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Improving Healthy Food Access in Rockwood Using Community Voice and Mapping

Author: Monica Cuneo, MPH

Contributing Organizations: Ecumenical Ministries of Oregon and Oregon Public Health Institute

ABSTRACT

Improving Healthy Food Access in Rockwood Using Community Voice and Mapping highlights an innovative, community-based project that examined barriers to accessing healthy food in the Rockwood neighborhood of Gresham, Oregon. The project's use of a Community Food Security Assessment (CFSA) combined with evidence from the Coalition for a Livable Future's Regional Equity Atlas 2.0 is a powerful model of how to couple community voice with data to identify barriers and solutions to improve access to healthy food.

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By sponsoring a series of white papers by local issue experts, CLF hopes to promote dialogue and discussion about a range of regional equity issues. The papers explore issues addressed in the Regional Equity Atlas 2.0 in greater depth, placing the Equity Atlas within a broader policy context. Proposals for papers are welcome. Interested authors should contact Scotty Ellis at scotty@clfuture.org.

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Improving Healthy Food Access in Rockwood Using Community Voice and Mapping

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This white paper highlights an innovative, community-based project that examined barriers to accessing healthy food in the Rockwood neighborhood, a racially and ethnically diverse, low-income neighborhood in Gresham, Oregon. Using a Community Food Security Assessment (CFSA) conducted in 2012-2013, combined with evidence from the Coalition for a Livable Future's Regional Equity Atlas 2.0, the project examined access to healthy food options, and considered whether a farmers market, the preferred solution identified by community members in Rockwood, would improve access to healthy food.

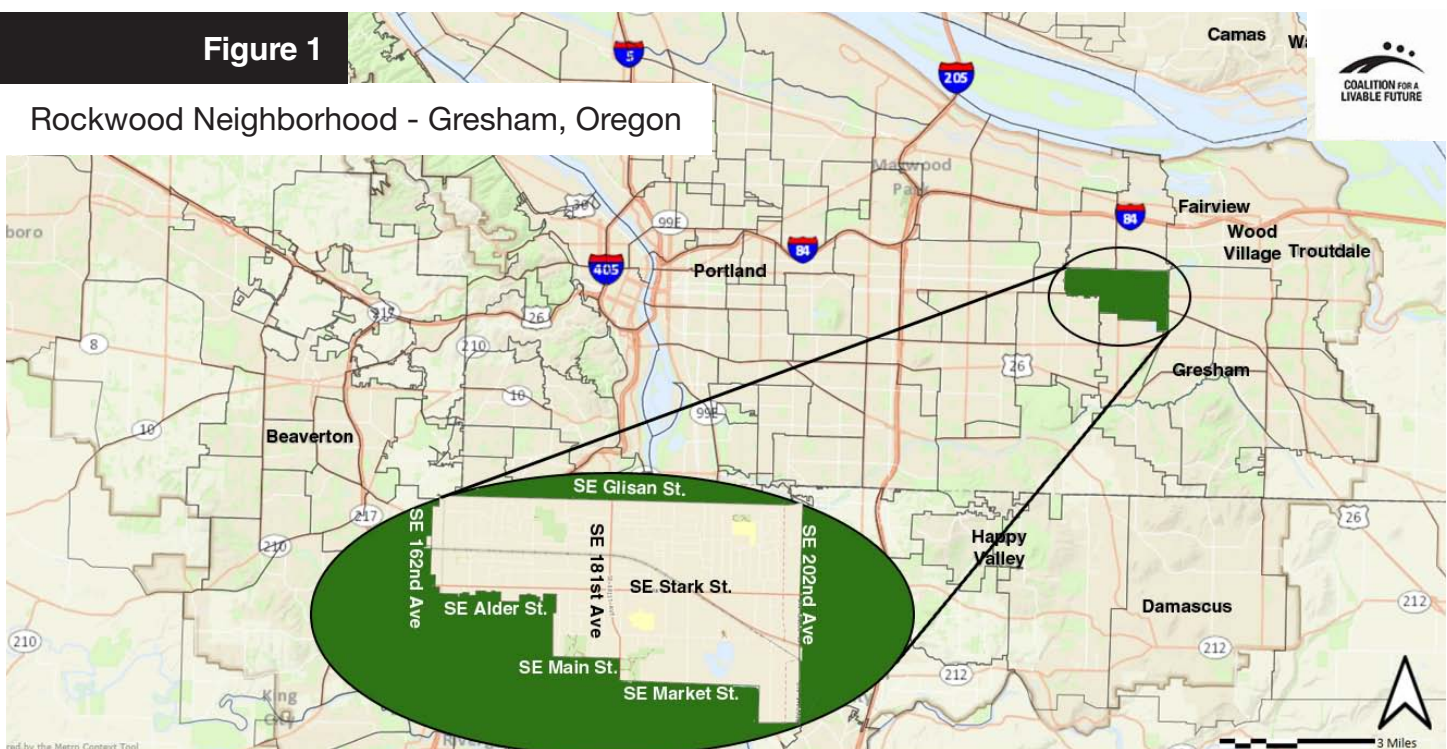
Access to Healthy Food Options and Related Health Outcomes

Access to healthy foods¹ can have a significant impact on people's health. Studies have found that communities with inadequate access to healthy food options have higher rates of obesity and chronic diseases, including Type 2 diabetes, cardiovascular disease, hypertension and heart disease.ⁱ These dynamics are compounded by racial and income disparities in access to healthy foods. Communities of color and low-income populations are more likely to have limited access to healthy food options.ⁱⁱ This contributes to disproportionately higher rates of diet-related diseases such as obesity and obesity-related chronic diseases in low-income communities and communities of color.ⁱⁱⁱ

¹ Healthy food options include fresh produce; whole grains, beans, legumes and similar minimally processed staple items; dairy products; foods that have little or no added fat, sugar, and sodium; and minimally processed fish, meat, and seafood.

