropriateness: Increase the availability of appropriate food options

A list of identified priorities was generated and ranked by a diverse mix of participants in the visioning process. The results are below, with “1” being the most critical issue to address:

1. Improve food quality and access for low-income households.
2. Reduce hunger/severe food insecurity.
3. Improve food quality and access for children.
4. Improve food quality and access for all households.
5. Increase access to locally-grown and produced foods.
6. Educate children about food and nutrition.
7. Educate the public about food and nutrition.
8. Increase awareness of available food options.
9. Support small and local food-related businesses.
10. Engage the community around food issues.
11. Increase access to organic food.

Words that should not be used
- Local
- Organic
- Healthy
- Appropriate

New words or phrases
- Healthful lifestyle
- Informed choices
- Variety of ways of access
- Convenient
**Strategies**

Using these identified priorities as a guide, a comprehensive list of potential strategies was developed. Special emphasis was included so that some strategies specifically focus on vulnerable populations, such as low-income households, youth, senior citizens, and recent immigrants.

Strategies were collected from visioning participants and VisionPDX, as well research into programs and practices in communities across the nation. Appendix B provides a more complete compilation of potential strategies and case studies, as well as descriptions and considerations for each strategy presented here.

Strategies are arranged into four general categories- City Initiatives, Incentives, Regulations, and Partnerships. Each strategy is evaluated on its potential to improve each of the goals, the five As. A large “X” indicates a strong influence toward achieving that goal, a smaller “o” indicates a moderate influence, and an empty space indicates little to no influence toward achieving that goal.

BPS is able to influence food access in a variety of ways, including providing direct services and programs. The City is in the unique position of being a central resource and many stakeholders felt strongly that a key role for the City to play was in providing information and increasing awareness regarding food access.

<table>
<thead>
<tr>
<th>City Initiatives</th>
<th>Improve the affordability of food</th>
<th>Improve physical access to food sources</th>
<th>Improve the availability of quality food</th>
<th>Improve awareness of food options</th>
<th>Improve access to appropriate food options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create “Community Food Development Zones” to foster pockets of innovative food access practices in underserved areas of the City</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Create an online community forum for residents to connect and exchange information and food resources, such as available garden plots, extra produce, coupons, etc.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td>Create a Citywide comprehensive directory of food access resources &amp; services</td>
<td>O</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Develop comprehensive marketing and educational campaigns to promote awareness of quality food options at the City and neighborhood levels</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultivate a culture of local food gathering and production by providing collapsible shopping carts and seed starts to individuals and organizations</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>O</td>
<td></td>
</tr>
</tbody>
</table>
The City may also be able to provide incentives that encourage the private sector to improve food access in a variety of ways. Attracting additional chain supermarkets may be a possible alternative, but our analysis of existing conditions indicates that the City as a whole, and even most low-income areas, are already relatively well served by full-service grocery stores. The strategies proposed below attempt to approach the issue from different angles and include a focus on vulnerable populations, as well as smaller-scale food providers.

<table>
<thead>
<tr>
<th>INCENTIVES</th>
<th>Improve the affordability of food</th>
<th>Improve physical access to food sources</th>
<th>Improve the availability of quality food</th>
<th>Improve awareness of food options</th>
<th>Improve access to appropriate food options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide incentives to small grocers and convenience store owners to stock fresh produce and other healthful food options at affordable prices, including grants for energy-efficient lighting and refrigerators</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>o</td>
<td>x</td>
</tr>
<tr>
<td>Encourage small grocers and convenience store owners to become licensed to accept OR Trail cards and WIC coupons</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>o</td>
</tr>
<tr>
<td>Provide incentives to CSAs to subsidize plots for low-income households</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Partner with food points to provide “Double Value” coupons for healthful food options for vulnerable populations (seniors and low-income households)</td>
<td>x</td>
<td>x</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Encourage retail food points to provide free or reduced-cost delivery options for senior citizens</td>
<td>x</td>
<td>x</td>
<td>o</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Provide offsets for the cost of watering for community gardens and other urban agriculture projects and promote rainwater harvesting</td>
<td>o</td>
<td>x</td>
<td>x</td>
<td>o</td>
<td></td>
</tr>
</tbody>
</table>

Key:  X = strong influence toward goal  O = moderate influence toward goal
Regulations may also be an effective way to influence actions of the private sector, and if applied at a citywide scale, could have a substantial impact on improving food access. Appendix B provides additional details on each of these potential strategies, as well as case studies of other municipalities that have implemented similar policies.

<table>
<thead>
<tr>
<th>REGULATIONS</th>
<th>Improve the affordability of food</th>
<th>Improve physical access to food sources</th>
<th>Improve the availability of quality food</th>
<th>Improve awareness of food options</th>
<th>Improve access to appropriate food options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Require a food access impact assessment before reducing transit service</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Require new multi-family residential developments to set-aside a portion of land for growing space, or provide incentives for developments to do this</td>
<td>〇</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>〇</td>
</tr>
<tr>
<td>Encourage urban agriculture initiatives on City owned property, as well as at Portland Public School properties</td>
<td>〇</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Implement an institutional purchasing program requiring government organizations to buy locally produced food</td>
<td>〇</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>〇</td>
</tr>
<tr>
<td>Ensure building codes provide adequate cooking and food related storage space, especially for senior living residences</td>
<td>〇</td>
<td>X</td>
<td>X</td>
<td>〇</td>
<td>X</td>
</tr>
<tr>
<td>Conduct food assessments as part of the community planning process, especially in underserved areas</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>X</td>
</tr>
<tr>
<td>Maintain zoning that facilitates late-night delivery, especially in traditionally industrial areas that may be experiencing development of other uses</td>
<td>〇</td>
<td>X</td>
<td>〇</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Promote and support produce carts, road stands, and U-pick farms with user friendly food selling regulations</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>X</td>
<td>〇</td>
</tr>
</tbody>
</table>

Key:  X = strong influence toward goal  〇 = moderate influence toward goal
Portland is rich when it comes to active food access organizations, and tapping into this resource stream in a strategic and mutually beneficial way could yield substantial gains toward improving food access across the city. From emergency food, public health, and urban agriculture organizations to community organizations focused on social equity and direct market agencies working with food retailers on their day-to-day business practices, building a strong foundation with and between these types of organizations is an important approach.

<table>
<thead>
<tr>
<th>PARTNERSHIPS</th>
<th>Improve the affordability of food</th>
<th>Improve physical access to food sources</th>
<th>Improve the availability of quality food</th>
<th>Improve awareness of food options</th>
<th>Improve access to appropriate food options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encourage additional food points to locate in underserved areas of the City</td>
<td>o</td>
<td>x</td>
<td>x</td>
<td>o</td>
<td>x</td>
</tr>
<tr>
<td>Expand the reach of Farm-to-School programs to include nutrition and agricultural education (cooking classes and school garden plots)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Increase transit connections between low-income and minority neighborhoods and appropriate, affordable grocery stores</td>
<td>x</td>
<td>x</td>
<td>o</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Work with healthcare organizations to promote direct access to quality food through coupons, vouchers, or even prescriptions</td>
<td>x</td>
<td>o</td>
<td>o</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Provide free or reduced-cost classes on shopping and cooking healthfully and affordably, especially for recent immigrant and low-income households</td>
<td>x</td>
<td>o</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide free or reduced-cost classes on growing your own food and preservation techniques, especially for youth and low-income households</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Provide infrastructure improvements to facilitate CSAs, including installing lock-boxes and making drop sites more visible</td>
<td>x</td>
<td>o</td>
<td>x</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Create space for local food production for small producers and food providers, such as incubator kitchens and refrigerated storage</td>
<td>o</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Create small-scale carshare or rideshare programs for low-income households and senior citizens for whom accessing food points is a challenge</td>
<td>x</td>
<td>o</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide racks in busses and MAX trains for grocery bag storage</td>
<td>x</td>
<td>o</td>
<td></td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Convene organizations, agencies, and neighborhoods on an ongoing basis to brainstorm, share program ideas, and interact professionally</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>x</td>
<td>o</td>
</tr>
</tbody>
</table>

Key:  

X = strong influence toward goal  

O = moderate influence toward goal
“Convenience is a big part of it, people don’t want to spend the time preparing and cooking.”
- Visioning participant
Findings and Recommendations

Citywide Recommendations

There are some recommendations that would be most impactful at a citywide scale and would help improve access for all residents. Large-scale awareness efforts could help residents become more aware of healthful choices in general and increase their access to options that may already exist in their neighborhoods. Many citywide strategies also target vulnerable groups, such as children or low-income households, regardless of the level of food access in their residential location.

- Create an online community forum for residents to connect and exchange information and food resources.
- Develop comprehensive marketing and educational campaigns to promote awareness of quality food options.
- Expand the reach of Farm-to-School programs to include nutrition and agricultural education.
- Work with healthcare organizations to promote direct access to quality food through coupons, vouchers, or even prescriptions.
- Convene organizations, agencies, and neighborhoods on an ongoing basis to brainstorm, share program ideas, and interact professionally.

Other recommendations are targeted at specific neighborhood circumstances identified through the Foodability mapping process. The Foodability score allows us to identify some areas that may have food access problems and recommend strategies that could be useful in improving food access in those broadly defined areas.

Four Food Access Scenarios in Portland

1. Low-income/ Inconsistent Foodability

What are the problems in these areas?

Neighborhoods with a large number of low-income residents and poor or inconsistent food access were identified as high-priority areas for improvement according to community input. In Portland, these neighborhoods are generally characterized by inconsistent food access—for example, the grocery store has prices too high for low-income residents, and more affordable smaller stores have few items low-income residents want or need. These areas may be less accessible—be less walkable, have more residents without cars, or have less available transit.

Where is this found in Portland?

There are a few areas in Portland where we see low-income communities with less access to nearby food. Outer North Portland near St Johns, outer Northeast around the Cully neighborhood, and outer East Portland near Lents have limited nearby food options for low-income residents.

What strategies could be useful to improve food access in these neighborhoods?

Several strategies could theoretically improve food access in these areas—bringing in low-priced grocery stores, improving transit access to low-cost stores in other areas, etc. However, many of these areas do not have sufficient population density to support a large grocery store or justify transit route changes. Additionally, many of these areas have food and other goods available at existing stores. Strategies aimed at increasing affordability of existing options and improving purchasing power of low-income households are likely to be better long-term solutions in these cases.
Preferred strategies in these areas include creation of “Community Food Development Zones” that foster programs and incentives to reduce cost and increase availability at small stores and convenience stores. Educational strategies, such as nutrition and cooking classes featuring ingredients available at local stores, could also be useful.

- Create “Community Food Development Zones” to foster pockets of innovative food access practices in underserved areas of the City
- Provide incentives to small grocers and convenience store owners to stock fresh produce and other healthful food options at affordable prices, including grants for energy-efficient lighting and refrigerators
- Encourage small grocers and convenience store owners to become licensed to accept OR Trail cards and WIC coupons
- Provide free or reduced-cost classes on shopping and cooking healthfully and affordably, especially for recent immigrants and low-income households
- Provide free or reduced-cost classes on growing your own food and preservation techniques, especially for youth and low-income households
- Require a food access impact assessment before reducing transit service
- Require new multifamily residential developments to set aside a portion of land for growing space, or provide incentives for developments to do this
- Encourage urban agriculture initiatives on City owned property, as well as at Portland Public School properties
- Conduct food assessments as part of the community planning process, especially in underserved areas

Map 14: Low Income/Inconsistent Foodability
2. Low-Income/High Foodability

What are the problems in these areas?
There are many areas in Portland with low-income residents and a large number of food access points, many affordable options, and a wide variety of food choices available. Some subgroups may still experience food access problems, and residents may desire some improvements in these neighborhoods, but community input indicated that these areas are less of a priority than more underserved locations.

Where is this found in Portland?
Downtown Portland and several close-in neighborhoods such as Boise and King in Northeast Portland and Kerns in Southeast Portland have low median household incomes, but are accessible, walkable areas with many food options.

What strategies could be useful to improve food access in these neighborhoods?
Focusing on awareness-based strategies would be most useful in these areas, giving residents the information and tools to take advantage of the variety of options in their community.

- Provide free or reduced-cost classes on shopping and cooking healthfully and affordably, especially for recent immigrants and low-income households.
- Provide free or reduced-cost classes on growing your own food and preservation techniques, especially for youth and low-income households.
- Require new multifamily residential developments to set aside a portion of land for growing space, or provide incentives for developments to do this.
- Encourage urban agriculture initiatives on City owned property, as well as at Portland Public School properties.
- Conduct food assessments as part of the community planning process, especially in underserved areas.

Map 15: Low-Income/High Foodability
3. MODERATE-INCOME/GOOD-FAIR FOODABILITY

What are the problems in these areas?
Most of Portland’s block groups have moderate household income levels and Good or Fair Foodability. These areas are accessible, walkable neighborhoods with a number of affordable places to purchase a variety of food. Some subgroups may still experience food access problems, and residents may desire some improvements in these neighborhoods, but community input indicated that these areas are less of a priority than more underserved locations.

Where is this found in Portland?
Hosford-Abernathy and Sellwood in Southeast, Vernon and Concordia, and Arbor Lodge in North Portland have moderate median household incomes, accessible neighborhoods, and a number of food options close by.

What strategies could be useful to improve food access in these neighborhoods?
Strategies that improve access for struggling subgroups and raise awareness for the rest of the community would be most useful in these areas.

- Encourage small grocers and convenience store owners to become licensed to accept OR Trail cards and WIC coupons.
- Provide free or reduced-cost classes on shopping and cooking healthfully and affordably, especially for recent immigrants and low-income households.
- Provide free or reduced-cost classes on growing your own food and preservation techniques, especially for youth and low-income households.
- Require a food access impact assessment before reducing transit service.
- Require new multifamily residential developments to set aside a portion of land for growing space, or provide incentives for developments to do this.
- Conduct food assessments as part of the community planning process, especially in underserved areas.
4. High-Income/Low Foodability

What are the problems in these areas?
These communities have a large number of high-income residents, but often have few available food options nearby, and are often inaccessible, with limited transit and low walkability. Many residents in these areas may not experience difficulty with food access, but that is likely because those residents rely on auto travel to reach grocery stores and other food points. These may not be high-priority areas for the City currently, but it may become necessary to revisit strategies for these areas in the future, if reducing Vehicle Miles Travelled (VMT) becomes a more significant concern. Some subgroups may still experience food access problems, and residents may desire some improvements in these neighborhoods, but community input indicated that these areas are less of a priority than more underserved locations.

Where is this found in Portland?
Much of Southwest Portland, including the Forest Park area, Southwest Hills and Markham, have high median household incomes and very few close food options. Many of these areas also have somewhat lower population densities than other areas in Portland. It is notable that we found no high-income block groups in Portland with excellent Foodability scores, which may indicate broader land use policies.

What strategies could be useful to improve food access in these neighborhoods?
These neighborhoods may benefit from strategies focused on improving accessibility, though this may be prohibitively expensive in much of the West Hills. Food access in these areas is also largely driven by a lack of nearby food stores, so increasing food points could also improve food access—though population density in these neighborhoods may not be sufficient to support additional full-service grocery stores.

- Require new multifamily residential developments to set aside a portion of land for growing space, or provide incentives for developments to do this
- Encourage urban agriculture initiatives on City owned property, as well as at Portland Public School properties
- Conduct food assessments as part of the community planning process especially in underserved areas
**Next Steps**

**Areas for Further Research**

Because the Foodability score is a gravity model for food access it assumes that residents will shop at the closest food source that can meet their needs. It does not necessarily reflect the behavior of residents, and does not consider other household needs that may motivate trips beyond their neighborhood or block group. Based on the Hacienda CDC case study, it seems likely that the Foodability score, while providing useful information, does not accurately describe the way many people access food in their daily lives.

Recommended next steps include a large-scale consumer behavior survey, possibly using a participatory GIS process, to discover actual consumer behavior, details about choices, and what consumers would like to change.

The impacts of online grocery stores and grocery delivery were not considered as part of this project, though online grocery shopping has been suggested as a possible strategy for improving food access in underserved locations. Additional research into the use and impacts of online grocery shopping and delivery should be conducted to determine its value as a food access strategy.

Considering restaurants, especially fast food, was beyond the scope of this project. Because many households consume a large portion of their meals away from home, this is a vital aspect of food access. Urban agriculture and CSAs were also only included in a limited way for this project. Any comprehensive food access planning process should address these gaps.

Today, according to the Oregon Farm Bureau, Oregon’s agriculture is largely an export industry, about 80 percent of Oregon’s agricultural production leaving the state, with more than 60 percent leaving the country. Only 20 percent of Oregon’s cropland, but Oregon is also a specialty crop state with more than 220 recognized commodities.

During WWII, in the face of a major challenge, food access was a very different picture. The country turned to the concept of the Victory Garden, ultimately producing 40% of the fruits and vegetables consumed by the nation (this comes from a variety of government agencies and Gallup polls conducted during WWII). According to an article in the December 2005 issue of *America in WWII*, even a plot of land at the Oregon Zoo was used for this purpose. With a firmly established base of specialty crops already in place, it seems that the role of urban agriculture to meet the fruit and vegetable needs of the local population is an area for further exploration, especially in the context of food security.

**Continuing Momentum for Food Access in Portland**

BPS and other organizations with an interest in food access may take a number of steps to continue the process of bringing food access issues into the Portland Plan and other policy processes. Possible actions include:

- Continuing to solicit feedback and comments from community members about potential food access visions, goals, and strategies.
- Conducting Community Food Assessments across Portland to ground-truth the Foodability score.
- Assessing needs and capacity to support additional food stores in underserved areas.
- Applying the Foodability score and recommendations to the greater Metro region.

Public outreach should be conducted to gather additional feedback on the vision statement, goals, and strategies. Special emphasis should be placed on gathering feedback from ethnic communities, who were difficult to reach and under-represented in the participation process for this project. Broad community consensus should be reached before the Foodability vision may be considered Portland’s vision for food access.

Food access and food issues are subjects that generate great interest in the Portland community, and we hope that this project has contributed to the ongoing discussion at BPS and across the City. We are also hopeful that an organization will pick up where we have left off due to the time constraints of this project.

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4 (http://www.oregonfb.org/about/about_orag.shtml)
Appendix A – Background Motivation and Research

Food System Planning’s Place within the Planning Field

Until recently, food systems were largely considered the domain of the free market and private advocacy groups and generally overlooked by the planning community. Food systems have also traditionally been considered a rural issue, outside the scope of planners in general and urban planning specifically (Pothukuchi, Kaufman, 1998). Studies in the late 1970s and surveys in 2000 found that planners believe the food system is largely driven by private market forces, and consequently not a legitimate area for public concern and interference. The neglect of food systems in comprehensive plans that “weave transportation, housing, recreation, and other basic needs...[but] rarely mention food” (Becker, 1982) has contributed to the feeling that food systems are “not [planner’s] turf” (APA, 2006). Because planners often neglected to consider the impacts of land use and transportation decisions on the food system, local governments and planning agencies might have made decisions that directly impacted residents’ access to food—such as cutting or altering a transit route providing transportation to a low-cost grocery store from a low-income neighborhood—without realizing the full impact of the decision. Worse, as noted in a 1978 University of Tennessee study, the “lack of a coordinating agency which can perform a broad oversight function” (Becker, 1982) can lead to scattered programmatic efforts to deal with food supply and related issues without any meaningful long-term change.

Without a comprehensive plan or overseeing body, most food-related programs prior to the 1990s were undertaken by nonprofit advocacy agencies. Social services and social justice organizations used traditional tools to combat food problems (mainly related to poverty and hunger) by focusing on food stamp programs, school meal programs, and emergency food provision. However, most of these efforts were “often unrelated [to each other], and treated symptoms [of hunger] rather than causes” (Becker, 1982). The recognition of food systems as a legitimate sphere of public interest and focus for planning and policy-making efforts may lead to more comprehensive and coordinated projects in the future that make lasting improvements to the sustainability, equity, and economic stability of the food system.

History of Food Systems Planning

Food systems were an issue of intermittent concern for the U.S. public between the 1920s and the 1960s, beginning with the publication of How Great Cities are Fed, a 1929 book written to educate the public on the complexity of the food system. Food planning was also a major area of concern during World War II. The burgeoning environmental movement of the 1960s brought additional awareness of the complexity of the food system and its connection to environmental quality, and the War on Poverty increased awareness of hunger as a public problem.

The first serious efforts at creating food policy and food planning began in the 1970s. The oil embargo in the seventies also brought increasing transportation costs and the dangers of dependence on foreign goods sharply into the public eye. In 1977-78 Robert Wilson, a professor at the Graduate School of Planning at the University of Tennessee, conducted a study of the food distribution system in Knoxville, TN. During the same period, Chicago’s Center for Neighborhood Technology hired an urban agriculture coordinator and the Hartford Food System (a forerunner of the City of Hartford Advisory Committee on Food Policy) was created.

The first food policy council in the U.S. was created in 1982 in Knoxville, when the City Council adopted a resolution stating that “local governments have a proper role to play in ensuring that all citizens have access to an adequate and nutritious food supply” (Becker, 1982). The city’s decision to create a food policy council was one of the responses to food system problems revealed by the 1970s study. In 1984-85 the U.S. Conference of Mayors initiated a project in five cities to develop food policy councils, and over the next decade a number of food policy councils were created across the U.S. and Canada. In the early 1990s additional studies reinforced attention on food systems and food policy councils, and in 2005 the American Planning Association made food systems planning an explicit focus for planners and planning departments with a special food planning track at the National Planning Conference. The 2006 presentation of a White Paper on food planning and 2007 adoption of an APA Policy Guide on Community and Regional Food Planning brought the issue of food firmly into the purview of planners and public policy-makers.
Food Policy Councils
Currently there are between 75-100 food policy councils across the nation. Food policy councils can be formed at state, county, city, or tribal government levels, and some food policy councils (like the Portland/Multnomah County Food Policy Council) are collaborations between different levels of government. There is no national organization governing or monitoring food policy councils, though the Community Food Security Coalition maintains a North American Food Policy Council website and (Drake University's Agricultural Law Center) has a State & Local Food Policy Councils website. Many food policy councils are subsections of larger organizations that deal with food systems, such as agriculture departments, poverty assistance organizations, or health councils.

According to an online interview with Mark Winne, founder of the Hartford Food System, there are three general methods of establishing a food policy council—legislative action, executive order, or private action. All three methods have benefits and disadvantages impacting membership, funding and staffing, and the long-term efficacy of the council.

Of the 76 food policy councils listed on the North American Food Policy Council site, 32 had sufficient information online to determine whether they are government or nonprofit organizations, and if they were still active organizations. Slightly over half of the food policy councils appeared to be part of private nonprofit agencies, which may or may not have official partnerships with local government or recognized status as an advisory body. The food policy councils that are a subset of local government are somewhat more likely to have official advisory capacity, but may also be subject to more restrictions on membership and decision-making processes. Most of the food policy councils listed appear to be currently active, though several policy council websites do not have entirely up-to-date information available online.

Food Policy Council Case Studies
Two sets of studies in the 1990s and one report in 2003 looked at food policy councils across the U.S., assessed their organizational background and structure, reviewed their activities and accomplishments, and noted challenges and areas in which the council might be improved.

The City of Hartford Advisory Commission on Food Policy (still active, http://www.hartford.gov/government/FoodCommission/default.htm) was founded via city ordinance in 1991 and began meeting in 1992. Fifteen volunteer commission members are appointed by the City Council for three-year terms. The Commission serves as an official advisory body, and works directly with non-profits, businesses, and government agencies to coordinate and monitor food system programs. It receives its limited funding through the Health Department and is staffed through the Hartford Food System, its lead organization. Like most other food policies, the Commission grew out of citizen advocacy efforts aimed at creating a “more equitable and just food system for ...all residents” (Beiher, Fisher, et al, 1999: 28).

The Hartford Commission has had success in increasing participation in school meal programs, improving participation in the local School Breakfast Program by 35 percent in three years. The Commission also initiated school meal quality standards in response to site visits and survey results. In addition to these childhood nutrition programs, the Commission conducts annual supermarket surveys, encourages supermarket development, and monitors local hunger indicators that are reported to other organizations and used to recommend new strategies to improve food quality and access for Hartford residents.

The Hartford Commission has benefited greatly from local support and leadership through the Hartford Food System, and its ability to access and examine data from other local organizations has helped it make productive recommendations and implement beneficial local programs. However, the Commission’s funding is too limited to allow it to maintain a full-time permanent staff position, which limits the Commission’s ability to cooperate more fully with city departments such as Planning and Economic Development.
The Austin-Travis County Food Policy Council (FPC, no longer in existence) was established by legislative action in 1995, in the wake of a study called Access Denied documenting local food access problems and impacts on health. The FPC did not receive a budget though the city or county, though it was given government sanction and meeting space. Staff and internship support was intermittently provided through the Sustainable Food Center, the nonprofit organization that conducted the Access Denied study. During the first years of its existence, the FPC had sufficient funding and support to implement two successful programs aimed at improving transportation to food sources and supporting community gardens. Unfortunately, sometime between 1999 and 2003 the FPC was disbanded, likely due to lack of funding and excessive competition for volunteer members’ time. However, in November 2008 the Sustainable Food Center, together with other local activists and organizations, convinced Austin City Council to create a new Sustainable Food Policy Board. The Sustainable Food Policy Board has advisory authority and is tasked with monitoring food issues and recommending actions to the city and county, very much like the previous FPC. The rationale behind creating a new food policy group rather than reviving the previous organization is unclear, and once again the establishing ordinance does not include any specific funding sources to support the group. While it is somewhat encouraging that the city of Austin is not neglecting food systems planning (especially given the success of some past programs), the possibility that the new group will be forced to duplicate FPCs 1995 start-up efforts is troubling.

The Tahoma Food System (TFS) was formed in 1997 by activists, farmers, and government agencies in Tacoma, WA and Pierce County, with a focus on food access and farmland preservation. The TFS was incorporated as a non-profit agency, though the organization made efforts to establish and maintain working partnerships with government agencies. TFS successfully increased awareness of community gardens within the city council and the public, and secured Community Development Block Grant funding for garden projects. Currently, the www.tahomafoodsystem.org site is listed for sale, and the Washington State University Pierce County Extension, which formerly housed the TFS, does not list it among its active programs. It seems probable that TFS was disbanded due to lack of funding.

The Los Angeles Food Security and Hunger Partnership (LAFSHP) was formed by city council resolution in 1996, following a 1993 UCLA Department of Urban Planning study called Seeds of Change highlighting food insecurity in LA neighborhoods, and the efforts of the Volunteer Advisory Committee on Hunger in 1995. It was granted seed funds by the city, though it also secured nonprofit status, to allow LAFSHP fundraising from private donors and other sources. The LAFSHP was given the authority to “review, evaluate, and recommend policies and community development programs” (Beiler, Fisher, et al, 1999: 38). As of 1999, LAFSHP had not completed any major projects, but had received Community Development Block Grant Funding to create a program to provide fresh produce to low-income households. The lack of information about LAFSHP activities suggests that the organization is no longer active, probably as a result of an inability to secure long-term funding.

The Knoxville Food Policy Council (KFPC, http://www.ci.knoxville.tn.us/boards/food.asp) was the first food policy council formed in the U.S. It was created in 1982 as the result of studies highlighting food distribution problems and subsequent encouragement from the county Community Action Committee. The KFPC was a nine–member council appointed by the Mayor’s Office until 2002, when the council was expanded to 11 members. Volunteer members are now appointed by the Mayor’s Office and the Knox County Executive, and include “one City Councilor, one County Commissioner, consumer and neighborhood advocates, representatives of the nutrition and health sector, and people involved in agriculture and the food industry” (Borron and Emerson, 2003). The KFPC is an advisory body with no enforcement power.

The KFPC receives very limited funding from the city of Knoxville and may receive additional funding from Knox County. Staff support is provided through four other agencies, including the Community Action Committee, who allocate part of one staff member's time to the KFPC. A planning consultant is also hired annually to help guide the KFPC and write reports.

KFPC has had success with school nutrition programs, and the Knoxville school district’s School Breakfast Program was enacted as a result of their urging. The school district also hired a nutrition coordinator at the KFPC's recommendation. KFPC has increased awareness of food systems issues, worked on improving transportation to food providers, and provided support for community gardens.
The Berkeley Food Policy Council (BFPC, probably still active, [http://www.berkeleyfood.org](http://www.berkeleyfood.org)) had its beginnings in 1997 when concerned parents spurred the formation of the Berkley Unified School District Food Policy Collaborative. The organization aimed to support the local food system and involve students and the community in “food, nutrition, and agriculture education” (Beiher, Fisher, et al, 1999: 49). In 1999 a coalition of residents, community groups, city and school agencies, and other organizations formed the Berkley Food Policy Council, and in 2000 the BFPC agreed to collaborate with the Berkeley Health Council as an advisory group. Membership on the BFPC is open, though attendance at two of the most recent four meetings is required for voting privileges. The BFPC is large—ninety people were involved in 2003—and come from a wide variety of stakeholder groups, including non-profit staff, farmers, grocers, restaurateurs, school district staff, and health department staff.

The BFPC has been quite successful in its efforts to increase nutrition and local food usage in schools, benefiting its beginnings as a school-focused collaboration. BFPC was also able to work with City Council to pass one of the first municipal food policies, and has supported urban agriculture and farmer’s markets in the Berkley area. However, the BFPC does have difficulty maintaining attendance at meetings and cohesion among its members, probably because the membership is open and extremely large. Its broad membership may also create buy-in from community members that might otherwise be disposed to resist implementation efforts.

**Challenges Facing Food Policy Councils**

Food policy council case studies indicate that the most significant challenge facing these organizations is lack of funding and problems arising directly or indirectly from funding insecurity. Inconsistent staff support, meeting space, and the ability to fund research and/or program implementation has been an issue for all of these organizations to some degree. The dissolution and reformation of the Austin-Travis County Food Policy Council/Sustainable Food Policy Board is particularly troubling, as it suggests that food planning may be seen as an optional—or at least less vital—area for local government action and thus especially vulnerable to cuts when budgets are tight. If food systems projects and planning are routinely cut from the budget and re-established when finances improve, there is a real danger of wastefully reinvesting in the same start-up activities again and again.

To some degree, the fact that food systems planning has been referred to as a new and burgeoning field for public action at multiple times since the late 1970s reinforces the suspicion that food planning emerges and disappears from the public consciousness and professional sphere of planners. Food systems planning will not be fully integrated into long-term comprehensive plans if it does not remain a visible issue for the public and the planning profession. It remains to be seen if the current economic downturn will dampen current interest in food systems planning, though cuts to planning departments and nonprofit budgets do not bode well for issues not seen as imperative to public welfare.
APPENDIX B - Potential Strategies and Case Studies*

*It must be noted that The City of Portland and food access organizations working in the area already employ and/or are testing some of the strategies listed here. However, we felt it was important to look beyond Portland for case studies and strategies to reaffirm what Portland is doing and add innovative ideas to the list of possibilities.

CITY INITIATIVES
The Portland Bureau of Planning and Sustainability is able to influence food access in a variety of ways, including by providing direct services and programs, such has already been done by the popular “Urban Growth Bounty” initiative. The City is in the unique position of being a central resource and many visioning participants felt strongly that a key role for the City to play was in providing information and increasing awareness regarding food access.

Create “Community Food Development Zones” to foster pockets of innovative food access practices in underserved areas of the City
This approach provides attractive loans, technical assistance, and free product marketing to businesses that either open new operations or expand their existing operations in targeted zone areas in a way that improves the overall availability of food options in the area, particularly by adding fresh products to their offerings, and/or improves affordability of their products.

Case Study: The Food Retail Expansion to Support Health, or FRESH, is a recently developed program in New York City that will provide zoning and financial incentives to neighborhood grocery stores, such as a reduction in required parking and real estate tax reductions, in an effort to encourage stores in four targeted, underserved communities to provide a full range of food products with an emphasis on fresh fruits and vegetables, meats and other perishable goods. Go to http://nyc.gov/html/misc/html/2009/fresh.shtml for additional information.

A similar program for a different product is the Recycling Market Development Zone (RMDZ) program implemented by the California Integrated Waste Management Board, which combines recycling with economic development to fuel new businesses, expand existing ones, create jobs, and divert waste from landfills.

Create an online community forum for residents to connect and exchange information and food resources, such as available garden plots, extra produce, coupons, etc.
Related to the directory approach listed below, this takes a more user-initiated approach. Along the line of Craigslist, this would be directed for residents who want to exchange information regarding food access. For example, home gardeners with excess crops could post listings to share or exchange with other gardeners or City residents. Additionally, tips and urban agriculture knowledge could be shared to maximize the effectiveness of all growers and to facilitate the entry of new gardeners to the area of urban agriculture. This could be a very cost effective way for information to get shared in a timely manner, but the information may not reach all audiences- obviously those without the ability to use a computer or access to one would not benefit. Another example is Urban Edibles, a public website, which shows the location of publicly accessible edible plants throughout the Portland Metro region (http://urbanedibles.org/).

Create a Citywide comprehensive directory of food access resources & services
As indicated by the list of organizations working in Portland on issues related to food access (Appendix F), many efforts are currently underway to help people meet their food needs. A comprehensive list of these organizations, including what services they offer the general public and contact information, would improve both access and awareness related to food access decisions in Portland.

This listing could be developed in conjunction with a non-profit advocate for food access. Grant funding could be applied to pay for printing and distribution costs. Another alternative is to keep the listing exclusively online to allow frequent updates and to reduce costs. However, this may limit access for certain populations. If provided in multiple languages, it would improve access to food and work towards improving awareness and equity to a larger audience. The directory could potentially include resources to educate regional food producers about opportunities for direct marketing.
**Case Study:** Being operated on a national basis is GroceryStore, an online directory of grocery-related information, including coupon sources, grocery shuttle offerings, grocery store evaluations, grant offerings, to list only a few. It focuses only on grocery stores, and does not include the offerings of smaller markets or non-profit organizations. Closer to home, Food for Oregon, which is a partnership between the Oregon Food Bank and Oregon State University Extension Services, provides an online searchable database of community food resources across Oregon. However, it does not include information regarding grocery stores.

Develop comprehensive marketing and educational campaigns to promote awareness of quality food options at the city and neighborhood levels

This is already being done to a certain extent for children through school programs, such as schools having a garden to teach children about growing techniques and healthy food choices. Some non-profits, particularly in the field of community health, already work with higher risk groups to educate them about making quality food choices. If specific groups are identified as having food access difficulties due to awareness issues, expanding and coordinating these efforts would help target their specific needs.

Cultivate a culture of local food gathering and production by providing collapsible shopping carts and seed starts to individuals and organizations

Similar to the idea of giving away CFC light bulbs to encourage energy conservation or giving away garden gloves and seed packets to encourage home gardening, this strategy offers tangible incentives in conjunction with more traditional literature-based materials to inform people about the impacts of the food access choices they make. The ‘giveaway’ item could be targeted to an area in terms of what behavior changes would lead to improved food access, such as providing collapsible shopping carts to encourage walking to their local food access points in areas of higher density, and giving out seed starts in areas with open space to encourage the expansion of urban agriculture.

In order to be successful, any program would need to be combined with a comprehensive promotional plan that includes plenty of follow up, as well as some checks and balances to make sure that the ‘giveaways’ are reaching the correct populations. Partnering with an organization already well established in the neighborhood would help ensure this process went smoothly.

**INCENTIVES**

The City may also able to provide incentives that encourage the private sector to improve food access in a variety of ways. Attracting additional traditional chain supermarkets may be a possible alternative, but as our analysis of the existing conditions shows, the City as a whole, and even most low-income areas, are already relatively well served by this type of establishment. The strategies proposed below attempt to approach the issue from different angles and include a focus on vulnerable populations, as well as smaller-scale food providers.

Provide incentives to small grocers and convenience store owners to stock fresh produce and other healthful options at affordable prices, including grants for energy-efficient lighting and refrigerators

Small grocery stores, and especially convenience stores, are frequently criticized as not carrying enough fresh produce or healthful food options for the immediate area they serve. Incentives directed to encourage the stocking of fresh produce and other healthful food options at affordable prices will expand the availability of a variety of food options. This could be done either by linking small grocers with specific farms, to eliminate middlemen, or through cooperative buying on behalf of smaller grocery stores to achieve larger savings through economies of scale, or through direct subsidies to wholesalers who receive lower profit margins on healthful food to smaller food retailers. The issue of profitability, due to higher costs for lower volume purchases and increased spoilage due to lower volume traffic would need to be studied to assess the economic viability of this option.

Encourage small grocers and convenience store owners to become licensed to accept OR Trail cards and WIC coupons

Even when a suitable food access point is located near a low-income family, they cannot always access it if they use a food assistance program that the local store does not accept. The result is that the family either must travel extra distance to a store that does accept their program, or go to a store that is perhaps not as affordable or appropriate for their needs.

On a more comprehensive level, the processing procedures for food assistance programs should be examined to identify barriers for food access
points to become licensed to accept food assistance benefits. However, as these programs are run at the federal and state levels, there may be little that can be changed at the city scale to improve the situation.

Provide incentives to CSAs to subsidize plots for low-income households
Some people on limited incomes may feel that participating in a CSA is outside of their financial reach, or may not be aware of their existence. One method to encourage participation from a wide sector of participants is to have members charged by their ability to pay. Additionally, because most CSAs require payment in advance of the receipt of the good, alternative payment schedules should be explored.

Case Study: The West Village CSA, located in New York, is based on a sliding scale, which means that higher income members subsidize share prices for lower income members, even though everyone receives the same amount of produce.

Partner with food points to provide “Double Value” coupons for healthful food options for vulnerable populations (seniors and low-income households)
A feasibility study regarding the cost of this program, as well as how to prevent fraud, would need to be completed. Also, the definition of healthful food would need to be assessed in consideration of the numerous dietary and health-related restrictions people have. Another approach would be to offer the coupons for only a very limited selection of easily agreed upon healthful foods that target specific populations, primarily youth, such as milk and a few locally produced fresh vegetables, helping to support local producers.

Case Study: The Wholesome Wave Foundation, which operates two farmers markets in Connecticut, began a program in the summer of 2008 that essentially doubles the value of WIC and food stamp benefits for the purchase of fruits and vegetables at the market. The coupons were distributed in targeted communities and after much success in its first summer, the program is planned to be replicated in farmers markets across the nation.

Encourage retail food points to provide free or reduced-cost delivery options for senior citizens
Some care facilities already provide transportation to local or discount food stores as part of their overall care package. The location of pick-up points would need to be studied, and would most likely need to be placed near transit points to maximize access from a wider area. Another approach may include working with grocery stores to reach out to senior citizens to market existing delivery services. A feasibility study could be done to identify challenges and opportunities, as well as price points to make a program such as this effective.

Provide offsets for the cost of watering for community gardens and other urban agriculture projects and promote rainwater harvesting
Rainwater harvesting has long been used as a cost effective approach to conserve water resources in areas where fresh, clean water is in short supply. However, the same techniques can be used in our area where plenty of rain water is available seasonally, then stored and used during the summer to reduce the cost and impact of operating community gardens. The Bureau of Environmental Services is a City agency that could act as a partner to implement strategies at a city-wide scale. Another approach is through the use of offsets.

Case Study: In an article in the May 9, 2007 issue of World Changer (http://www.worldchanging.com/archives/006657.html), Jeremy Faludi suggests that since the amount of water wasted by inefficient irrigation is around four times the total amount of water used by commercial and residential buildings, builders of green buildings could have a bigger impact by financing water offsets—buying an efficient irrigation system for a farm or orchard—rather than using the money on a water efficient building improvements and on systems for gray water capture. The problem with this concept is that reducing water use in cities should still be encouraged, but this could serve as a good starting point for the idea of linking up urban agriculture with local water saving initiatives.
Regulations may also be an effective way to influence the actions of the private sector, and if applied at a citywide scale, could have a substantial impact on improving food access.

Require a food access impact assessment before reducing transit service
Research on food access and food security, especially for low-income communities, has indicated that one of the recurring problems facing food insecure households is lack of safe, reliable, or convenient transportation to grocery stores or other sources of affordable, healthful food. Additionally, providing direct transit access from low-income neighborhoods or areas with inadequate affordable food stores can provide benefits beyond increasing food access for those communities. Since many grocery stores are located in more affluent areas and are often close to other retail or commercial activities, these transit connections may also increase employment opportunities for some residents.

Require new multifamily residential developments to set-aside a portion of land for growing space, or provide incentives for developments to do this
While many larger residential developments set aside a portion of the land for recreational purposes, this land is often of marginal value and inappropriate for urban agricultural use. Either through incentives or through regulations, systems could be put into place encouraging the setting aside of land suitable for agriculture within the residential development, including rooftop or container gardens.

Encourage urban agriculture initiatives on City owned property, as well as at Portland Public School properties
By taking advantage of unused as well as highly visible pieces of property, the City can take steps to model the behaviors and practices that it would like to encourage its residents to undertake, such as community gardening and the planting of fruit trees. Strategic considerations should be made to develop potential publicly owned sites, as well as rooftop space, into viable agricultural venues.

Case Study: The City of Boston’s Redevelopment Authority designated community gardens with specific zoning (Community Garden Open Space) to “protect land appropriate for and limited to the cultivation of herbs, fruits, flowers, or vegetables; such land may include Vacant Public Land.”

Case Study: The San Francisco Sustainability Plan sets a goal to maximize food production within the City itself, with identified actions including cataloguing all public vacant properties suitable for food production, donating such land to non-profits for gardening projects, and amending the City Charter to allow discount sales of city properties to non-profit organizations to use for community-based food projects.

Implement an institutional purchasing program requiring government organizations to buy locally produced food
Research shows that not only do children eat a significant percentage of their meals at school, but school breakfast and lunch programs providing nutritious meals to low-income students can improve performance. In addition, studies indicate that education about food and nutrition is important to teach children whose parents do not (or cannot) cook healthful meals how to do so. The National Association of Counties also asserts that “bringing locally grown fresh fruits and vegetables...encourages America's children to consider the intersection between their health and their food” (Dillon & Harris, 2007: 9).

Ensure building codes provide adequate cooking and food related storage space, especially for senior living residences
Some low-income housing for seniors do not have adequate kitchen facilities. Eating healthfully can be difficult even with a full service kitchen; working with just a microwave and small refrigerator makes it far more difficult, as cooking and storage options are severely limited.

Conduct food assessments as part of the community planning process, especially in underserved areas
Local food assessments, such as was done in the Lents community, not only help identify local issues, they also increase awareness of local food options and facilitates the creation of partnerships for addressing the identified issues. However, these assessments are usually done at the neighborhood level, where community organizing is done at a volunteer level. Creating a document that helps guide neighborhoods through the assessment process
would greatly improve the ability of the neighborhood to complete the process, would improve overall quality of results, and would result in a product that would be more easily comparable across communities.

Maintain zoning that facilitates late-night delivery for food-industry related activities, especially in traditionally industrial areas that may be experiencing development of other uses
As housing continues to creep into industrialized areas, and the need for services in these areas increases, it becomes more and more difficult for grocery stores and other food service providers to receive their deliveries. Noise complaints and traffic make truck delivery more difficult and consequently more expensive and time consuming. Additionally, while more related to food systems as a whole than directly related to food access, locating warehouses for food distributors near the city center enables more efficient delivery of wholesale goods to area stores, allowing perishable goods to get to the stores more quickly and ensuring a higher quality product.

Promote and support produce carts, road-side stands, and U-pick farms with user friendly food selling regulations
A significant barrier for local farmers and other local food producers in getting their products to the community is the various national, state, and local regulations they must meet. If this system were streamlined or if there were one source of information as to how to maneuver the regulations, more local food could get into the community. Care must be taken to preserve high standards of consumer safety.

PARTNERSHIPS
Portland has a wealth of active food access organizations and tapping into this resource stream in a strategic and mutually beneficial way could yield substantial gains toward improving food access across the City. From emergency food, public health, and urban agriculture organizations to community organizations focused on social equity and direct market agencies working with retailers on their day-to-day business, building a strong foundation with and between these types of organizations is an important approach.

Encourage additional food points to locate in underserved areas of the City
There are a wide number of approaches to take in implementing this strategy, but most are aimed at areas of large, underserved, low-income populations, most frequently seen in older industrial-based cities. See Appendix E for a summary of food access points and the requirements and strategies for locating them in a particular neighborhood.

Expand the reach of Farm-to-School programs to include nutrition and agricultural education (cooking classes and school garden plots)
Farm-to-School programs can provide nutrition and education to students. Learning about local food systems, as well as food production and preparation through in-class activities and hands-on field trips can be a valuable way to introduce children to where their food comes from and the importance of nutritious eating. Likewise, programs to work with farms and other food supply organizations to ensure that local food is easy to prepare can help school school cafeterias with limited ability to prepare food.

Case Study: In August 2008, a grant from Kaiser Permanente Community Fund will fund a Farm-to-School program operated by Ecotrust, for the Portland Public School district and the Gervais School District to bolster existing efforts to bring more regionally produced food into the school meal programs. Additionally, an accompanying six month study will provide a rigorous test of policy concepts originally introduced in the 2007 Oregon legislative session to reimburse schools for purchasing Oregon agricultural products. Data gathered from the pilot will provide the Oregon State Legislature with information to consider another similar proposal.
Increase transit connections between low-income and minority neighborhoods and appropriate, affordable grocery stores
Similar to the car share strategies, the goal is to facilitate access to the grocery stores people want to go to, and transportation barriers continue to surface as an obstacle. When planning transit routes, taking into consideration the location of major discount grocery stores would facilitate access to these locations. Food access is not currently a factor in bus routing decisions. However, many people feel that they cannot adequately access grocery stores, or state that it is very difficult to do so using public transit, because of the difficulties in traveling with a large amount of groceries.

Work with health care organizations to promote direct access to quality food through coupons, vouchers, or even prescriptions
Forming partnerships with health care organizations already actively promoting access to healthful food may provide additional connections to underserved and/or vulnerable populations. Like the WIC program, which operates at the national level, communities may be able to provide additional benefits to those whose health would be greatly benefited by a more nutritious diet. Like other programs, a feasibility study regarding the cost of this program, as well as how to prevent fraud, would need to be completed. Also, the definition of healthful food would need to be assessed in consideration of the numerous dietary and health-related restrictions people have.

Provide free or reduced-cost classes on shopping and cooking healthfully and affordably, especially for recent immigrants and low-income households
Community development agencies and other community based organizations may be potential partners in providing educational resources, especially when it comes to “smart” shopping on a limited budget and how to make healthful meals when time is short. Used as a community building exercise participants could share challenges and success stories, as well as tips on how they access food.

Case Study: A joint program between Boise State University’s Health, Wellness and Counseling Services and WinCo Grocery Stores offers free Grocery Store Savvy Tours to educate about smart grocery shopping on a tight budget while still creating a healthy diet.

Provide free or reduced-cost classes on growing your own food and preservation techniques, especially for youth and low-income households
If you have land available but lack gardening knowledge, you may have difficulties growing your own food, which is a cost effective way to supplement your diet with fresh and healthful food. Additionally, if you are growing your own food, an abundance of one type of food is ripe at one time, but without the knowledge of preserving that food for later use, much of that food can be lost. These barriers can easily be overcome through education techniques. Many classes are currently available through various organizations, but the cost may make them out of the reach of those who could benefit from them the most.

Provide infrastructure improvements to facilitate CSAs, including installing lock-boxes and making drop sites more visible
Additional supporting infrastructure would facilitate the effectiveness of CSAs and community gardens. This includes installing lock-boxes and making drop sites more visible to the public and increasing awareness of opportunities to become involved with CSAs.

Create space for local food production for small producers and food providers, such as incubator kitchens and refrigerated storage
It takes time and money to start up a food operation and meet all of the regulations required of a new business. Stringent food safety regulations prohibit many types of food for public consumption to be prepared in a private home. One alternative for an entrepreneur is contract production and packaging, but this can be very expensive. Another alternative is incubator kitchens, which are fully functional commercial kitchens that rent space by the hour to food entrepreneurs. They carry general licenses and can help clients obtain any additional licenses they will need to produce their goods. By helping local food growers and entrepreneurs maneuver the regulations, and spread out production costs, these facilities reduce a major barrier to market entry.

There are concerns for those operating the incubator kitchen. They are logistically challenging to run, as the space is rented out by the hour by a great variety of users. Additionally, utility charges can run very high. They currently have a mixed record for turning a profit.
Create small-scale carshare or rideshare programs for low-income households and senior citizens for whom accessing food points is a challenge

According to a study released on April 8, 2003 by the UC David Center for Advanced Studies in Nutrition and Social Marketing, inner-city supermarkets can improve their profit margins and the health of the communities they serve by offering shoppers free transportation. The program expands resident’s access to fresh, healthful food, especially fruits and vegetables. Stores benefit from additional shopping trips from new and existing customers, increased sales from larger purchases, reduced shopping-cart losses, free publicity (signs inside and outside the vans) and improved customer and community good will. However, this type of program seems most appropriate in areas where there are food deserts, with only convenience stores and no full service or intermediate-sized grocery stores available.

A needs-based, small-scale car share program would facilitate access for low-income families who do not have a car but who want to access the more affordable grocery stores, or to access stores that have food appropriate for their culture. Again, no case studies exist for such a program and additional research as to its viability would be necessary. To provide safer, more convenient access to grocery stores, supermarkets could be encouraged to fund shopper shuttles, as well as seeking connections with non-profits and social-service agencies to share vans in their ownership.

Provide racks in buses and MAX trains for grocery bag storage

A natural complement to improving transportation options for accessing food points is to provide storage for grocery bags. No case studies exist for such a program and additional research as to its viability would be necessary.

Convene organizations, agencies, and neighborhoods on an ongoing basis to brainstorm, share program ideas, and interact professionally

Besides keeping an organized list of the organizations working to improve food access in Portland for the benefit of city residents, actively working to get those organizations working together, sharing ideas and resources to best meet the needs of the community and to reduce duplicate efforts, would improve overall efficiency of the system.

Case study: The Local Fare program was originally started with an Economic Development grant from the UW Extension. It is an initiative designed to improve regional economic and community well-being by increasing access to locally grown products in Southwest Wisconsin. By providing professional development and networking opportunities to local producers, it promotes the connection of regional producers and consumers through stores, schools, farmer’s markets and community-supported agriculture relationships. Local Fare is housed in the Office of Continuing Education at the University of Wisconsin-Platteville. (Information from their website, http://www.uwplatt.edu/cont_ed/LocalFare/index.html)
APPENDIX C – PORTLAND SPECIFIC RESEARCH

VisionPDX – Comments related to Food Access

VisionPDX was a City-supported, community-led initiative to create a vision for Portland for the next 20 years and beyond. The purpose of VisionPDX was:
- To invite community members to plan for the future of the City. There had not been a broad look at the current state and direction of Portland for 15 years.
- To open up government to all Portlanders, particularly to underrepresented groups and communities.

This was the largest public engagement process Portland has completed to date, and one of the largest in North America.

The VisionPDX Input Report:

During the summer of 2006, over 13,000 Portlanders responded to a questionnaire about the City and its future. In nine different languages, across all areas of the City and in countless different community settings, these Portlanders provided candid and insightful answers to the following four questions:
- What do you value most about Portland and why?
- What changes do you most want to see right now?
- Imagine Portland in 20 years in the future and all your hopes for the City have been realized. What is different? How is our City a better place?
- As you imagine the Portland you just described, what are the most important things we can do to get there?

Though there was not a specific section addressing food issues in Portland, it was a recurring theme throughout the document. Those ideas are summarized below. The complete document can be found at (www.visionpdx.com/reading/inputsummary).

Significant Themes Relating to Food Access

Both the individual and the community have a responsibility to promote health. Portland is a City that values, supports, and promotes healthy living.

a) People love being able to easily access fresh, local, healthy food through a variety of different outlets, including neighborhood farmers markets, non-traditional, health-conscious grocery stores, community gardens located throughout the City, and Community Supported Agriculture and farms near the city limits.

b) Many respondents believe that Portland already has an abundance of fresh, healthy food, while others are unable to access high quality, organic produce because it is not sold at the supermarkets where they shop or it is out of their price range.

People want to see the basic rights of all children and families fulfilled.

a) Portlanders feel that all children and families have basic rights which the community must strive to meet, including health, quality food, safety, and quality education.

b) The community needs to reduce and prevent hunger before it becomes an even greater problem.

c) The need for food is a basic necessity that remains unmet in our community.

Part of what makes Portland livable is ample access to a wide array of amenities, services, and institutions.

a) Access to multiple sources of organic, local food as well as sustainable products and services by all neighborhoods, communities, and populations.

b) Low income residents should have better access to fresh, local food from a variety of sources.
In the face of population growth and market pressures, Portlanders urge the City to remain true to its reputation as a leader in forward thinking, community-oriented land use planning. The City should be responsible for policy that directly addresses equal access to healthy food.

a) Successful past land use planning efforts include maintaining farmland close to the City, helping Portlanders to access fresh, local food.

b) Focus redevelopment efforts on improving livability in underserved neighborhoods, ensuring that every community has access to grocery stores that offer fresh, healthy food at affordable prices.

c) Policies and plans should reflect health as a priority so that not only is access to food a priority, but access to quality food is the standard.

d) Portlanders need to support services that directly work to prevent hunger.

e) There needs to be more promotion of local food production as it relates to the benefits of the local economy and Portland residents.

Looking forward: Equity in access to local food. Portlanders of all income levels should have access to multiple sources of fresh, local food. Increase access to local food among low-income populations so all Portlanders can benefit from the region’s agricultural abundance.

a) Portlanders value access to high-quality, local food and want to facilitate its production and consumption.

b) Many envision a future in which most of the food Portlanders eat is produced locally and Portland is a food mecca with vibrant nearby agriculture.

c) Portlanders see many benefits to supporting local food production, including:
- reducing dependence on fuel
- building a strong local economy
- improving residents health and reducing obesity
- building community by connecting neighbors to each other as well as to food producers
- combating pollution
- increasing people’s connection to nature
- fostering regional self-reliance
- creating a more vibrant urban eco-system
Suggested Strategies:

1) Regulate the food supply to keep harmful substances out of people’s diets

2) Distribute farmers markets fairly and equitably throughout the City. Farmers markets in every neighborhood. A year round farmers market downtown.

3) Demand schools to improve the quality of cafeteria food and serve only healthy food to children.

4) Create a culture where communities can easily grow their own food. More homegrown food (rooftops, community gardens, lawns). Create more community gardens in parks, so people can grow their own food and so children can learn how to grow plants.

5) Change the City comprehensive plan to reflect health as an important priority.

6) Change zoning to encourage urban farming. Grow food on unused properties within the city. Tax breaks for backyard vegetable gardens and/or incentive to turn lawns and parking strips into gardens.

7) Create City-owned CSAs in different neighborhoods. Create a fund to allow people who can’t make the initial payment, to make incremental payments to CSAs. Provide subsidies so low-income people can participate in CSAs. Have a community garden within walking distance of everyone.

8) The City needs an active, comprehensive plan to address food access and the infrastructure needed to provide it, such as good local stores, farmers markets, school food, and community gardens.

9) Increase community education/learning for children and adults around the benefits of local food production and how to grow their own food using different techniques, such as organic gardening and permaculture.

Everyone Eats!

The Interfaith Food and Farms Partnership of Ecumenical Ministries of Oregon’s (EMO) Interfaith Network for Earth Concerns launched the Everyone Eats! north/northeast community food assessment in March 2006. The focus was on north/northeast Portland because of its diversity and high rates of hunger and poverty, and to follow up on issues that were raised in a 2003 assessment. EMO’s Northeast Emergency Food Program (NEFP) was a primary partner for the Everyone Eats! Assessment. Based on relationships built with congregations and community partners, several low-income residents were recruited to serve on a leadership team. Members of the team helped to develop a survey which they conducted in their neighborhood. Additionally, four small focus groups and members of the leadership team shared their stories and ideas. This process informed the following findings and recommendations.

The project focused on three questions:

- What are the barriers to food access for low-income residents of north/northeast Portland?
- What projects would be most needed and effective for increasing access to fresh, healthy food in these neighborhoods?
- How can faith communities participate in creating a more secure and just food system in north and northeast Portland?

Findings:

- Access to food and especially to enough fresh, healthy, culturally appropriate food is a serious concern for many residents of north and northeast Portland. Thirty percent of survey respondents said that they don’t get enough unprocessed foods like fruits and vegetables, and 21 percent said that they don’t get enough of the food that they are familiar with and are used to cooking with.
- Seventy-one percent of survey respondents said that at least sometimes they have difficulty stretching their food budget to the end of the month, and report accessing emergency food boxes or eating less food and skipping meals as some of their coping mechanisms.
Forty-five percent of survey respondents were dissatisfied with the number of grocery stores in their neighborhood, with a substantial number of those surveyed traveling long distances in order to shop at discount grocery stores and to reach emergency food locations. This despite most of north/northeast residents living within a half-mile of a full service grocery store.

Forty-three percent of survey respondents said that issues relating to transportation sometimes make it difficult for them to get groceries, and about half of respondents did not generally have access to a car or use their own car for grocery shopping.

**Recommendations: Access to Healthy Food for All**
- Address transportation issues related to isolation from grocery stores, particularly bulk discount stores.
- Increase dialogue between local growers and emergency food providers to enhance access to fresh, nutritious foods for low-income clients.
- Work with Portland/Multnomah Food Policy Council Food Access Committee to pursue policy changes.
- Create a community food center for food education, preservation and micro enterprise in north and northeast Portland.

**Recommendations: Local Food Programs**
- Subsidize farm produce shares for low-income families.
- Provide low-income residents with coupons usable at congregation farm stands and north/northeast farmers markets.
- Provide classes on cooking with local food and help publicize available cooking and nutrition classes.
- Publicize community garden plot availability and existing programs that help low-income residents start home gardens. Support congregations interested in starting gardens that connect with low-income neighbors.
- Expand publicity on the availability of WIC and Senior Farm Direct Nutrition Coupons and farmers markets and farm stands that accept the Oregon Trail Card.

**Recommendations: Faith Community Partnerships**
- Make congregation parking lots, classrooms and kitchens available for programs like produce box drop-off sites, cooking clubs, and sites for farm stands where framers’ market coupons can be used.
- Incorporate these programs for creating access to fresh, local food into existing congregational emergency food programs.
- Sponsor low-income families to receive subsidized shares of produce from a local farm.
- Start a garden on congregation property and make plots and resources available to low-income neighbors and provide support to neighboring community gardens.
- Engage and educate congregation members about local food, farm, and hunger issues.
Lents Food Assessment

In October 2003 the Portland/Multnomah Food Policy Council (FPC) recommended a plan for food access throughout the region by developing community-based solutions for areas with inadequate food access. The FPC partnered with Metro to map food resources such as grocery stores, emergency food resources, farmers markets, and community gardens along with census data. Transit lines and automobile access were also assessed. One of the areas of Multnomah County identified as having less than adequate access to healthy affordable food was the Lents community, and it was selected as the area for FPC’s pilot planning project.

The Community Food Assessment process included forming a food advisory committee to guide the process, development and implementation of a Lents-based community food assessment survey, and use of a market basket survey to investigate the price and availability of food products in Lents.

Key findings of the food assessment survey:
- Almost half of the respondents surveyed would grow their own food if they had the space and information.
- Fifty-three percent of respondents wanted to learn more about preparing fresh foods.
- There was a high degree of interest in re-establishing a farmers market in Lents.

Key finding of the market basket survey:
- A cross section of common grocery items was available and slightly less expensive in Lents compared to other parts of the city, suggesting that Lents is not a “food desert” where affordable groceries are not available.

In 2005, with funding from a $50,000 Robert Wood Johnson Healthy Eating by Design grant to develop physical and programmatic enhancements related to food access in the Lents community, the assessment spurred the creation of community partnerships and guided numerous community projects focusing on three areas:
- Growing your own food
- Preparing healthy meals on a budget
- Resurrecting the Farmers Market

Policy Implications:
With the understanding that government policy can be the most effective way to affect long-term change in the food system, residents have been meeting with a food policy consultant hired through the Healthy Eating by Design grant to develop policy proposals to address the issues identified in the assessment. They are now weighing which policy initiatives will best meet their objectives.
APPENDIX D - COMMON VOCABULARY

Community Food Security: A situation in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes community self-reliance and social justice.\[1\]

Community-Based Food System: A food system that emphasizes eating seasonal, locally-grown and produced foods. It emphasizes developing rural-urban connections and supporting local farms.

Culturally Appropriate Food: Food crops and products specific to a culture.

Economic Access: Having enough money to buy appropriate food, which depends on how much money a household has, how much it can allocate to food (as opposed to other, mandatory, expenditures such as utilities, rent, and debt repayment), and on the price of food.\[3\]

Equity Planning: Planning efforts that pay particular attention to the needs of poor and vulnerable populations, populations also likely to suffer the burdens of racial and sexual discrimination, both institutional and personal.\[4\]

Fast Food: A method of producing food, for serving in a restaurant for ‘take away’, using an assembly line of workers all doing one little job, rather than one cook doing all the jobs. The food is frequently processed and received from a centralized source for final stage preparation to ensure consistency across the chain of restaurants. Choice is limited and food is served in disposable containers. Overall, the food is quick, convenient, and generally inexpensive.

Food Access: Food access is the ability to consistently acquire, both physically and economically, sufficient amounts of healthful food.

Food Consumption: The amount of food used by an individual or group, including the amount wasted.

Food Delivery System: This term is used in two ways:
1. The process of food going from the farm to the retailer.
2. The process of food reaching people who have financial or physical limitations.

Food Desert: An area with little or no access to healthful food. This is partially the result of supermarkets closing leaving food availability to convenience stores and fast food outlets. Food deserts may damage public health by restricting availability and affordability of foods that benefit health.\[5\]

Food Distribution: The logistics involved throughout the food supply chain.

Food Mile: The distance food travels from where it is grown to where it is ultimately purchased or consumed by the end user.

Food Processing: Transforming raw food products into another form with one or more of the following three goals:
1. To make food safe (microbiologically, chemically).
2. To provide products of the highest quality (flavor, color, texture)
3. To make food into forms that are convenient (ease of use)\[6\]

Food Production: The methods through which food is produced, such as farming, ranching, and fishing.

Food System: Every step in getting food from the farm to the table, including production, processing, distribution, and consumption of food as well as the processing of the waste produced throughout the system.

Fresh Food Desert: Populated urban areas, sparsely populated rural areas or low-income neighborhoods where fresh food is nonexistent or too expensive.\[7\]
**Fresh Food:** Food that is not preserved by canning, freezing, dehydration, or smoking and is generally seasonal and perishable. This includes, but is not limited to, fruits, vegetables, dairy and meat products.

**Healthful Food:** Food that provides the required nutrients to meet your needs for vitamins, minerals and other nutrients, that reduces your risk of obesity and contributes to your overall health and vitality.

**Healthy Diet:** The USDA Dietary Guidelines describe a healthy diet as one that:
- Emphasizes fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products.
- Includes lean meats, poultry, fish, beans, eggs, and nuts
- Is low in saturated fats, trans fats, cholesterol, salt (sodium), and added sugars.

**Household Food Access:** The ability to acquire sufficient quality and quantities of food to meet all household members’ nutritional requirements.

**Household Food Security:** Access by all members of the household at all times to enough food for an active, healthy life, and is especially critical in low-income communities. At a minimum it means the ready availability of nutritionally adequate and safe foods and the assured ability to acquire acceptable foods in socially acceptable ways (that is, without resorting to emergency food supplies, scavenging, stealing, etc).

**Livability:** A safe, healthy and sustainable future for all.

**Local Food System:** See Community-Based Food System

**Locally Grown:** The definition varies, but it generally means that a product was grown in the local area. Whole Foods Market classifies products as “local” if they traveled seven or fewer hours from the farm to the store.

**Organic:** A way of growing and processing food, including produce, that doesn’t involve the use of artificial ingredients, preservatives or irradiation. Products labeled “organic” must contain at least 95 percent organic ingredients, according to USDA regulations. The name of the certifying agency must appear on the package.

**Physical Access:** The range and quality of food available in shops that people can actually reach, whether by foot, public transport, or, if they have access to one, by car.

**Sustainable Agriculture:** Agriculture that over the long-term enhances the environmental quality and the resource base on which agriculture depends; provides for basic human food and fiber needs; is economically viable; and enhances the quality of life for farmers and society as a whole.

**Sustainable Development:** Development which meets the needs of the present without compromising the ability of future generations to meet their needs.

**Sustainable Food System:** Where production, processing, distribution, and consumption are integrated and related practices regenerate rather than degrade natural resources, are socially just and accessible, and support the development of local communities and economies.

**Thrifty Food Plan (TFP):** Created by the US Department of Agriculture, it is the basis for food stamp allotments. The TFP provides a representative healthful and minimal cost meal plan that shows how a nutritious diet may be achieved with limited resources. The Plan assumes that all purchased food is consumed at home.
APPENDIX E – Direct Market Solutions

Traditionally, food access has largely been left to free market forces to provide for the needs of the community. The belief is that if there is enough demand for a product, then it will become economically viable for the free market to provide that product. This goes from the smallest scale of demand for a specific product to the addition of new food retail points.

Looking specifically at the creation of new retail points as a means for improving food access for a community, there are criteria that need to be met before a market-based, financially self-sustaining solution can be implemented.

Full-service Grocery Store: (45,000-80,000 sq. ft, sometimes as large as 120,000 sq. ft. or more) The required customer base is quite large (both in terms of service area and population density) and opening a new supermarket within a city environment requires rarely available large parcels of land and lots of capital. Additionally, environmental and traffic impact studies are frequently required, as well as meeting often elaborate zoning and permit requirements, which can take years to complete. Consequently, the traditional chain supermarket is not a viable model for many neighborhoods, and particularly not for low-income neighborhoods.

Case Study: One of the most successful examples of a grocery store improving food access in a low-income area is a 48,000-square-foot Pathmark Supermarket in Newark, New Jersey, which anchors the New Community Neighborhood Shopping Center. Pathmark and the New Community Corporation (NCC), a local CDC, opened the center in 1990 after a market study discovered 93,000 residents within a half-mile radius in which there was no supermarket competition. NCC owns 66 percent of the supermarket and 100 percent of the franchises and other businesses in the center. Profits from the center are used to help fund the NCC’s programs for housing, employment, children, and elderly and homeless people. Surveys conducted by NCC show that local residents — who previously had to leave the area to do their grocery shopping — now save not only time but also as much as 38 percent on their food bills by shopping at Pathmark.

Independent grocers: They are usually smaller than the full-service grocery chain store and target a specific neighborhood. They depend on providing a high level of customer service, developing customer appreciation. They also generally depend on walking access and often have limited parking due to smaller lot location. They are best located in the center of a neighborhood. Since they are of a smaller size, they have fewer of the location limitations that a full-service grocer faces, but they have the greatest chance of succeeding when located with retailers that compliment their services, creating a synergy. Two common types (with overlap):

• **Specialty Store:** (often 800-4,000 sq. ft.) Provides a focused selection of high quality perishable items and aims to capture the more frequent, small-volume grocery store trips. Often, but not always, cater to higher income neighborhoods.

• **Ethnic Market:** (No determined size range) Aims to serve an ethnic community, usually recent immigrants with lower incomes, providing specific, sometimes exotic, food and services.
**Case Study:** La Tapatia in Vallejo, California, is a good example of a successful ethnic store, providing a complete line of Mexican and Central American food products. Opened in 1985 with 1,200 square feet on Sonoma Boulevard, La Tapatia is now an 8,500 square-foot grocery store on a major thoroughfare in Vallejo. The market features meat and seafood picked specifically for the ethnic preferences of its customers, and the produce department is stocked with fruits and vegetables that are staples of Mexican meals. In addition to the grocery, La Tapatia’s owners operate a prepared foods counter where customers can purchase ready-to-eat tacos, burritos, or Mexican dinners for takeout or for eating in a small dining area.

**Convenience stores:** (Approx. 400-4,000 sq. ft.) They are sometimes known as corner markets, due to their traditional locations within a neighborhood. Today, these stores are generally not considered sources of significant food access, as they often predominantly carry tobacco, alcohol, sodas, and convenience foods, even though they traditionally carried a sufficient range of goods to meet people’s basic food needs. Their entry into an area is often opposed by the local population, since the availability of liquor products is often linked to increases in violence and crime.

They generally have higher prices than larger markets reflecting their smaller volumes of sales and reduced ability to take advantage of economies of scale. While having the advantage of being centrally located and pedestrian-access friendly, they can also charge a premium for the convenience factor. This is particularly problematic when they are the only food sources for those without adequate transportation to alternative food points, providing a ‘captive market.’ However, for those with limited mobility or without access to full-service grocery stores, convenience stores provide an important food source.

While they only reach a very small demographic area, they can survive if there are enough customers within a half mile radius to provide sufficient business. Additionally, they require relatively little capital or other investment.

**Farmers Markets**
These provide a direct farm-to-market connection, usually meaning that market produce is fresher than that found in more traditional food markets. They also help to sustain local agriculture, enabling small and medium-sized local growers to survive since they can market their products directly to consumers. They can also provide an outlet for organic or other specialty growers. The offerings are generally regarded as more expensive and more limited than that offered in larger, more traditional food retail establishments, and often do not locate in low-income areas. They also usually only operate one or two days a week, and frequently do not operate during the winter, limiting the role they can play in overall food access. As a result, customers usually still need to make a trip to a grocery store of some sort to meet all of their needs.

**Cooperative Grocery Stores**
These are owned and operated by their members and often offer locally produced goods, similar to independent grocers. Since they are member owned, they tend to contribute to a sense of community among members, as well as facilitating the sharing of information regarding new products.

There are several different business models including members-only sales, or those open to all and giving discounts to members. They are often not operated for a profit, or if a profit is obtained, it is returned to its members, to ensure affordable prices. Participants also contribute to the decisions as to what is or is not carried by the coop. Cooperative Grocery Stores are just one element of a wider coop business model.
Community Supported Agriculture
These also provide a direct farm-to-market connection, but require an investment on the part of the consumer to support the farmer throughout the growing season. It usually consists of a weekly (30 or so weeks of the year) drop or pickup of seasonal produce and sometimes eggs or milk. It is built upon the concept of shared risk between the producer – usually a farm - and the consumer. Because of this element of shared risk, CSAs are also said to help build a sense of community among members.

There is no complete listing of CSAs in the United States, but there are at least 2,500 of them of various sizes. Nevertheless, their ability to meet all of a consumer's food needs is limited, similar to that of farmers' markets. Also like farmers' markets, they are good at providing support for small, local producers, particularly farmers, who may not be able to compete in other markets.

Fruit and Vegetable Stands/Markets
These consist of small retail outlets, offering primarily fruits and vegetables. The offerings vary, but often include local, in-season produce. These would easily fit within the footprint of a typical convenience store and may offer an opportunity to provide fresh produce in underserved areas, while supporting local agriculture.

Community Gardens
The benefits of community gardens are often stated in social and physical terms, rather than in terms of their contribution to the overall level of food access. They are also limited by the amount of land available, and often long waiting lists exist in order to obtain a plot of land. Access to private land on which to form community gardens is complicated by the need for liability insurance to protect the land owners' interests. However, for those who are able to participate in a community garden, their food access is improved by their ability to grow their own produce, the food they produce by their own hand is more affordable and fresher than that provided by most other sources, and their knowledge on food options and choices, as a member of a gardening community, is greatly enhanced.

Emergency Food
This is generally provided by local social service organizations, both private and governmental, to help people in need of emergency assistance. Access to emergency food is often through food banks, hot meal sites and shelters, and while aimed at low-income families and individuals, often no proof of need is required, nor is any charge for the food made. Emergency Food providers are regarded as one of the last lines of defense against hunger, and are not meant to replace other food sources. They are frequently donation based, and their effectiveness is partially affected by their support base.
The Foodability Score uses geographic information systems (GIS) to develop a weighted scoring system of indicators for food access that can be spatially displayed. The study area is the City of Portland and census block groups are the unit of analysis. The analysis included 432 census block groups either completely contained by the City of Portland or those that fall at least 50 percent within the City of Portland.

Mapping of food access in the Portland region has been pursued through a few previous studies, but these efforts have not attempted to include types of food access outside of grocery stores, and have moved little beyond looking at physical proximity as the main influencing factor of food access. CFC developed the Foodability Score after considering previous regional food access studies, reviewing academic research, and working collaboratively with the Visioning Participants and Advisory Committee.

**Definition of Food Access Points**

In this project, food access points refer to the physical locations where residents acquire food. Food access points within the City of Portland and within one mile of the City boundary were included in our analysis (see Table 1 and Table 2). GIS shapefiles of Full-service Grocery Stores, Community Gardens, and Farmers Markets, current as of October 31, 2008, were provided by BPS. Emergency Food (free meal sites and food banks) were provided by Metro, and updated by CFC with Oregon Food Bank information to be current as of March 2009. InfoUSA, an online database of detailed business information compiled from telephone directories and other public records, was queried by 2007 North American Industry Classification System (NAICS) codes to download business addresses for other food access points, current as of March 2009. The list of addresses was checked for accuracy, with duplicates and inaccurate stores removed. The addresses were geocoded in ArcGIS 9.3 to Metro's Regional Land Information System (RLIS) street network to generate points for Grocery Stores, Ethnic Stores, Specialty Stores, and Convenience Stores.

Ethnic Stores were identified by name. Specialty Stores were identified by their NAICS code and include stores specializing in meat, fish and seafood, fruits and vegetables, or other specialty products. The analysis does not include restaurants, school lunches, school gardens, farms, liquor stores, food carts, and CSA drop-off sites. Gathering and analyzing data on these food points was beyond the scope of this study, but is important to consider for future studies. Tables 1 and 2 provide a summary of food access points used in the analysis.

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<th>Table 1. Food Access Points Classification</th>
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<td><strong>Food Access Point</strong></td>
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<tr>
<td>Full Service Grocery Stores</td>
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<tr>
<td>Specialty Stores</td>
</tr>
<tr>
<td>Community Gardens</td>
</tr>
<tr>
<td>Farmers Markets</td>
</tr>
<tr>
<td>Emergency Food</td>
</tr>
</tbody>
</table>

Community Gardens: Gardening opportunities provided on public land for the physical and social benefit of the people and neighborhoods of urban, suburban, or rural communities. Food access points of the City of Portland Parks and Recreation Department owned community gardens provided by Bureau of Planning and Sustainability, current October 31, 2008. [1]

Convenience Stores: Food marts or gasoline stations engaged in retailing a limited line of goods that generally include milk, bread, soda, and snacks. Convenience Stores food access points downloaded from ReferenceUSA in March, 2009 and geocoded by Community Food Concepts, and include NAICS coded Gasoline Stations (44719), Convenience Stores (44512), and stores less than 2,500 square feet in size. [2]

Co-ops: A member-owned, member-governed food business that operates for the benefit of their members according to common principles agreed upon by the cooperative community.

CSAs: Community-supported agriculture is a model for selling farm-fresh produce, through which subscribers or shareholders purchase a “share” of the season’s harvest upfront. This harvest is then delivered or offered for pick-up, usually once a week for the growing season. (Information from local CSA’s was not received in time to include in this study but bears further consideration) [3]

Ethnic Markets: Stores that primarily serve a specific group of consumers who share a common cultural background by providing culturally specific foods that are rare or not found in more commonly available food sources such as grocery stores. Ethnic Market food access points downloaded from ReferenceUSA in March, 2009 and geocoded by Community Food Concepts. The points include NAICS coded Supermarkets & Other Grocery Stores (44511), Meat Markets (44521), Fruit & Vegetable Markets (44523), and All Other Specialty Food Stores (44529). Stores were identified by name as providing ethnic food choices.

Emergency Food: Food bank establishments primarily engaged in the collection, preparation, and delivery of food for the needy. These establishments may prepare and deliver meals to persons who by reason of age, disability, or illness are unable to prepare meals for themselves; collect and distribute salvageable or donated food; or prepare and provide meals at fixed or mobile locations. Also includes free meal sites and food box pick-up locations. Emergency food access points provided by Metro and Oregon Food Bank, current as of March 2009. [2]

Farmers Markets: Operations that sell directly from farmers to consumers. Farmers markets can be held in permanent public markets, or seasonally in locations such as public parks. Farmers Markets food access points provided by City of Portland Bureau of Planning and Sustainability, current October 31, 2008. [3]

Fast Food Restaurants: Establishments primarily engaged in providing food services where patrons generally order or select items and pay before eating. Food and drink may be consumed on premises, taken out, or delivered to the customers’ location. Fast Food Restaurant food access points provided by City of Portland Bureau of Planning and Sustainability, current October 31, 2008. Not considered in the scope of this project, but bear further consideration, as to their influence on food access. [2]

Full-service Grocery Stores: Stores that provide a full array of food options, including fresh produce, meats and dairy products, as well as packaged foods. Full-service Grocery Stores food access points provided by City of Portland Bureau of Planning and Sustainability, current October 31, 2008. A grocery list developed by Andrea Leigh Sparks at the University of Oregon was geocoded by BPS, with additional stores added by BPS, including food co-ops and a few other smaller or ethnic full-service stores. [3]
**Specialty Stores**: Establishments engaged in retailing miscellaneous specialty foods not for immediate consumption and not made on the premises. Specialty Stores food access points downloaded from ReferenceUSA in March, 2009 and geocoded by Community Food Concepts. The points include NAICS coded Fish & Seafood Markets (44522), Fruit & Vegetable Markets (44523), Meat Markets (44521), All Other Specialty Food Stores (44529), Limited-Service Restaurants (72221), and Supermarkets and Other Grocery Stores (44511). [2]


**Table 2. Food Access Points, Portland, Oregon**

<table>
<thead>
<tr>
<th>Food Access Point</th>
<th>City Total</th>
<th>% of Total</th>
<th>Number per 10,000 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Service Grocery Stores</td>
<td>79</td>
<td>12.8</td>
<td>1.4</td>
</tr>
<tr>
<td>Grocery Stores</td>
<td>133</td>
<td>21.5</td>
<td>2.3</td>
</tr>
<tr>
<td>Convenience Stores</td>
<td>190</td>
<td>30.7</td>
<td>3.3</td>
</tr>
<tr>
<td>Ethnic Stores</td>
<td>55</td>
<td>8.9</td>
<td>1.0</td>
</tr>
<tr>
<td>Specialty Stores</td>
<td>28</td>
<td>4.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Community Gardens</td>
<td>40</td>
<td>6.5</td>
<td>0.7</td>
</tr>
<tr>
<td>Farmers Markets</td>
<td>14</td>
<td>2.3</td>
<td>0.2</td>
</tr>
<tr>
<td>Emergency Food</td>
<td>79</td>
<td>12.8</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>618</strong></td>
<td><strong>100</strong></td>
<td><strong>10.7</strong></td>
</tr>
</tbody>
</table>


**The Mapping Process**

The first Advisory Committee provided feedback on how each of the five A’s could be measured. Committee members approached the questions as food advocates; presenting suggestions informed by their expertise in particular areas of food access issues. Themes in the first meeting included focusing on affordability and low-income households, using the USDA Thrifty Food Plan as a measurement tool, the possibility of special consideration for some ethnic groups, variety of food choices, and “walkability” of the City.

The preliminary Foodability Score was presented through a series of maps in the second Visioning meeting. Participants provided feedback on how measures should be refined and weighted. Again, participant suggestions were influenced by their sector of involvement. The second working group meeting included a number of emergency food and low-income-advocates. Feedback voiced included that the scoring system should place less emphasis on walkability, more weighting of affordability and transit, and concerns with including convenience stores, ethnic stores, and emergency food points.

**Measures**

Data about income and population for each block group came from the 2000 US Census and SimplyMap (projections and estimates for 2008), a web-based mapping application that provides detailed block group level information on demographics and marketing data. [2] Low-income block groups were considered as those with a median household income below 185 percent of the 2008 federal poverty level ($39,220). [3]

Measures employed to create the Foodability Score were assessed through three indicators of food access — Accessibility, Affordability, and Availability. Each indicator has a measure or number of measures that were ranked to calculate the score which was determined by the quantile that the ranking fell within. In most cases, the quantile break points were determined by Jenk’s natural breaks, with two exceptions, the urban form measures, slope and street connectivity, that have reasonably well-defined absolute cut-off points. Natural breaks groups the data into classes that are inherent in the data.

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meaning break points are identified that group similar values and maximize the
difference between classes. The resulting classes from excellent to very poor
are set so that there are relatively big jumps in the data values between the
classes. Ten points were assigned to the food points or block groups ranked in
the highest quantile, 7.5 points to those in the next quantile, then 5, 2.5, and 0
points to those in the remaining quantiles (see Table 3). The aggregate of the
scores for each of the three indicators gives us the Foodability Score for each
block group, with higher scoring block groups having better “Foodability”.

ACCESSIBILITY
Accessibility refers to the ability of people to physically travel to a food point
from their homes and back again. Although a majority of people access food
points by car, this assessment of accessibility places primary emphasis on
accessing food points by foot and restricts the “accessible” food points in
each block group to those within walking distance, defined as the area within
1,000 meters or .62 miles (about a 15-minute walk for an adult in an urban
setting) of the block group centroid. Pedestrian access is emphasized not
only because many people, particularly those with low incomes and those
living in the more dense areas of the city, do not own cars, but because the
City is interested in developing communities and neighborhoods that are
more pedestrian-friendly and less auto-dependant.

Density (measure 1). This measure included all food points within 1,000
meters of each block group centroid, divided by the 2008 projected population
for each block group. To account for the fact that different types of stores
contribute different amounts of food and different levels of accessibility,
the different types of food points were weighted before summing. The weighting
scheme was based on estimates of each point’s relative volume of people
served and degree of temporal constraints (such as how many days per year
they are open). The sum of these two scores was divided by the 2008 projected
population for each block group. A street network buffer was used, created
with Network Analyst. This measure was ranked using natural breaks.

Transit Service (measure 2). Level of public transit service was
calculated by finding the number of transit points (bus and light rail stops
from Metro’s Regional Land Information System) within 530 feet of each food
access point of each block group’s walkable area (1,000 meters from the block
group’s centroid). The choice of 530 feet was based on Metro’s definition of
the maximum allowable distance between intersections. A street network
buffer was used, created with Network Analyst. This measure was ranked
using natural breaks.

Walkability. A block group’s walkability was determined by combining
measures of three different urban form variables: street connectivity, slope,
and sidewalk coverage. These three measures were ranked and scored, then
combined and weighted equally to create an overall walkability measure.

Street connectivity (measure 3) was measured by the connected
node ratio, the number of intersections divided by the number of
intersections plus the number of cul-de-sacs. This produces a value
ranging from 0 to 1, with higher numbers indicating a more connected
network with less dead-ends and cul-de-sacs. A favorable score is
0.75 or higher, as defined by EPA’s Smart Growth Index Version 2.0,
and was used as a cutoff point in the ranking.6

Slope (measure 4) was calculated as the average slope for each
block group, with a 20 percent slope considered to be unwalkable and
used as a cutoff point in the ranking.

Sidewalk coverage (measure 5) was measured by calculating
the number of sidewalks within 1,000 meters of each block group
centroid, divided by the total length of all streets within the same
area. Citywide sidewalk data was provided by BPS. This measure was
ranked using natural breaks.

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4 Apparicio P., Cloutier MS, Shearmur R. The case of Montreal’s missing food deserts: Evalua-


6 Kanai, Tomoko. September, 2007. Validating Pedestrian-Scale Street Connectivity Measure-
ments. Portland State University, Masters of Urban and Regional Planning field area paper.
### Table 3. Foodability Scoring System

<table>
<thead>
<tr>
<th>MEASURES</th>
<th>RANKING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10 points</td>
</tr>
<tr>
<td></td>
<td>(Excellent)</td>
</tr>
<tr>
<td><strong>Accessibility</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Measure 1.</strong> Supply capacity of food points (volume served + temporal constraints / population)</td>
<td>0.095 &amp; up</td>
</tr>
<tr>
<td><strong>Measure 2.</strong> Level of Transit Service (average # of transit stops within 530 ft. or one block of each food access point within a block group)</td>
<td>10+ stops</td>
</tr>
<tr>
<td><strong>Measure 3 (Walkability).</strong> Street Connectivity (Connected Node Ratio - 0 to 1, closer to 1 indicates more connected network)</td>
<td>0.88 - 1</td>
</tr>
<tr>
<td><strong>Measure 4 (Walkability).</strong> Average slope</td>
<td>0 - 5%</td>
</tr>
<tr>
<td><strong>Measure 5 (Walkability).</strong> # of sidewalks / total street length (within 1000 m of BG centroid)</td>
<td>0.0051 +</td>
</tr>
<tr>
<td><strong>Measure 6.</strong> Vehicle Ownership (percent of households with no vehicles)</td>
<td>0 - 6.9%</td>
</tr>
<tr>
<td><strong>Affordability</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Measure 7.</strong> market basket survey prices relative to TFP market basket price</td>
<td>-10.9 - 6.5%</td>
</tr>
<tr>
<td><strong>Availability</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Measure 8.</strong> Percent of items available in each surveyed food category</td>
<td>117.7 - 149.0%</td>
</tr>
<tr>
<td><strong>Foodability Score</strong></td>
<td>7.6 - 10 points</td>
</tr>
</tbody>
</table>
Vehicle Ownership (measure 6). Vehicle ownership was measured by the percent of households in each block group with no vehicles. 2008 projections were used, downloaded from SimplyMap. This measure was ranked using natural breaks.

The data for calculating the Affordability, Availability, and Appropriateness scores for the study’s retail food access points came from market basket surveys conducted at 45 stores of varying types. Market basket surveys typically include a list of specific weights or units for specific items. The surveyor records the lowest prices for each of the items at the specified weight or unit at each store surveyed. If the store has the item, but not at the specified weight/unit, the actual weight/unit is recorded along with the price, and the price is converted by multiplying it by the ratio of the actual weight/unit to the desired weight/unit. The result of the survey is not only a list of prices normalized by weight/unit for the surveyed items at each store, but also a list of items that a store does (or does not) carry. Normalized prices allow for price comparisons to be made between stores, and the presence/absence of items enables calculations to be made regarding a store’s level of variety or availability for certain types of food, as well as the appropriateness of the store’s offerings for groups with distinct food preferences.

The market basket survey used for this project was based on the USDA’s Food Store Survey Instrument, as part of their Community Food Security Assessment Toolkit7 (the survey instrument used for this study is included in Appendix G). The list of items on this survey instrument are taken from the Thrifty Food Plan (TFP), a representative healthful and minimal cost meal plan formulated by the USDA that shows how a nutritious diet may be achieved by a household with limited resources (gross monthly income is about 165 percent of the federal poverty level, of which 30 percent of net income is assumed to go towards food, all of which is assumed to be prepared and eaten at home), and serves as the basis for food stamp allotments.8 As such, it is essentially a grocery list that, if adhered to, would provide a household with an affordable, balanced, nutritious diet which is affordable at most mainstream full-service grocery stores for a household whose income is about or above 165 percent of the federal poverty level.

The items selected for inclusion in the TFP and the USDA Survey Instrument were those items in each of the major food categories that are most commonly consumed and widely available on a nation-wide scale. As a result, the list of items is reasonably generic and not well-suited for assessing stores that cater to specific ethnic groups or other sub-populations whose tastes and food preferences are substantially different from predominant national food consumption habits. To help correct for this bias, the USDA survey instrument was modified in three ways. First, culturally-specific items for Portland’s two largest ethnic groups, Latinos and East Asians, were added to the survey instrument for this study. These items were selected from Latino- and East Asian-specific balanced, nutritious food lists developed by nutritionists and based on the eating patterns and dietary traditions of each group.9 Second,

| Table 3. Store types used for calculating average scores for scoring unsurveyed stores |
|--------------------------------------------------|-------------|-------------|
| Retail Food Access Points                        | City Total | Number Surveyed |
| Full Service Grocery Stores                      | 79          | 11           |
| economy                                          | 21          | 3 (17)1      |
| non-economy                                      | 58          | 8 (40)1      |
| Other Grocery Stores                             | 133         | 10           |
| Convenience Stores                               | 190         | 8(46)1       |
| Ethnic Stores                                    | 55          | 10           |
| Specialty Stores                                 | 28          | 7            |
| produce                                          | 12          | 1            |
| meat                                             | 11          | 2            |
| seafood                                          | 4           | 1            |
| Farmers Markets                                  | 14          | 1            |
| Total                                            | 605         | 43           |

7 Available online at: http://www.ers.usda.gov/Publications/EFANo2013/
9 The lists were developed by the non-profit food issues group, Oldways Preservation Trust. They are available on-line at: http://www.oldwayspt.org/pyramids.html (accessed 5/1/09).
since many Portlanders expressed a strong interest in supporting the growth of the local food system in VisionPDX, the survey instrument asked surveyors to note, on a scale of 0–2, whether stores offered locally produced items that were advertised and promoted as such.

Finally, in order to make the survey instrument more useful for measuring the availability in ethnic stores catering to populations other than Latinos and East Asians that might have few items on the survey, but a wide variety of other choices, the survey asked surveyors to note, on a scale of 0–2, whether the store had a wide variety of items in general categories (such as grains or fruits and vegetables). This information was also intended to help better gauge overall availability by distinguishing stores with some or all the list items but little else from stores with some or all of the list items plus a wide variety of additional offerings.

AFFORDABILITY (measure 7)
The affordability measure of surveyed retail food points was based on shelf prices for list items it carried relative to a benchmark “affordable” price for each item. Since the USDA provides only the price for the complete basket of all items and not prices for each item, prices had to be derived for this study. This was accomplished by averaging the prices for each item from six full-service grocery stores whose average overall market basket prices closely matched the target TFP price of $137.10 for a family of four (two adults aged 20 to 50, and two children, ages 6 to 8 and 9 to 11). The six stores included Fred Meyer, QFC, Winco, New Seasons, Food 4 Less, and Safeway, and their average complete market basket price was $133.59.

For each surveyed store, prices for stocked list items were summed and compared to the sum of the TFP benchmark prices for each of those items by dividing the difference of the two sums by the sum of the benchmark prices, resulting in the percentage difference between the store’s summed prices and the summed benchmark prices. A store’s percentage difference from the summed benchmark price served as the basis for its affordability score which was calculated by using Jenk’s natural breaks to classify the stores into quantiles, and then assigning 10 points to the stores in the quantile with the lowest prices, 7.5 points to the stores in the next quantile, and 5, 2.5, and 0 points to the stores in the remaining quantiles.

Stores that weren’t surveyed were assigned the average of the scores of the surveyed stores for each of the different store types listed in Table 4, with additional sub-categories used for full-service grocery stores to develop separate average scores for low price economy stores and for higher price stores. Similarly, specialty stores specializing in produce, meat, or seafood that weren’t surveyed were assigned average scores from surveyed stores of the same type. Specialty stores that didn’t fall into these three sub-categories were assigned a score equal to the average score of all specialty stores.

The food access points in the two non-retail categories—emergency food locations and community gardens—were assigned a score of 10, since emergency food is free, and growing one’s own produce is generally cheaper than buying it.

AVAILABILITY (measure 8)
The availability measure is essentially a measure of the variety of a food point’s offerings. Its contribution to the accessibility of an area’s food access, or Foodability, is based on the premise that greater variety of foodstuffs will enable more people to find foods that suit their personal preferences and dietary habits. For retail food points, the availability measure was calculated as the percent of survey list items present in the store, plus the percent of total “variety points” (2 points for each food category with a wide variety of offerings in addition to those on the list, and one point for each food category with a moderate variety of offerings in addition to those on the list—there were 22 possible points in all). Because of the roughness of the “variety points” score, it was weighted less than the percentage of listed foods, and was multiplied by .5 before adding the two percentages, resulting in a highest possible Availability score of 150 percent. The stores were then ranked according to their summed percentage, and grouped according to natural breaks quantiles, with a score of 10 given to the stores in the highest quintile, and 0 given to those in the lowest quintile.

For non-retail food points—emergency food outlets and community gardens—scores were assigned based on estimated ability of their users’ ability to get foods matching their personal preferences. Because of the many constraints on what food pantries are able to offer, these sites were assigned a score of 2.5. Community gardens were assigned a score of 5 since gardeners would theoretically be able to grow a variety of produce matching their preferences.
APPRIOPRITENESS

An appropriateness measure was developed, but not used in the final Foodability Score as it seemed to be capturing the same information and was closely correlated with the availability measure.

A food access point’s level of appropriateness was determined by the amount of offerings it had for Latinos, East Asians, and people interested in buying locally produced foods. For the retail food points, appropriateness sub-scores were developed for each category, with Latino and East Asian sub-scores based on the percentage of culturally appropriate surveyed food items present in each store, and the local food score based on surveyors’ estimates of the level of local offerings in each of the survey’s different food categories. These three sub-scores were then summed to provide a retail food point’s overall Appropriateness score. The stores were then ranked and grouped according to natural breaks quantiles, with a score of 10 given to the stores in the highest quantile, and 0 given to those in the lowest quantile.

Appropriateness scores for non-retail food access points—emergency food outlets and community gardens—were based on the degree of control consumers typically have over what types of food they can get from each source. All emergency food points were assigned an Appropriateness score of 2.5, and community gardens a score of 7.5.

FOODABILITY

An initial Foodability Score for each block group was developed by simply summing unweighted scores for each measure and ranking them for distribution into natural breaks quantiles. Choropleth maps of the City displaying unweighted Foodability scores of each of the block groups were presented for comment at the second stakeholder meeting. As a result of feedback at that meeting, accessibility and affordability scores were weighted more heavily, with each accounting for 30 percent of the total score, while availability was scaled back 20 percent of the total score. The sub-measures for accessibility were also weighted, with density accounting for 40 percent of the accessibility measure, and transit service, walkability, and vehicle ownership each accounting for 20 percent of the accessibility measure (see Table 5). An alternate scenario that excludes vehicle ownership was also developed, along with a low-income scenario that excludes stores whose market basket price is greater than 50 percent more than the USDA TFP price.

<table>
<thead>
<tr>
<th>Table 5. Foodability Scenarios</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Scenario 1</strong></td>
</tr>
<tr>
<td><strong>Accessibility</strong></td>
</tr>
<tr>
<td>Measure 1 - Density</td>
</tr>
<tr>
<td>Measure 2 - Transit</td>
</tr>
<tr>
<td>Walkability (Measures 3, 4, &amp; 5)</td>
</tr>
<tr>
<td>Measure 6 - Vehicle Ownership</td>
</tr>
<tr>
<td>Total Accessibility Weighting</td>
</tr>
<tr>
<td><strong>Affordability</strong></td>
</tr>
<tr>
<td><strong>Availability</strong></td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
**APPENDIX G - SUPPLEMENTAL DATA AND MAPS**


**Variable Names**
- HH Inc., Median ($)
- 2008, Food at home (HH Avg)
- 2008, Food away from home (HH Avg)
- Fresh Fruits (HH Avg)
- Fresh Vegetables (HH Avg)
- Food (HH Avg), 2008
- % HH w/ No Vehicles, 2008
- # Population (Pop), 2008

**Definitions**

**HH Inc., Median ($), 2008**: This measure divides the income distribution in a stated area into two equal parts: one-half of the households earning below the median income and one-half above the median income. The median income is based on the distribution of the total number of households including those with no income.

**Food at home (HH Avg)**: The total expenditures in one year by households in a geographic area for food at grocery stores (or other food stores) and food prepared by the consumer. It excludes the purchase of nonfood items.

**Food away from home (HH Avg)**: Includes all meals (breakfast and brunch, lunch, dinner and snacks and nonalcoholic beverages) including tips at fast food, take-out, delivery, concession stands, buffet and cafeteria, at full-service restaurants, and at vending machines and mobile vendors. Also included are board (including at school), meals as pay, special catered affairs, such as weddings, bar mitzvahs, and confirmations, school lunches, and meals away from home on trips.

**Fresh Fruits (HH Avg), Fresh Vegetables (HH Avg)**: Includes all fresh fruits and fresh vegetables.

**Food (HH Avg), 2008**: The total expenditures in one year by households in a geographic area for food, both at home and away from home.

**% HH w/ No Vehicles, 2008**: Households with no vehicles (passenger cars, vans, pickup or panel trucks of one-ton capacity or less) kept at home and available for the use of household members.

**Data Sources**


Population Estimates Program supplies various input files for age sex race as of 7/1/2007 and historical files back to 4/1/2000. EASI develops current and five year forecasts by a model that simulates the aging migration process to 1/1/2008 and to 1/1/2013. EASI develops at the Block Group level similar type of models (based on age specific migrate estimates) that correspond to the national model.

The Current Population Survey (CPS) (Mid March 2007 Income, Poverty, and Health Coverage in the US (P60)) provides a variety of national income estimates that EASI models to create Block group estimates; EASI also obtains county income data from U.S. Department of Commerce, Bureau of Economic Analysis which are used as part of the analysis bias adjustment process.

U.S. Postal Service Data: Mailable Households derived from a ZIP4 Carrier route File; Delivery Statistics; City State File. These are primarily used for obtained ZIP Code roster files and to estimate annual migration at sub-county levels. These input files are all as of 1/1/2008.


EASI’s model uses Income Distribution, Age of Head of Household, Marital Status and Tenure to information modeled against the latest Consumer Expenditures (CEX) study results. This study is based upon the results of the latest Consumer Expenditure Survey done by the Bureau of Labor Statistics. It is based upon results as of 1/1/2008. EASI models the national data from the CEX using a disaggregation technique to estimate all other levels of geography (EASI estimates first Block Groups and then uses those results to obtain other geography).
Maps used throughout the Visioning Process:

- Food Retail Access Points
- 1-Mile Foodability
- 1/2-Mile Foodability

Sources: City of Portland Bureau of Planning GIS data, 10.31.2008
- Full Service Groceries
- Farmer's Markets
- Community & School Gardens

Ethnic Markets
Specialty Stores
Grocery Stores
Convenience Stores
Additional Foodability Measures:
APPENDIX G - SUPPLEMENTAL DATA AND MAPS
Measure 3. Street Connectivity

Measure 3. Connected Node Ratio

- Excellent (0.88 - 1)
- Good (0.75 - 0.87)
- Fair (0.68 - 0.74)
- Poor (0.62 - 0.67)
- Very Poor (0 - 0.61)

Connected Node Ratio is the # of intersections divided by the # of intersections plus cul-de-sacs, producing a value from 0 to 1, with higher numbers indicating a more connected network (fewer deadends).

Source: City of Portland Bureau of Planning
GIS data current 10.31.2008, InfoUSA, Metro RLIS

Measure 4. Average Slope

Measure 4. Slope

- Excellent (0 - 5%)
- Good (5.1 - 7.5%)
- Fair (7.51 - 10%)
- Poor (10.1 - 19.9%)
- Very Poor (20% & up)

Source: City of Portland Bureau of Planning
GIS data current 10.31.2008, InfoUSA, Metro RLIS

Legend:
- Neighborhood Boundary
- Food Access Points
## APPENDIX H - MARKET BASKET SURVEY INSTRUMENT

<table>
<thead>
<tr>
<th>FOOD ITEM</th>
<th>Item Weight/Unit (DESIR ED)</th>
<th>Item Weight/Unit (ACTUAL)</th>
<th>Price (Lowest Cost)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fruit—fresh</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apples, any variety (bagged or loose)</td>
<td>Per lb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bananas</td>
<td>Per lb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grapes (green or red)</td>
<td>Per lb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melon (cantaloupe, honeydew, or watermelon)</td>
<td>Per lb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oranges, any variety (bagged or loose)</td>
<td>Per lb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plantains</td>
<td>Per lb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Papaya</td>
<td>Per lb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guava</td>
<td>Per lb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pineapple</td>
<td>each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avocados</td>
<td>each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cactus Leaves</td>
<td>Per lb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cherimoya</td>
<td>Per lb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coconut</td>
<td>each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mangos</td>
<td>each</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Is there a wide variety of other selections in this category?</strong></td>
<td>yes</td>
<td>somewhat</td>
<td>no</td>
</tr>
<tr>
<td><strong>Does this store appear to be making an effort to stock and promote locally-produced goods in this category?</strong></td>
<td>yes</td>
<td>somewhat</td>
<td>no</td>
</tr>
<tr>
<td><strong>Vegetables—fresh</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carrots, unpeeled (bagged or loose)</td>
<td>Per lb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Celery, bunch</td>
<td>Per lb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green pepper</td>
<td>Per lb</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Is there a wide variety of other selections in this category?</strong></td>
<td>yes</td>
<td>somewhat</td>
<td>no</td>
</tr>
<tr>
<td><strong>Does this store appear to be making an effort to stock and promote locally-produced goods in this category?</strong></td>
<td>yes</td>
<td>somewhat</td>
<td>no</td>
</tr>
</tbody>
</table>

| **Fruit, canned**          |                             |                           |                     |
| Lettuce, leaf (green or red) | Per lb                    |                           |                     |
| Onions, yellow (bagged or loose) | Per lb            |                           |                     |
| Tomatoes (any variety)      | Per lb                      |                           |                     |
| Potatoes, any variety       | 5-lb bag                    |                           |                     |
| Tomatillos                  | Per lb                      |                           |                     |
| Jicama                      | Per lb                      |                           |                     |
| Zucchini                    | Per lb                      |                           |                     |
| Sweet Potato                | Per lb                      |                           |                     |
| Chayote                     | Per lb                      |                           |                     |
| Corn                        | Per lb                      |                           |                     |
| Chilies (spicy)             | Per lb                      |                           |                     |
| Casava/Yuca                 | Per lb                      |                           |                     |
| Bok Choy                    | Per lb                      |                           |                     |
| Chinese Broccoli            | Per lb                      |                           |                     |
| Cabbage                     | Per lb                      |                           |                     |
| Mushrooms, exotic           | Per lb                      |                           |                     |
| Bean Sprouts                | 1-lb bag                    |                           |                     |
| **Is there a wide variety of other selections in this category?** | yes | somewhat | no |
| **Does this store appear to be making an effort to stock and promote locally-produced goods in this category?** | yes | somewhat | no |
### Vegetables, canned

<table>
<thead>
<tr>
<th>Item</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mushrooms, pieces</td>
<td>6-oz can</td>
</tr>
<tr>
<td>Spaghetti sauce, any variety</td>
<td>26-oz jar</td>
</tr>
<tr>
<td>Tomato sauce, any variety</td>
<td>8-oz can</td>
</tr>
<tr>
<td>Bamboo Shoots</td>
<td>19-oz can</td>
</tr>
<tr>
<td>Mushrooms, Straw</td>
<td>8-oz can</td>
</tr>
</tbody>
</table>

**Is there a wide variety of other selections in this category?**
- yes
- somewhat
- no

**Does this store appear to be making an effort to stock and promote locally-produced goods in this category?**
- yes
- somewhat
- no

### Fruits and Vegetables, frozen

<table>
<thead>
<tr>
<th>Item</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orange juice, concentrate</td>
<td>12-oz can</td>
</tr>
<tr>
<td>Broccoli, chopped</td>
<td>16-oz bag</td>
</tr>
<tr>
<td>Green beans—any variety</td>
<td>16-oz bag</td>
</tr>
<tr>
<td>Green peas—any variety</td>
<td>16-oz bag</td>
</tr>
<tr>
<td>French fries—any variety</td>
<td>32-oz bag</td>
</tr>
</tbody>
</table>

**Is there a wide variety of other selections in this category?**
- yes
- somewhat
- no

**Does this store appear to be making an effort to stock and promote locally-produced goods in this category?**
- yes
- somewhat
- no

### Breads, Cereals, and Other Grain Products, fresh

<table>
<thead>
<tr>
<th>Item</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bread, white, enriched</td>
<td>1-lb loaf</td>
</tr>
<tr>
<td>Bread, whole wheat</td>
<td>24-oz loaf</td>
</tr>
<tr>
<td>Hamburger buns, enriched</td>
<td>Package of 8</td>
</tr>
<tr>
<td>Rolls, dinner, enriched</td>
<td>Package of 12</td>
</tr>
<tr>
<td>French or Italian Bread, enriched</td>
<td>Per 1-lb loaf</td>
</tr>
<tr>
<td>Bagels, plain, enriched</td>
<td>Package of 6</td>
</tr>
<tr>
<td>Bread crumbs, plain</td>
<td>10-oz can</td>
</tr>
<tr>
<td>Tortillas, corn (white or yellow)</td>
<td>90-ct bag</td>
</tr>
</tbody>
</table>

### Dairy Products, fresh

<table>
<thead>
<tr>
<th>Item</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk, 1% lowfat</td>
<td>1 gal</td>
</tr>
<tr>
<td>Milk, whole</td>
<td>1 gal</td>
</tr>
<tr>
<td>Cheese, cheddar, any variety</td>
<td>Per lb</td>
</tr>
<tr>
<td>Cheese, cottage, any variety</td>
<td>16-oz carton</td>
</tr>
<tr>
<td>Cheese, mozzarella, whole</td>
<td>16-oz package</td>
</tr>
<tr>
<td>Queso Fresco</td>
<td>Per lb</td>
</tr>
</tbody>
</table>

**Is there a wide variety of other selections in this category?**
- yes
- somewhat
- no
Does this store appear to be making an effort to stock and promote locally-produced goods in this category?

<table>
<thead>
<tr>
<th>Dairy Products, canned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaporated milk, any variety</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Meat and Meat Alternates, fresh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef, ground, lean</td>
</tr>
<tr>
<td>Chicken, fryer, cut-up or whole</td>
</tr>
<tr>
<td>Chicken, thighs</td>
</tr>
<tr>
<td>Turkey, ground</td>
</tr>
<tr>
<td>Pork, ground</td>
</tr>
<tr>
<td>Turkey ham (packaged luncheon meat)</td>
</tr>
<tr>
<td>Eggs, grade A, large</td>
</tr>
</tbody>
</table>

Is there a wide variety of other selections in this category? yes somewhat no

Does this store appear to be making an effort to stock and promote locally-produced goods in this category? yes somewhat no

<table>
<thead>
<tr>
<th>Meat and Meat Alternates, frozen and canned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish, flounder or cod, frozen</td>
</tr>
<tr>
<td>Tuna fish, chunk-style, water packed</td>
</tr>
<tr>
<td>Beans, garbanzo (chick peas), canned</td>
</tr>
<tr>
<td>Beans, kidney, canned</td>
</tr>
<tr>
<td>Beans, baked, vegetarian</td>
</tr>
</tbody>
</table>

Is there a wide variety of other selections in this category? yes somewhat no

Does this store appear to be making an effort to stock and promote locally-produced goods in this category? yes somewhat no

<table>
<thead>
<tr>
<th>Fats and Oils</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margarine, stick</td>
</tr>
<tr>
<td>Shortening, vegetable</td>
</tr>
<tr>
<td>Salad dressing, mayonnaise type</td>
</tr>
<tr>
<td>Vegetable oil, any type</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sugars and Sweets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugar, brown (dark or light)</td>
</tr>
<tr>
<td>Sugar, powdered</td>
</tr>
<tr>
<td>Sugar, white, granulated</td>
</tr>
<tr>
<td>Jelly, grape</td>
</tr>
<tr>
<td>Molasses, any type</td>
</tr>
<tr>
<td>Pancake syrup, any type</td>
</tr>
<tr>
<td>Chocolate chips, semi-sweet</td>
</tr>
<tr>
<td>Fruit drink, refrigerated, any flavor</td>
</tr>
<tr>
<td>Fudgesicles, ice milk</td>
</tr>
</tbody>
</table>

Is there a wide variety of other selections in this category? yes somewhat no

Does this store appear to be making an effort to stock and promote locally-produced goods in this category? yes somewhat no
**APPENDIX I – Supplemental Analysis**

SPSS analysis showed statistically significant differences between block groups when broken out by Foodability score, poverty level, and income level. However, the differences revealed in this analysis were often not the differences we expected to see.

Block groups with high Foodability scores are significantly better than low-scoring block groups in nearly all respects. They are more walkable, have more food points and transit, higher appropriateness, affordability, availability, and accessibility scores. However, residents in block groups with higher Foodability scores spend a higher percentage of their median household income on food than residents of block groups with low Foodability.

When broken out by median household income, this difference becomes clearly income-driven. Block groups were divided into low ($39,200 or less, or 185 percent of the 2008 federal poverty level), moderate ($39,201-80,000), and high ($80,001 and over) income.

Sixty-three percent of low-income block groups have a Foodability score of Good, with another 10% scoring Excellent. Only 1% (one block group) has a Poor Foodability score. As could be expected, low-income block groups spend a higher percentage of their income on food and a higher percentage of their food dollars on produce. Residents are more likely not to own a car. Surprisingly, however, these block groups tend to have higher accessibility, a higher overall Foodability score, and higher availability, appropriateness, and affordability scores. Low-income block groups generally have a higher number of food access points (within 1000 meters of the block group centroid), more transit stops, and are more walkable than block groups that with higher median incomes.

The distribution of Foodability scores for high income block groups shows quite a different picture. None of the high income block groups have an Excellent Foodability score. Twenty-nine percent of them score Very Poor, and another 20% score Poor. Eleven block groups score Good, and 11 score Fair.

Fourteen of the 19 (74%) of the block groups with Very Poor Foodability are high-income. 30 of the 41 (73%) of the block groups with Poor Foodability are moderate income, and another 10 (24%) are high income.

Block groups with low Foodability scores, low accessibility, and no food points have high median incomes. Of the ten block groups ranked the lowest in using our initial Foodability score weighting, 9 had median incomes over $75,000 a year, and 6 had median incomes over $100,000. Residents spent a significantly lower percent of their median incomes on food—but, of course, since incomes are much higher, this represents a significant increase in dollars spent.

Only 12% of the moderate income block groups have a Foodability score of Poor or Very Poor. Forty-five percent of the 296 moderate income block groups have a good score, and another 35% have a score of fair. Sixty-nine percent of the block groups in Portland are considered moderate income block groups.

The seven block groups with 2 or more food points are low-income, and 70% of the low-income block groups have 6 or more food points. Eighteen percent of the 296 moderate income block groups have 1 or less food points, and another 50% have between 2-5 food points. All block groups with Very Poor and Poor Foodability scores have one or fewer food access points (within 1000 meters of the block group centroid).

**Examination of selected neighborhoods**

Neighborhoods with higher Foodability scores are significantly different than neighborhoods with low Foodability scores in a number of ways—and most differences impact the final Foodability measure.

**Neighborhoods with block groups scoring Excellent-Good Foodability:**
- Boise
- Foster-Powell
- Humbolt
- King/Sabin
- Sunnyside

**Neighborhoods with block groups scoring Fair-Poor Foodability:**
- Brentwood-Darlington
- Cully
- Lents
- Madison South
- West Portland Park
It is potentially noteworthy that projected median household income, percent of income spent on food, and percent of income spent on produce are not significantly different between these neighborhoods. The percentage of household food dollars spent on produce, however, is significantly lower in Excellent-Good neighborhoods than Poor-Fair neighborhoods.

Excellent-Good neighborhoods are significantly more walkable and accessible than Poor-Fair neighborhoods, with more sidewalks. This results in significantly higher accessibility scores for Excellent-Good neighborhoods overall.

Excellent-Good neighborhoods also have more food points and higher availability and affordability scores, indicating that food stores have a wider variety of offerings and prices are generally lower. Food access points in Excellent-Good neighborhoods also have higher density measures, indicating that these neighborhoods have stores that are open longer hours and/or are not seasonal or temporary (not a summer-only farmers’ market, etc).

Because all of these measures are significantly different between Excellent-Good neighborhoods and Poor-Fair neighborhoods, it is possible that improving food access by increasing geographic accessibility of food stores in some Poor-Fair neighborhoods (especially west Portland) with steep slopes, limited transit, and few sidewalks will be difficult, and may make only a small impact on food access.

Increasing the number of food points in neighborhoods with low Foodability scores may increase the availability of food in the neighborhood, though its impact on affordability will depend on prices. However, it may be difficult to locate larger, lower-cost stores in these areas, because of low population density and proximity of other food stores.

What can we say based on mapping the data—both using the Foodability score and other measures?

Overall, it appears that most neighborhoods on Portland are well-served in terms of food access—nearly everyone in Portland has access to a food source that has a variety of items available, and many places sell food at affordable prices. However, the experience of some Portland residents—especially low-income residents—is not reflected by the Foodability score. This is partially because the Foodability score is an aggregate of scores for each block group. For example, the block group’s affordability score is an average of affordability scores for each food access point within that block group and the availability score for each block group reflects the maximum availability score of all the food access points in the block group. When there is only one food point within a block group, or all the food points within the block group have a similar variety of food and similar prices, the aggregate scores will do a good job of reflecting the overall food access scenario for the block group. However, if there is a wide disparity between food access points in one block group—for example, the block group has one full-service grocery store with a large variety of items and high prices, and several small stores with limited offerings and low prices—the Foodability score for that block group may not be accurately represent food access for all residents, particularly low-income residents, or those searching for specialty items, such as ethnic or locally-grown food. Therefore it is important to consider patterns in store type and location in addition to the Foodability score.

In order to surface some of the potential problems facing low-income residents, it was necessary to consider median income level and access to food stores that are affordable to low-income households and offer a variety of foods—specifically, access to low-cost full-service grocery stores.

There are a total of 47 grocery stores that are considered affordable to low-income households. This project considered stores ‘affordable’ for low-income households if their prices that are not more than 50% higher than the prices set by the Thrifty Food Plan. The remaining 184 food points that are affordable to low-income households are emergency food sources (79) community gardens (36) and 69 are small and/or ethnic grocery stores. These food sources are highly likely to have limited hours or operate seasonally, and/or have a limited selection of food available for purchase.

Block groups with low median income but no nearby low-cost grocery store may have other food options—community gardens, small shops, or emergency food sources—that are accessible to low-income households. However, the lack of a low-cost full-service grocery store means that low-income residents are likely to have unreliable access to sufficient affordable food nearby, and will be forced to travel to another location to purchase food. Interviews with seven female residents of Villas de Mariposas suggest
that affordability is a major factor for low-income residents—even if the local food source is somewhat affordable, low-income households may be willing to travel to a more distant store that is more affordable.

There are low-income block groups in Cully, Boise, Boise-Elliot, Portsmouth, Linnton and St Johns in North and Northeast Portland (as well as Lents, Glenfair, and Mill Park in outer Southeast Portland) who do not have an affordable grocery store (high availability and convenient hours of operation) within one mile. It does seem that low-income and minority communities in North and Northeast Portland consistently express a desire for a low-cost grocery and/or big-box store to be located in the area. Hacienda residents asked for a low-cost grocery store nearby and suggested a vacant school site on 42nd and Killingsworth. Hmong residents in St Johns also expressed a desire for similar retail during the outreach process of the St Johns Neighborhood Plan (February 2003, St Johns/Lombard Plan, Hmong and Latino Forums, Appendix C, page 8). While this type of retail is often resisted by higher-income residents and homeowners, it may be worthwhile to consider strategies that might overcome resistance to a low-cost grocery store in North/Northeast if this request continues to be heard from low-income communities.

However, there are grocery stores in most of these neighborhoods—and preliminary conversations with low-income residents at Hacienda indicates that low-income residents travel not only to affordable food stores, but also to low-cost stores that sell other household goods. Locating a low-cost food store may help low-income households access food, but would not necessarily reduce their need to drive to distant retailers to purchase other household goods. In addition, there is some danger that bringing a larger, more affordable food store in these areas would drive smaller, locally-owned businesses out. A better long-term solution may be to raise household income, so residents can afford to shop at grocery stores and other shops already located in their neighborhoods.

Short-term efforts to reduce the cost of food at existing stores and bring a greater variety of affordable food to smaller food sources may also be helpful, possibly in conjunction with awareness-focused efforts to increase residents’ knowledge of affordable options close by and raise appreciation of the potential benefits for shopping locally.

An additional note on affordability scores for individual stores—because affordability is scored based on the average affordability of a variety of items from the Thrifty Food Plan, a particular store may have low prices on some items while still scoring fairly low on affordability. It is possible for selective shopping to yield affordable choices at most (if not all) of these stores.

Conclusions

Some Portland residents struggle to access sufficient healthful food for their families, even though data suggests that they have geographic access to appropriate, varied, and (at least some) affordable options. This may indicate several things. It seems that the problem, at least in Portland, is not primarily spatial—that is, most people have access to a food store, and, at least according to Thrifty Food Plan guidelines, most low-income people have access to at least one food store that sells affordable food (though the locally-available affordable food may be limited). Another possibility is that the affordability guidelines in the Thrifty Food Plan are set too high—food may not be affordable at that price for very low-income households.

Residents may not be fully aware of the available food options nearby—they may assume that nearby stores are more expensive than they are in reality, or they may simply not be aware that closer food stores exist. It may be that it is too difficult or time-consuming for low-income households to shop around for the best deals at several nearby stores, so they chose to patronize stores that they know have low prices on the goods they need, even if that store is farther away. Another possibility is that residents—especially low-income residents—do not have the ability or the available time to purchase and prepare less-expensive options from scratch, and instead opt for more expensive convenience foods.

Overall, data suggests that food access problems in Portland are unlikely to be significantly impacted by spatial and land-use oriented solutions. There is food available in most cases—but some residents cannot afford healthful options. In this case, food access is more a symptom of poverty than a stand-alone problem. Increasing the affordability and availability of nearby food may help residents who struggle with food access, but those households are also likely to be hindered by problems that fall outside the scope of food policy—such as lack of time to purchase and prepare healthful meals, or difficulties affording other basic necessities, such as clothing or household goods.
As a result, focusing efforts on existing local options (rather than bringing in new grocery stores that cater to low-income households) and increasing awareness (what is available and how to prepare it) may improve food access for struggling households. In addition, more detailed research and assessment of the needs of vulnerable communities should be conducted in order to identify their specific needs. These efforts should not be entirely focused on food access, but should rather be multifaceted strategies aimed at helping households to increase their overall income level and economic security, which will likely also have the effect of improving their ability to access already-available food.

| Walkability* | Very Poor | 19 | 2.50 | 1.88 | 0.00 | 7.50 |
|             | Poor      | 41 | 5.37 | 2.44 | 0.83 | 9.47 |
|             | Fair      | 137| 7.88 | 1.82 | 1.67 | 10.00|
|             | Good      | 203| 8.71 | 1.55 | 0.83 | 10.00|
|             | Excellent | 32 | 9.61 | 0.70 | 6.67 | 10.00|
|             | Total     | 432| 7.91 | 2.30 | 0.00 | 10.00|

| Sum of food access points in block group* | Very Poor | 19 | 0.00 | 0.00 | 0.00 | 0.00 |
|                                         | Poor      | 41 | 0.22 | 0.42 | 0.00 | 1.00 |
|                                         | Fair      | 137| 3.53 | 2.11 | 1.00 | 12.00|
|                                         | Good      | 203| 6.75 | 4.17 | 1.00 | 31.00|
|                                         | Excellent | 32 | 11.50| 9.66 | 1.00 | 42.00|
|                                         | Total     | 432| 5.16 | 4.98 | 0.00 | 42.00|

| Transit* | Very Poor | 19 | 0.79 | 1.68 | 0.00 | 5.00 |
|          | Poor      | 41 | 3.84 | 3.22 | 0.00 | 10.00|
|          | Fair      | 137| 4.95 | 2.40 | 0.00 | 10.00|
|          | Good      | 203| 5.74 | 2.14 | 0.00 | 10.00|
|          | Excellent | 32 | 6.80 | 1.71 | 5.00 | 10.00|
|          | Total     | 432| 5.37 | 2.67 | 0.00 | 10.00|

| Appropriateness* | Very Poor | 19 | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | Poor      | 41 | 0.37 | 0.70 | 0.00 | 2.00 |
|                 | Fair      | 137| 3.02 | 1.97 | 1.00 | 8.00 |
|                 | Good      | 203| 7.52 | 1.38 | 3.00 | 10.00|
|                 | Excellent | 32 | 7.60 | 1.17 | 7.00 | 10.00|
|                 | Total     | 432| 5.04 | 2.18 | 0.00 | 10.00|

| Affordability* | Very Poor | 19 | 0.00 | 0.00 | 0.00 | 0.00 |
|               | Poor      | 41 | 0.00 | 0.00 | 0.00 | 0.00 |
|               | Fair      | 137| 3.21 | 1.40 | 0.00 | 7.00 |
|               | Good      | 203| 4.79 | 1.28 | 2.00 | 9.00 |
|               | Excellent | 32 | 6.42 | 1.20 | 4.00 | 10.00|
|               | Total     | 432| 3.74 | 2.14 | 0.00 | 10.00|
### Characteristics of block groups by Foodability score

<table>
<thead>
<tr>
<th>Availability*</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Poor</td>
<td>19</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Poor</td>
<td>41</td>
<td>0.55</td>
<td>1.05</td>
<td>0.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Fair</td>
<td>137</td>
<td>3.16</td>
<td>1.11</td>
<td>2.00</td>
<td>8.00</td>
</tr>
<tr>
<td>Good</td>
<td>203</td>
<td>7.87</td>
<td>1.89</td>
<td>3.00</td>
<td>10.00</td>
</tr>
<tr>
<td>Excellent</td>
<td>32</td>
<td>9.92</td>
<td>0.44</td>
<td>8.00</td>
<td>10.00</td>
</tr>
<tr>
<td>Total</td>
<td>432</td>
<td>5.49</td>
<td>3.42</td>
<td>0.00</td>
<td>10.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accessibility (including vehicle ownership)*</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Poor</td>
<td>19</td>
<td>2.50</td>
<td>0.35</td>
<td>1.83</td>
<td>3.00</td>
</tr>
<tr>
<td>Poor</td>
<td>41</td>
<td>3.96</td>
<td>0.58</td>
<td>3.17</td>
<td>5.00</td>
</tr>
<tr>
<td>Fair</td>
<td>137</td>
<td>5.32</td>
<td>0.58</td>
<td>3.83</td>
<td>7.17</td>
</tr>
<tr>
<td>Good</td>
<td>203</td>
<td>6.17</td>
<td>1.05</td>
<td>4.17</td>
<td>9.00</td>
</tr>
<tr>
<td>Excellent</td>
<td>32</td>
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<td>9.00</td>
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<th>Percent of HH Median income spent on food*</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
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<tbody>
<tr>
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<td>19</td>
<td>0.08</td>
<td>0.02</td>
<td>0.05</td>
<td>0.13</td>
</tr>
<tr>
<td>Poor</td>
<td>41</td>
<td>0.11</td>
<td>0.02</td>
<td>0.06</td>
<td>0.16</td>
</tr>
<tr>
<td>Fair</td>
<td>137</td>
<td>0.13</td>
<td>0.03</td>
<td>0.07</td>
<td>0.24</td>
</tr>
<tr>
<td>Good</td>
<td>203</td>
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<td>0.05</td>
<td>0.07</td>
<td>0.43</td>
</tr>
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<td>0.15</td>
<td>0.06</td>
<td>0.09</td>
<td>0.38</td>
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<td>0.06</td>
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<table>
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<th>Std. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
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<tr>
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<td>0.06</td>
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<td>0.06</td>
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</tr>
<tr>
<td>Poor</td>
<td>41</td>
<td>0.06</td>
<td>0.00</td>
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<tr>
<td>Fair</td>
<td>137</td>
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<td>0.00</td>
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<tr>
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* indicates statistical significance at a 95% certainty (oneway ANOVA)

### Income Level

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<thead>
<tr>
<th>Income Level</th>
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<th>High</th>
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<td>49</td>
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<td>Total</td>
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<td>236</td>
<td>49</td>
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<table>
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<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Excellent</th>
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* indicates statistical significance at a 95% certainty (Chi-square)
### Characteristics of block groups by projected 2008 Median Household income

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<tr>
<th>Walkability*</th>
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<th>Std. Deviation</th>
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<table>
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<th>Mean</th>
<th>Std. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
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<table>
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(Continued on next page)
### Characteristics of block groups by projected 2008 Median Household income (Continued)

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<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accessibility (including vehicle ownership)</strong>*</td>
<td></td>
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<tr>
<td>Low Income 2008 Median $39,200 or less</td>
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<td>5.91</td>
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<td>1.33</td>
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<td>9.00</td>
</tr>
<tr>
<td><strong>Percent of HH Median income spent on food</strong>*</td>
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</tr>
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</tr>
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<td>0.08</td>
<td>0.01</td>
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</tr>
<tr>
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<td>432</td>
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<td>0.04</td>
<td>0.05</td>
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</tr>
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<td><strong>Percent of Food Dollars Spent on Produce</strong>*</td>
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<td>0.07</td>
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<td>0.00</td>
<td>0.06</td>
<td>0.07</td>
</tr>
</tbody>
</table>

* indicates statistical significance at a 95% certainty (oneway ANOVA)

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<table>
<thead>
<tr>
<th>Range of Food Points</th>
<th>One or less</th>
<th>2-5 food points</th>
<th>6-10 food points</th>
<th>11-20 food points</th>
<th>21 or more</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>Very Poor</td>
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<td>0</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>Poor</td>
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<td>0</td>
<td>0</td>
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<td>41</td>
</tr>
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* indicates statistical significance at a 95% certainty (Chi-square)
### Characteristics of block groups by Poverty

**High poverty block groups have 20% or more of the block group living under the 1999 poverty level**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
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</thead>
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<tr>
<td><strong>Walkability</strong>*</td>
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<td></td>
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<tr>
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<td>9.09</td>
<td>2.01</td>
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<td>1.32</td>
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<tr>
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<td>0.23</td>
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</tr>
<tr>
<td>Not High Poverty</td>
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<td>0.02</td>
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<tr>
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<td>0.01</td>
</tr>
<tr>
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<td>409</td>
<td>0.01</td>
<td>0</td>
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* indicates statistical significance at a 95% certainty (Independent-Samples T-test)
APPENDIX J - Community Involvement

The Visioning Process

The food access visioning process was designed to elicit responses to two overall questions: “Where are we going?” and “How do we get there?” To do this, CFC convened a diverse group of people with connections to food access and encouraged a dialogue, framed by the Five A’s, about what a potential vision for food access in Portland should be. Priorities were sought to help evaluate strategies for the City and other organizations to move Portland towards achieving its food access vision. The objective was to identify common ground, as well as areas of potential conflict amongst the various perspectives represented. Consensus was not the end goal; these initial conversations sought to gain an understanding of the values and interests of various stakeholder viewpoints.

Participants in the visioning process represented a spectrum of perspectives on food access. For some, such as those representing emergency food organizations, this topic was not new and in fact, ours was one of many conversations about food policy that they had been a part of. For others, however, understanding their place at the table and knowing that their perspective was valued was a crucial first step in joining the conversation.

Details of the Dialogue

In the first visioning meeting the focus was what the City’s role should be as it moves forward with a food access policy. What should be the aim, or vision, of such a policy and what are some practical ways that the City or other implementers can support that vision? The topic was explored in small groups by asking the questions:

- What should be the City’s vision statement to guide food access policy?
- What can the City do to support that vision?
- What are the strategies, barriers, opportunities, for reaching those goals?

Two example statements were provided to help spark conversation. Example vision statements were:

- All Portland residents have equitable access to a variety of healthful foods
- Healthy, local and organic food is available and affordable to residents in all Portland neighborhoods in a variety of ways (grocery stores, local markets, gardens, etc.)

Each small group was then encouraged to come up with a sample vision statement, or at least a series of words that should or should not be included in a vision statement. One of the small groups drafted a sample vision statement of their own reading,

“All Portland residents have equitable access to food that leads to a healthful lifestyle and is available in a variety of ways.”

Others discussed what words were appropriate for a vision statement. Many felt that words such as organic and local, while valuable, were better suited as part of goal statements, rather than part of the larger vision statement. The word healthy also sparked much debate. Many noted the importance of health, especially as it relates to children and obesity, but for the most part participants felt that it was not up to the City to decide what was or was not “healthy” for an individual. Instead the phrase “healthful lifestyle” was mentioned, as was the phrase “informed choices” which again came up as a result of thinking about the City’s role not necessarily as an enforcer of strict dietary rules, but as ensuring a wide range of options for people.

<table>
<thead>
<tr>
<th>Words that should not be used</th>
<th>New words or phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local</td>
<td>Healthful lifestyle</td>
</tr>
<tr>
<td>Organic</td>
<td>Informed choices</td>
</tr>
<tr>
<td>Healthy</td>
<td>Variety of ways of access</td>
</tr>
</tbody>
</table>
In asking the second two questions, “What can the City do to support that vision?” and “What are the strategies, barriers, and opportunities for reaching those goals?” some common themes emerged from each of the small groups. Education and awareness seemed to be the most prevalent answer, but health, feeding hungry people, partnerships, and connecting neighbors were also important ideas that were shared by many of the participants.

Community Food Concepts considered all the sentiments expressed at the first visioning meeting and crafted a draft vision statement. This statement reflects the values expressed by the participants of the visioning meeting, as well as the overarching themes found in Vision PDX.

In 2030, every Portlander has convenient access to a variety of quality, affordable food. People are able to make informed choices about available food options which lead to a healthful lifestyle.

Refining the Vision

At the second visioning meeting the draft statement was presented. Attendees were asked if it captured the conversations from the first meeting. Participants were invited to identify words or phrases they especially liked, or that should be omitted from the vision statement. Participants generally responded positively to the vision statement, and several commented that the draft statement captured much of the feedback from the first meeting. Many participants noted words such as quality, affordable, and informed choices as very important. Some also commented that “convenient” although it has different connotations, is a valuable concept to include, especially when thinking about access to healthful food options.

At the second meeting there was a strong sentiment that not enough emphasis was placed on targeting vulnerable populations (children, low-income communities, minorities, etc.) in the vision statement. Some felt that the vision was a very “big” and even “unrealistic” goal.

After gathering feedback from the second stakeholder meeting the draft vision statement was tweaked slightly to read:

In 2030, every Portlander has convenient access to a variety of quality, affordable food. People are able to make informed choices about available food options which contribute to a healthful lifestyle.

Although no substantial changes to the draft vision statement were made as a result of the feedback from the second visioning meeting, much of that input shaped supporting goals and priorities.
### APPENDIX K - Advisory Council Meeting Summary

**The Five A’s of Food Access**

**Appropriateness**
- Folks from ethnic restaurants/groceries
- Emergency food folks
- Ethnic stores
- Co-op people ➔ what niches are they serving, how far are people coming to get “niche” foods
- Immigrant farmers & shoppers
- Immigrant group reps ➔ can people get the food they want? Is it an issue of climate (can’t grow); info (where to get); cost… etc.
- IRCO, MercyCorps, Coalition of Community of Color
- Availability of credit
- Language barriers
- How important is ownership?

**Accessibility**
- Look at existing Community Food Assessment data
- Coping strategies regarding transportation:
  - Taxis
  - Rides
  - Buses
  - Buy smaller sizes
- What do people buy and what do they forego?
- Shopping patterns
- Why do people shop where they do? What is the driving factor?
- TriMet- How are routes determined? Destination planning?
- Transit Reps- both mass transit and private taxi
- PDC- where does development happen? Why is/isn’t there retail interest in certain places?
- Convenience/ corner store owners- supply chain/market issues that limit ability to stock certain types of foods
- Economic sector
- Marketing- access to drugs/alcohol
- Safety- both traffic/pedestrian safety and safety from crime

**Additional Notes**
- Could map where there are concentrations of different ethnic groups in Portland, but seems as though surveying people would get you there more thoroughly
- Market basket surveys provide useful data, but will take a lot of work to do stores citywide. Debbie Kaufman PSU capstone class has done some market basket surveys (Noelle for info)
- Fast Food Survey/Mapping the location related to poverty, compare by income
- Convenience store concentration, overlaid with income
- Vehicle ownership
- Bus routes and do they go to supermarkets?
- Shopping cart loss as proxy for transportation difficulties
- Various databases- See Economic Research Service
- Definition of food desert- combination of location and vehicle ownership
- Sidewalks (Equity Atlas?)
- Crime mapping
### Awareness
- Knowledge of nutrition, of gardening, of food sources
- Barriers to healthy eating - cooking ability, time for food prep and shopping
- Attitude toward Portland's "local, organic" mantra
- Where culturally appropriate/desired is - can I access it?
- Taste preferences?
- Foresight within city agencies (planners)
- Community - conversations that have already happened
- Emergency Food
- SNAP (Food Stamp program) → Clackamas Co-op Ext. Office
- Need to survey:
  - How many times a week do you cook?
  - If you had space, would you grow a garden?
- USDA guidelines - RDA’s, Thrifty food plan
- What barriers exist to eating healthy? Ex: transportation, $
- Marketbasket survey - where do find healthy food?
- OR Food bank Surveys
- Planners/Developers
- Consumer Expenditure Survey
- Labeling - Nutrition - Do they know about it?

### Affordability
- Income related to type of food outputs
- Talk to convenience store owners about barriers to stocking/selling healthy, fresh food
- Talk to housing & community developers about integrating retail food into their developments (ie: Ed McNamara)
- Rose CDC in Lents is connecting access to food to their broader community development
- Ask people what do they forego when it is tight?
- How does transportation costs reduce ability to buy food?
- Healthy Cornerstore Network (quarterly conference calls)
- Does Fed Food Participation rate correlate w/ market basket data to show if people can afford what is available in their neighborhood
- Sales data from grocery/supermarkets w/ poverty data (Are the stores in low-income neighborhoods serving FSP(WIC)?)
- Price comparison between stores in low income neighborhood and suburb neighborhoods
- Cost of Thrifty Food Plan compared to food stamp guidelines
- Purchasing Power Tools - Alma for link
- Pop densities - Winco - higher population/low income
- Food stamp data
- Free/Reduced School meals
- Foreclosure data
<table>
<thead>
<tr>
<th>Availability</th>
</tr>
</thead>
</table>
| ▪ Do I have the options I want?  
  □ Growing my own (different types of access)  
  □ Buying direct  
  □ Grocery  
  □ Variety  
  □ Cultural  
| ▪ Able to get local, pesticide-free shopping patterns  
  □ Economies of scale  
  □ Price-point- other sources/partners?  
| ▪ Do I have the equipment (food prep) to use the food? (different from awareness- where the assumption is a deficit of knowledge)  
| ▪ Neighborhood group reps. (may work on providing community gardens, transit, buying co-ops)  
| ▪ Store owners |

| ▪ Thrifty Food Plan contents make a healthy meal  
| ▪ Quality of fruits and veggies  
| ▪ Low fat products  
| ▪ Fast food vs. grocery stores  
| ▪ See Mari Gallagher’s work in Chicago, Detroit and PolicyLink in LA  
| ▪ Perhaps looking at Single Residence Occupancy concentrations related to food outlets?  
| ▪ Retails- what they can/will stock  
| ▪ Look to Vancouver, B.C.- 7-11 fresh food  
| ▪ Access thru informal access  
  □ LU controls?  
  □ Awareness Developers & Planners  
| ▪ NYC health dept- food carts  
| ▪ TESCO- UK based- behavioral studies- compact stores  
| ▪ Corey Schreiber- Local connection  
| ▪ Tricounty buyers guide- local farmers |
APPENDIX L - Visioning Process Meeting Summary

First Food Access Meeting Minutes
Smith Memorial Student Union Room 327
1-3pm April 1, 2009

Introductions: The meeting commenced at 1:15pm and Elizabeth Chapin introduced the members of Community Food Concepts, as well as Amanda Rhoads, from the Bureau of Planning and Sustainability. Chapin gave a short overview of the Foodability Project, and Rhoads then explained the city’s role as client and the intent for the results of these stakeholder conversations to be incorporated into the larger project. All stakeholders then introduced themselves.

Purpose of the Meeting: Kim Armstrong explained the process each of the three small groups would go through by first coming up with a vision statement or key words that could shape the city’s actions in regard to food access. She explained that the statement should be forward looking (2030), and that each group would then come up with specific goals to support that vision. She also asked participants to identify strategies, barriers and opportunities for carrying out these goals.

Summary of Small Group Discussions: Participants were dispersed into groups and a member of Community Food Concepts facilitated discussion at each of the tables. The summaries below provide an overview of the important issues that were discussed. Among all of the participants the issue of including words such as local, affordable and healthy was discussed at length, but no clear consensus was reached.

Table #1
- Education
  - Key words: information, variety and convenience
  - Sample goal: People are aware of the food available within a certain neighborhood, the price, and where it is produced.

- Appropriate Zoning
  - Sample goal: The City is zoned appropriately and regulations do not inhibit food businesses from locating and meeting the needs of an informed consumer.
  - Health
  - Sample goal: Stores will have healthy foods and will enable shoppers to meet all USDA guidelines for a healthy diet and be available within a geographic area, whether at one store or multiple.

Table #2
- Education
  - Key words: knowledge system, expand choices, free market
- Access & Infrastructure
  - Sample goal: Improve access of where farmers can sell their food by providing more direct markets.
  - Feeding Hungry People
  - Sample goal: Create a truly sustainable food system that eliminates hunger.

Table #3
- Education & Awareness
  - Key words: marketing choice, elevate awareness
- Partnerships
  - Sample goal: Create partnerships to make schools a place where children and families connect to food, through community gardens and learning to grow and cook food.
• Neighborhood Connectedness

- Sample goal: The City provides a virtual resource center where neighbors can connect to share yard space, information on growing and cooking food, and food they have grown.

- Sample Vision Statement: All Portland residents have equitable access to food that leads to a healthful lifestyle and is available in a variety of ways.

Next Steps & Adjournment: April Chastain ended small group discussion at 2:45pm for a brief review of what each of the groups had discussed. She then informed everyone of the second, and final, stakeholder visioning meeting taking place on Wednesday, April 22nd from 1-3pm in Smith Memorial Student Union room 294. This meeting will provide stakeholders a chance to review and vet the recommendations Community Food Concepts drafts, as well as to learn more about the mapping component of the project. The meeting was adjourned at 3pm.

Second Food Access Meeting Minutes
Smith Memorial Student Union Room 294
1-3pm April 22, 2009

Introductions: The meeting commenced at 1:10pm. Elizabeth Chapin introduced the members of Community Food Concepts, as well as Alma Flores, from the Bureau of Planning and Sustainability, standing in for Amanda Rhoads. Chapin gave a short overview of the Foodability Project, and Flores then explained the city’s role as client and the intent for the results of these stakeholder conversations to be incorporated into the larger project. All stakeholders introduced themselves.

Purpose of the Meeting: April Chastain gave a review of the April 1, 2009 meeting and explained how the results of the first meeting were integrated into the draft vision statement. The proposed statement is:

In 2030, every Portlander has convenient access to a variety of quality, affordable food. People are able to make informed choices about available food options which lead to a healthful lifestyle.

It was explained that the presentation of maps that followed was to be viewed with this vision statement in mind.

Summary of Map Presentation: Steve White introduced the mapping component of the meeting. In order to map the existing condition of food access conditions in Portland, 5 indicators were used: Accessibility, Affordability, Availability, Appropriateness, and Awareness. He explained what food access points were used and what indicators were used to develop a map for four of the five indicators.

Accessibility
- Five maps were displayed of the following measures, followed by a sixth composite map.
  - food points per capita
  - level of transit service
  - street connectivity
  - average slope
  - vehicle ownership

- The measures have not yet been weighted.
- It does not include proposed transit projects.
- The measure ‘distance to nearest food access point’ will be added soon.
- Still working out how to include sidewalks into a map
- The data is based on 2009 projects of Census 2000 data.
Affordability
- Based on a market basket survey of 45 food point locations across the City of Portland conducted by graduate students in the MURP program. It is a federal standard of affordability based on a USDA developed tool for setting qualification standards for the Food Stamp Program.

Availability
- Based on the store with the highest score for the block group of total number of items present on the market basket survey.
  - There is a one-mile buffer around the city limits, but does not include Vancouver.
  - Most of the low availability scores are in industrial districts.
  - Emergency food will be integrated when income information is added to the mapping project.

Appropriateness
- Based on the market basket survey ethnic foods items as well as whether the store carried locally produced products.
  - The focus was on Asian and Hispanic foods.
  - This information will later be overlaid with the City’s ethnic distribution.

Composite Map: A final map of all eight measures, unweighted, was displayed.

Awareness – Kim Armstrong introduced the discussion
- Working with Hacienda CDC in northeast Portland to do direct work with residents about how and where they shop. This will be used as a case study to inform the project.
  - Anticipated completion is mid-May
  - This may be overlaid with both income and affordability data.

Discussion on Food Access Measures Weighting:
- Vehicle ownership map is difficult to read and counterintuitive, with high vehicle ownership regarded as making food access easier when city looking at 20-minute neighborhood concept.
  - Walkability (slope, street connectivity) overweighted. Walking to the grocery store not realistic for many; proximity to a grocery store needs a higher weighting.
  - Appropriateness maybe should not be included, or only looked at in regards to locations of ethnic groups. Other ethnic groups should be included.
  - Equity issues should be examined more closely. Neighborhoods vary considerably and this is not yet taken into consideration.
  - Convenience stores should not be given too much weighting, and perhaps not included at all.
  - Affordability and transportation options need the highest weighting. (repeated theme.)
  - Eliminate emergency food since it has limited frequency of use and offerings. Leave out community gardens since seasonal and limited availability.
  - Restaurants are not currently included due to scope of the work. Prepared foods from stores were not part of the market basket survey. Could be included in future work.
  - Would like to see a thematic map on amount spent on various types of food.

Next Steps & Adjournment: Stephanie VanRheen moved the discussion back to the draft vision statement. Kim Armstrong introduced a list of eleven currently identified priorities for food access in Portland. A questionnaire was given out to comment on the vision statement and to rank the priorities, not using a filter as what is or is not possible for the city to address. The priorities will be used to assess possible recommendations and implementation strategies. The meeting was adjourned at 2:50pm.
**APPENDIX M - Annotated List of Food Access Organizations in the Portland Metro Region**

**COMMUNITY HEALTH ORGANIZATIONS**

**Active Living By Design (www.activelivingbydesign.org)**
ALBD’s vision is healthy communities where routine physical activity and healthy eating are accessible, easy, and affordable to everyone. Portland ALBD partnership has focused on the Springwater Corridor Trail in the Lents neighborhood.

**African American Health Coalition, Inc. (www.aahc-portland.org)**
The AAHC promotes wellness for African Americans who live in Portland, working towards reconfiguring health and social services. The AAHC has partnered with local and state healthcare departments, major healthcare systems, and medical associations as well as engaged 20 percent of Multnomah County’s African American population in lifestyle change.

**Community Health Partnership (www.communityhealthpartnership.org)**
The Community Health Partnership: Oregon’s Public Health Institute works to improve the health of Oregonians through advocacy and support of effective public health policy and activities. The Healthy Eating Active Living partnership addresses physical activity and health eating through improved community design, public policies, and youth and adult programs.

The partnership is a community of activists, nonprofits, Portland Public School department leads and representatives of city and state agencies that are committed to advancing the Portland Public Schools Wellness Policy. The mission is to improve childhood learning and health, focusing on the school food environment, integrating garden-based and nutrition education, and access to school gardens and local farms.

**COMMUNITY & SOCIAL JUSTICE ORGANIZATIONS**

**Coalition for a Livable Future (www.clfuture.org)**
The CLF unites over 90 diverse organizations and individuals to promote healthy and sustainable communities through a variety of efforts, including to end hunger in the community. A current initiative, the Regional Equity Atlas Project, illustrates which people and places have the best and worst access to important assets, including grocery stores.

**Ecotrust (www.ecotrust.org/foodfarms)**
Ecotrust’s mission is to inspire fresh thinking that creates economic opportunity, social equity and environmental well-being. The Food & Farms Program improves public understanding of agriculture and its challenges, increases the market share of locally grown, processed, and manufactured foods, and shares the abundance of the region with all eaters.

**Ecumenical Ministries of Oregon - Interfaith Food & Farms Partnership (www.emoregon.org/food_farms.php)**
The Interfaith Food and Farms Partnership, a project of Ecumenical Ministries of Oregon's Interfaith Network for Earth Concerns, aims to empower faith communities, farmers, and neighborhoods to build rural-urban alliances and create innovative partnerships for just and sustainable food systems. Small farmers are supported through innovative market relationships to bring local food within reach of those who need it most.

**Elders in Action (www.eldersinaction.org/)**
Elders in Action is powered by the experience of more than 150 volunteers, who work to solve problems, tackle important issues, and help businesses and communities better serve the older customer. With a mission to assure a vibrant community through the active involvement of older adults, the organization believes the quality of life should never depend on age and welcomes the talent and wisdom that older adults can provide to make communities in Clackamas, Multnomah and Washington Counties more livable for all.
Hacienda Community Development Corporation ([www.haciendacdc.org/](http://www.haciendacdc.org/))
Hacienda CDC develops affordable housing and builds thriving communities in support of working Latino families and others in Oregon by promoting healthy living and economic advancement.

Janus Youth Programs, Inc. ([www.jyp.org](http://www.jyp.org))
Janus Youth Programs operates community-based programs for children, youth and families in the region. Village Gardens, launched in 2001 with a USDA Community Food Projects Initiatives grant, is a 60,000 square foot urban agriculture program that uses sustainable organic gardening and farming to increase access to healthy food, improve economic opportunities and build unity with low-income residents of North Portland.

The Council was formed in the Spring of 2009 to represent the NECN community in matters related to the King Farmers Market, which began operations on May 3, 2009. The Council has the following primary responsibilities with regard to the King Farmers Market: outreach to the community—promotion of the market, removing barriers that could keep people away from the market, understanding community needs and reporting these to PFM, staff and program the community booth at the market each week, present workshops; classes; community education around food, and to act as liaison between NECN and PFM.

Mercy Corps Northwest ([www.mercycorpsnw.org](http://www.mercycorpsnw.org))
Mercy Corps Northwest helps low-income individuals in Oregon and Washington to improve their lives through small business and self-employment. Services include assisting individuals to start up business ventures in economically distressed communities, promoting economic development opportunities in low-income neighborhoods and support communities’ efforts to create and improve economic infrastructure. In 2008, Mercy Corps Northwest gave proprietors of Portland food carts $20,000 in loans and matched savings to bolster their mini-eateries, with intentions to expand the program.

Rose Community Development ([www.rosecdc.org](http://www.rosecdc.org))
Rose Community Development combines affordable housing programs with supportive services in outer Southeast Portland.

**Food Providers & Distributors**
*Only organizations that participated in the visioning process are included here, and do not represent all food providers & distributors in the Portland area.*

Alberta Cooperative Grocery ([www.albertagrocery.coop/](http://www.albertagrocery.coop/))
The Alberta Cooperative Grocery is a community-owned store located in the vibrant Alberta Arts District in Portland, Oregon. It offers a wide range of fresh produce, groceries, health and home products, and more. The store often has special events, music, and art displays in the store, and you’ll find a Community Corner with a bulletin board.

Food Innovation Center- OSU Extension Services ([http://fic.oregonstate.edu/](http://fic.oregonstate.edu/))
The FIC is a resource for client based Product and Process Development, Packaging Engineering and Shelf Life Studies, and Consumer Sensory Testing. Research work is conducted to develop innovative Processing and Packaging Technologies. The FIC also engages in scholarly research in Agricultural Economics and Marketing.

New Seasons Market ([www.newseasonsmarket.com](http://www.newseasonsmarket.com))
New Seasons Market is a locally owned grocery store that provides reasonably priced local foods and has created many community partnerships to promote the well-being of the community.

Northwest Grocery Association ([www.ogia.org/home.html](http://www.ogia.org/home.html))
The mission of NWGA is to serve as the spokesperson for the Northwest’s grocery industry by promoting the common interests...
and issues of its membership by providing current communications, leadership and member services.

**Oregon Restaurant Association** ([www.ora.org/](http://www.ora.org/))  
The Oregon Restaurant Association is the leading business association for the restaurant industry in Oregon. The not-for-profit trade organization is at the forefront of restaurant associations across the nation. The Association, with its Education Foundation, works to represent, educate, and promote the restaurant industry, which is the cornerstone of Oregon’s economy, careers, and communities.

**Sysco Food Services of Portland (SYSCO)** ([www.syscoportland.com/](http://www.syscoportland.com/))  
Sysco Food Services of Portland is committed to delivering the highest quality products to our customers, when they want them, at the most competitive prices, to help them grow their business more profitably.

**FOOD SECURITY ORGANIZATIONS**  
**Community Food Security Coalition** ([www.foodsecurity.org](http://www.foodsecurity.org))  
The CFSC is a national nonprofit with a Portland chapter, dedicated to building sustainable local and regional food systems that ensure access to affordable, nutritious, and culturally appropriate food for all people at all times. Programs and services include: policy advocacy, education and networking, training and technical assistance, and the National Farm to Cafeteria Program.

**Food for Oregon (a collaboration of OSU Extension & Oregon Food Bank)** ([http://foodfororegon.oregonstate.edu](http://foodfororegon.oregonstate.edu))  
Food for Oregon aims to increase Oregonians’ food security by improving access to local, sustainable food resources. A database of local and regional community food resources in Oregon is maintained.

**Healthy Corner Store Network** ([http://healthycornerstores.org](http://healthycornerstores.org))  
The HCSN works to promote the sale of healthy, fresh, affordable foods in small, neighborhood stores in under-served communities. The HCN supports the work of participant organization to promote innovative retail models, policies and programs that can help corner stores become the backbone of healthy neighborhood food retail.

**Oregon Food Bank** ([www.oregonfoodbank.org](http://www.oregonfoodbank.org))  
The Oregon Food Bank works to eliminate hunger and its root causes as the hub of the Oregon Food Bank Network, a statewide network of 20 regional food banks and 915 agencies and programs serving Oregon and Clark County, WA, that recovers food and distributes it to programs serving low-income people. OFB also works to eliminate the root causes of hunger through advocacy, nutrition education, learning gardens and public education.

**Portland Police Bureau Sunshine Division** ([www.sunshinedivision.org/index.htm](http://www.sunshinedivision.org/index.htm))  
The Portland Police Sunshine Division is a nonprofit emergency food relief organization. The Division maintains a civilian Board of Directors with the assistance of one sergeant paid for and supported by the Police Bureau. The Division has been in operation since the early 1920’s and continues to offer emergency food relief as a result of generous donations of food, cash and services from local businesses and the general public.

**GOVERNMENT & REGIONAL AGENCIES**  
**City of Portland Bureau of Planning & Sustainability** ([www.portlandonline.com/ods](http://www.portlandonline.com/ods))  
The Bureau focuses on policy and programs that support local, sustainable agriculture, economic development in the region and access to healthy, culturally appropriate food for all residents. The Bureau works with the citizen-based Portland Multnomah Food Policy Council to advise elected officials on issues regarding food access and many other policy initiatives in the regional food system.
City of Portland Parks & Recreation - Community Gardens (www.portlandonline.com/parks/index.cfm?c=39846)
Portland Community Gardens provides gardening opportunities for the physical and social benefit of the people and neighborhoods of Portland, promoting organic gardening in the urban environment and bringing people together to learn to grow vegetables and fruit for home consumption. Gardeners donate a portion of their produce to neighborhood food relief agencies. There are currently 32 community gardens located throughout the city.

Metro Regional Government - Fork It Over! (www.forkitover.org)
Fork It Over! is Metro’s food donation program to reduce hunger and waste in the Portland, Oregon region. The focus is on restaurants, catering companies, and grocery stores to encourage food donation as a safe and simple alternative to surplus food.

Multnomah County Health Department (www.mchealth.org)
The Multnomah County Health Department works toward healthy people in healthy communities. Their mission is to work in partnership with the communities they serve, to assure, promote and protect the health of the people of Multnomah County.

Oregon Department of Agriculture (www.oregon.gov/ODA/index.shtml)
The mission of the ODA is to ensure food safety and provide consumer protection, to protect the natural resource base for present and future generations of farmers and ranchers, and to promote economic development and expand market opportunities for Oregon agricultural products.

Oregon Environmental Council (www.oeconline.org)
The Oregon Environmental Council’s Healthy Food and Farms Program safeguards healthy food produced by local farmers, helps farmers and food businesses flourish economically and be stewards of the environment, envisions Oregon as a leader in food production and farming that protects our health and environment, and helps Oregonians have the opportunity to support local agriculture and eat local, healthy, sustainably produced food.

Oregon Hunger Relief Task Force (http://oregonhunger.org)
The Oregon Hunger Task Force was created by the State Legislature in 1989 to collaborate with state agencies, businesses, nonprofit organization, public officials and local communities to end hunger in Oregon. The Task Force documents the extent of hunger, helps coordinate and publicize existing services, and advocates for programs and policies to eliminate hunger.

Portland Multnomah Food Policy Council (www.portlandonline.com/osd/index.cfm?c=eccja)
The Food Policy Council is a citizen-based advisory council to the City of Portland and Multnomah County. The Council addresses issues regarding food access, land use planning, local food purchasing, and many other policy initiatives in the current regional food system.

Portland Public Schools Nutrition Services (www.nutrition(pps.k12.or.us/.docs/pg/10055)
Nutrition Services has supported school-based programs in which students grow and harvest foods that can be used in the preparation of school meals. Twice a month, the Harvest of the Month program introduces students to a local farmer whose food is featured on school menus.

TriMet (www.trimet.org/
TriMet provides public transportation in the Portland, Oregon, metropolitan area, including most of Clackamas, Multnomah and Washington counties

Urban Agriculture & Community-Supported Agriculture

Chef’s Collaborative (http://chefscollaborative.org)
Chef’s Collaborative is a leading network of chefs and members of the food community that fosters a sustainable food supply through advocacy, education and collaboration. An emphasis is placed on food that is delicious, locally grown, seasonally fresh, and whole or
minimally processed.

Friends of Family Farmers (www.friendsoffamilyfarmers.org)
Friends of Family Farmers promotes policies, programs, and regulations through education, advocacy, and community organizing that protect and expand the ability of Oregon’s family farmers to run a successful land-based enterprise while providing safe and nutritious food for all Oregonians.

Friends of Zenger Farm (www.zengerfarm.org)
FZF was created to preserve Zenger Farm, a 16-acre urban farm in Southeast Portland, and to transform it into a community learning center for sustainable food systems, environmental stewardship and local economic development.

Growing Gardens (www.growing-gardens.org)
Growing Gardens promotes food gardening for improved nutrition, health, and self-reliance while enhancing the quality of life in Portland. Growing Gardens installs organic food gardens at the homes of low-income Portlanders and provides three years of support, including plants, seeds, tools, mentors, and garden education. Other programs include Youth Grow and educational workshops for beginning gardeners.

Oregon Farmers’ Markets Association (www.oregonfarmersmarkets.org)
The OFMA seeks to promote, support and develop partnerships between city residents and farmers. OFMA assists in growing successful markets and advocates for strengthening Oregon agriculture and communities.

Oregon Tilth (www.tilth.org)
Oregon Tilth is a nonprofit research and education organization dedicated to sustainable agriculture, offering educational events, providing organic certification services, and promoting equitable access to healthy food.

Plate and Pitchfork (www.plateandpitchfork.com)
Plate and Pitchfork is a volunteer group committed to increasing awareness of the benefits of eating local foods and supporting local food providers and farmers. Its web site provides tools for educating consumers about the food they purchase.

Portland Area CSA Coalition (http://portlandcsa.org)
The Portland Area CSA Coalition fosters responsible relationships between the grower, consumer, food, and land on which the food is grown. CSA’s creates a direct relationship between farming operations and a community of supporters by selling harvest shares.

Portland Farmers Market (www.portlandfarmersmarket.org)
PFM operates vibrant farmers markets that contribute to the success of local food growers and producers, strengthen our food economy and serve as community gathering places.

Portland Fruit Tree Project (http://portlandfruit.org)
The Portland Fruit Tree Project is an all-volunteer grassroots organization that works to increase equal access to fresh, healthy food and foster stronger communities by empowering neighbors to share in the bounty and care of urban fruit and nut trees. The Project also works to increase community knowledge in food preservation and fruit tree cultivation.

Sauvie Island Center (www.sauvieislandcenter.org)
Sauvie Island Center teaches children and adults about farms, the food they grow, and the landscape in which they exist. Programs, educational and cultural events connect people with the acts of growing, preparing and eating food.

Tri-County Farm Fresh Foods, Inc. (www.tricountyfarm.org)
Tri-County Farm Fresh Foods is an organization of local farms offering produce for sale directly to the public through U-pick and farm stands, striving to provide high-quality, nutritious and farm-fresh produce in a manner that is healthful for residents and the environment.
Appendix N – Annotated Bibliography


This paper discusses food systems and the need for planning for sustainable food systems, outlines trends and changes within the food system that make the current system unsustainable and unhealthy in the long run, and considers current and emerging roles for food and nutrition professionals in supporting sustainable food systems, with specific suggestions for each aspect of the food system (e.g. consumption, access, etc).


This paper discusses some reasons behind the neglect of food systems planning by the planning profession and the importance of the food system on other local and regional systems. Trends in food systems and their impacts on health, the economy, the environment, social equity issues, and culture are discussed. The policy sets out seven general policies. Each policy includes subpolicies, with reasons to support the subpolicy and specific suggestions for roles planners might play in supporting these policies.


This paper discusses the food system and food system planning and reasons behind the neglect of this area by the planning profession, considers why planners should become more involved in food systems planning and ways planners can use their skills to engage in food systems planning. It also gives examples of food policy actions and recommendations from various sources, grouping policies by steps in the food chain and areas familiar to planners.

Policy examples are given under the following categories:
- Food production
- Food distribution and processing
- Food access and consumption
- Food waste disposal
- Environment
- Economic Development
- Sustainable Development
- Health
- Neighborhood Development


This book provides a detailed guide to forming food policy councils, including suggestions for finding political allies and funding sources. It provides a number of example policies and recommendations for various parts of the food system. In addition, the book includes case studies of several food policy councils in the US and Canada, discussing their format, programs, and organizational challenges. The assessment also reviews programs and strategies that these organizations have implemented and their impact on local communities.


This report examines how market-based solutions can provide healthy food in low-income communities (based in Oakland, CA) that suffer from a lack of healthy food access. Elements that are considered include store size, location and accessibility, merchandise mix and regulatory barriers. The report also evaluates the feasibility of various business models and provides three case studies. A substantial list of public policy recommendations is generated which includes actions for local governments, private funders and community groups.

This paper outlines why food systems planning is of interest to the APA as well as trends in agriculture, food systems, hunger, health, the environment, and federal policies that impact food systems planning. It discusses food policy councils in general and categories of food policy and planning activity that food policy councils have considered. It lists issues that a Food Planning Policy Guide should address. The paper also gives examples of policy and planning decisions that have been adopted and lists some partners that should be at the table to develop both a policy guide to food systems planning and food systems policies in the future, with some discussion of concerns facing specific groups and communities.


The paper outlines the history, current structure, major accomplishments, and challenges of several food policy councils. Councils assessed are:
- Berkley Food Policy Council
- Austin-Travis Food Policy Council
- City of Hartford Advisory Commission on Food Policy
- Knoxvill-Knox County Food Policy Council


This article looks at the major stakeholder groups in food systems, and their values, interests, and positions. Planners have the opportunity to bridge food system tensions, such as recognizing overlapping stakeholder interests and playing the role of collecting and analyzing data. Coalition building techniques are suggested.


Website for the Hartford Food Commission, including information on their programs.


An in-depth study of food policy and food policy organizations in the US and Canada, including individual assessments of local food policy councils. Assessments include some local press coverage of policy councils and actions taken. The study includes example goal statements, policy ordinances and discussion of some policy issues found at the local level. Organizations assessed are:
- Knoxville, KY
- St. Paul, MN
- Onondaga County, NY
- Philadelphia, PA
- Toronto, Canada


Website for the Dane County Food Policy Council, including links to annual reports, information on meetings, and other information.

City of Seattle Food Policy Action Plan Adopted April 28th, 2008

A resolution establishing goals, creating a policy framework, and identifying planning, analysis and actions for the purpose of strengthening Seattle’s food system sustainability and security.

A report by the National Association of Counties containing four different strategies for county governments to support their local food systems. Each strategy includes a case study of a county government that has successfully implemented at least some of the suggested actions. The report is focused on improving health outcomes for children, specifically reducing childhood obesity. Strategies explored in the report are:
- Food Policy Councils
- Farm to School programs
- Infrastructure development
- Agriculture conservation easements


This paper presents a GIS-based method to identify geographic locations of areas with inadequate access to food in London. Analyses began with a census of food retail outlets in a deprived area within a walking distance and the price and availability of healthy food acceptable to each of the four major ethnic groups in the area. Maps showed the food shops and price indices with the road network. The area analyzed had reasonable walking access to reasonably priced shops and the article concluded that the maps are a first indication of the picture of food access that can be used to enable practitioners in other areas.


This website provides information regarding the approval and formation of a new advisory board to coordinate food-related activities of government, nonprofit, and business organizations in order to “improve the availability of fresh, nutritious, locally and sustainably grown food at reasonable prices for all residents, particularly those in need”.


This article makes an initial evaluation of the ability of comprehensive plans to impact the development of smart growth in Wisconsin. It discusses studies of efficacy of comprehensive plans controlling other areas of planning, such as environmental controls, and gives an overview of smart growth as a general concept and the passage of Wisconsin's Comprehensive Planning Law in 1999. The article makes the point that 'smart growth' encompasses a range of planning concerns, and that individual jurisdictions can (and often do) have varied and sometimes contradictory definitions of 'smart growth' and different strategies on how smart growth may be achieved. The study looks at thirty comprehensive plans, interviews representatives from the communities, and evaluates each plan based on its inclusion of goals and policies promoting smart growth. Plans were scored in order to allow comparison. The study found that plans did not consistently address all 6 elements of smart growth identified in this study, and the level of specificity varied widely between plans. In general, the plans evaluated included most of the smart growth goals but did not include a set of smart growth policies to implement those goals. The article also suggests that developing smart growth goals and guidelines specifically geared towards smaller, more rural communities could be more useful than pushing current urban-oriented smart growth concepts on communities for which they may not be suited.

Found here is a general discussion of food policy councils and what they do, and a recap of training on food policy councils conducted in Santa Fe in April 2008. Topics include finding allies and different approaches to forming a FPC. Specific examples from Santa Fe, Missoula, and Oklahoma were discussed, along with lessons learned from each case.


This article reviews the practice of indicator development and reports lessons learned. Aggregated measures are seldom used, but indicators on specific topics can be valuable if they are transparent, methodologically sound, and build on the way decision-makers think. For broad indicator reports to be of community value, they must be produced collaboratively, have public attention, and become an institutionalized part of the work of an agency. She says that indicators are not used by policymakers as aids to decision. Indicators’ main influence is during the course of their development as players think about their design. To be useful, indicators must be clearly associated with a policy or set of possible actions. She says five to ten years is the amount of time for an influential indicator to be developed.


News article about Seattle’s community garden program and the increasing demand for community garden space through this program and other options. (Note that there are several articles about the P-Patch program).


This study compared resident perceptions of the availability of healthy foods with the density and type of food outlets found near their residences. Surveys rating the availability of produce and low-fat products in neighborhoods were aggregated into a healthy food availability score. Densities of supermarkets and smaller stores were calculated per square mile around each respondent’s residence, using a kernel estimation in GIS. Worse perceived availability of healthy foods was associated with lower densities.


This paper advocated for trying to address food access issues within the framework of also improving both the supply and demand for locally and sustainably produced food. The concept of Agricultural Urbanism is concerned with “creating an urban environment that values, encourages, activates and sustains agriculture enterprise through integration of people, the places where they live and work, and their food. It invites agriculture back into our settlement areas, taking into consideration the plethora of agri-food system activities and contributions that might be desirable and viable for the breadth of spaces and environments, from natural areas to urban cores.” Municipal Supported Agriculture is similar to the Digitable City concept. They emphasize that this is but one piece of the puzzle for advancing the concept of agricultural urbanism.

A list of food policy councils by state, with contact information. Note that this list relies on organizations to report their information and keep it updated, so the listing is not complete or up-to-date—several councils listed are no longer active, and some newer councils are not included.


This case study presents a tool to be used to assess food access in specific areas of the UK - a food access radar developed in GIS. Key findings include that there is currently no definition for adequate access to healthy food to use as a basis for measurements. Besides location of stores, physical and socio-economic factors influence food access, such as bus routes, car ownerships, income, and age of population. The food access radar measured the proportion of the population within reasonable walking distance to a food outlet, evaluated areas with the greatest concentrations of socio-economic and demographic factors likely to increase food access problems, and assessed the availability of private and public transport in each area. In conclusion, the study found that retailers should be encouraged to stock a fuller range of items to meet the needs of all consumers.


Community Food Assessments (CFAs) are the first step in planning for community food security. This article studies nine CFAs, points out their common threads to planning, how planning can strengthen CFAs, and what planners can learn from CFAs. CFAs implemented by professional planners have included: spatial analysis, diverse community linkages, envisioned a role for planning agencies, and distributed findings widely. Included are the tables: “A comparative overview of four streams linking food and communities” and “Overview of nine community food assessments.”


This article discusses some reasons why the food system has been neglected as a valid subject for urban planning, including the perception that the food system is a rural issue and the general ‘invisibility’ of the food system in an urban environment. However, the article asserts that the food system is a vital and important part of the urban structure, and that food systems planning is necessary. They suggest a few city institutions that could be created or adapted to allow comprehensive food systems planning, including a city department of food, food policy councils, and planning departments.


This article tests the hypothesis that access to different types of food retail located within a five minute travel time, are different in predominantly white neighborhoods as compared to predominately black and mixed-race neighborhoods. A Neighborhood Healthful Foods Vulnerability Index was created using Gini coefficients and Poisson regression to identify at-risk neighborhoods. The analysis found that supermarkets are absent in minority neighborhoods compared to white neighborhoods, but there is an extensive network of small grocery stores. The article recommends that attracting grocery stores to minority neighborhoods be approached with caution, as smaller stores may be more efficient for ensuring access to healthful foods.

To map food insecurity, an index of risk factors was created, including socio-economic factors such as income, unemployment, and food assistance program participation. The density of households scored as food insecure was mapped and overlaid with public transit routes and the pedestrian street network to show areas with greater than a 30 minute transit time and areas not accessible by transit. Policy opportunities to address food access in these food insecure areas were explored.

Seattle-King County Food Policy Council Food Policy Recommendations (Dec. 27th, 2007)


King County Extension Food & Farms webpage, including information about food systems, the Acting Food Policy Council, Farm-to-School Connections and Nutrition education programs in the Seattle area.


This article highlights an assessment of how small, full-service food retailers can contribute to urban food security. Neighborhoods were assessed for accessibility, affordability, nutritional adequacy, cultural acceptability, and produce quality. It finds that such stores meet many needs by providing a wide variety of low-cost foods, but are limited by geographic inconsistency and targeting particular ethnic markets. Conclusions include that the unique economic development histories and cultural politics of neighborhoods will affect their food access.


Website with general information on food policy councils, including a Q&A addressing issues such as who serves on a food policy council, what the best model for a FPC is, what outcomes might be, etc. Also includes a Council Profiles page with links to state councils and other local and regional councils. This list of councils appears to be more up-to-date, but may still not be completely accurate.


Website for a Toronto food center with two locations. The center began as an emergency food location, but has expanded to provide nutritional education and classes, a community garden, a drop-in meal program, and prenatal and infant nutrition programs. The site includes results from annual surveys of Stop users and reports about food access in the area.