Figure 1

Rockwood Neighborhood - Gresham, Oregon



The Rockwood Neighborhood

Rockwood is the City of Gresham's most densely populated neighborhood. Residents in Rockwood experience significantly higher rates of poverty than most other neighborhoods in the region. Rockwood is also one of the most racially and ethnically diverse neighborhoods in the region. According to the Regional Equity Atlas 2.0, Rockwood has the 6th highest density per acre of populations of color of all neighborhoods in the four-county Portland metropolitan region, and the 2nd highest density per acre of Hispanic population (see Table 1).

Figure 2 shows the density per acre of populations of color in the Portland metropolitan region. The light and dark brown areas have the highest densities of populations of color. The circled area shows the density per acre of populations of color in Rockwood. The teal, light blue and tan areas have low to moderate densities of populations of color.

TABLE 1

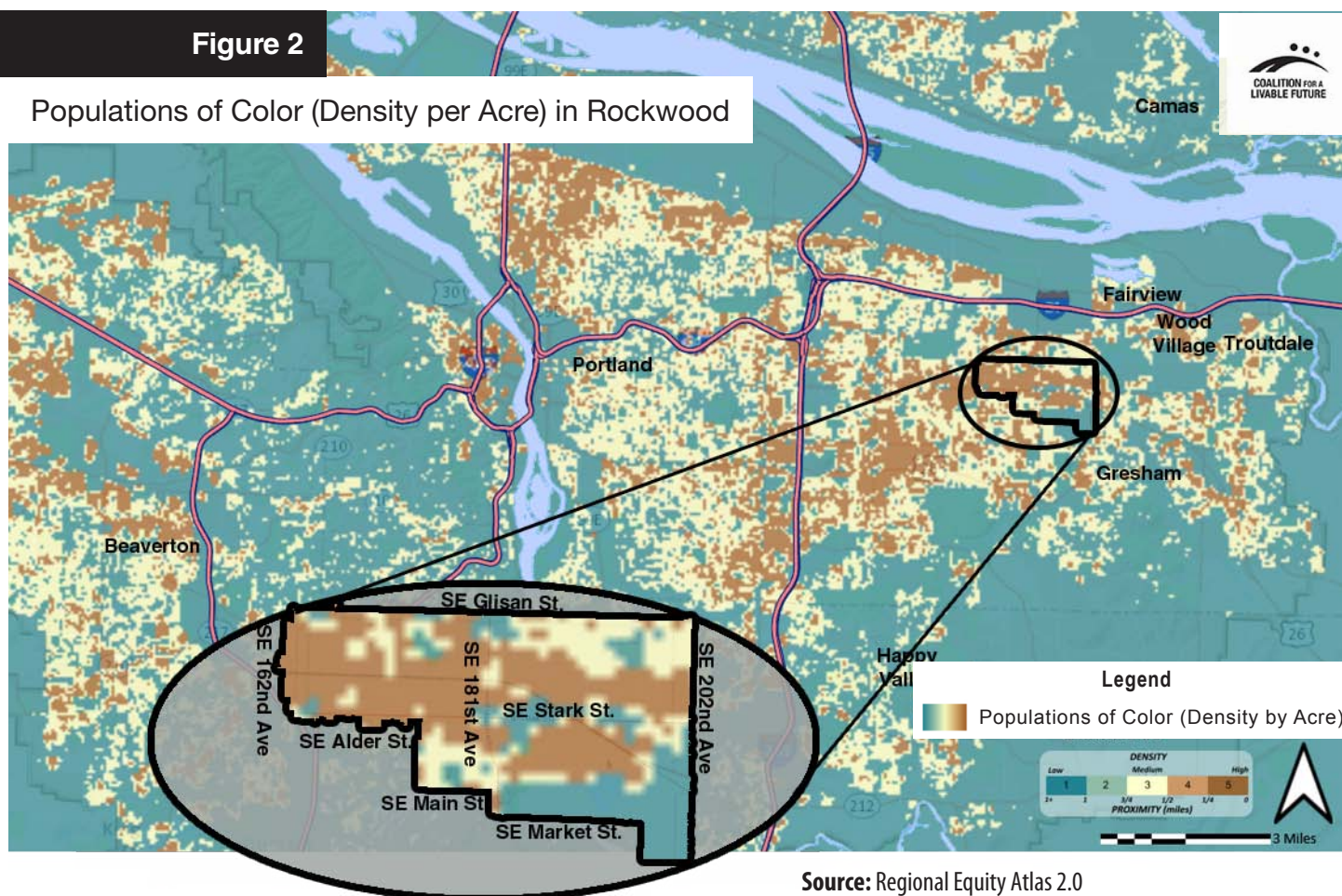
Race/Ethnicity Demographics of Rockwood*

	Rockwood	Gresham	Oregon
White, Non-Hispanic	47.1%	68.7%	78.5%
Hispanic	37.1%	18.9%	11.7%
Black/ African American	8.9%	3.5%	1.8%
Asian	4.4%	4.3%	3.7%
Native American/ Alaska Native	2.9%	1.3%	1.4%
Hawaiian/ Pacific Islander	2.2%	0.7%	0.3%
Total Population	15,712	105,594	3,831,073

*Source: 2010 U.S. Census

Figure 2

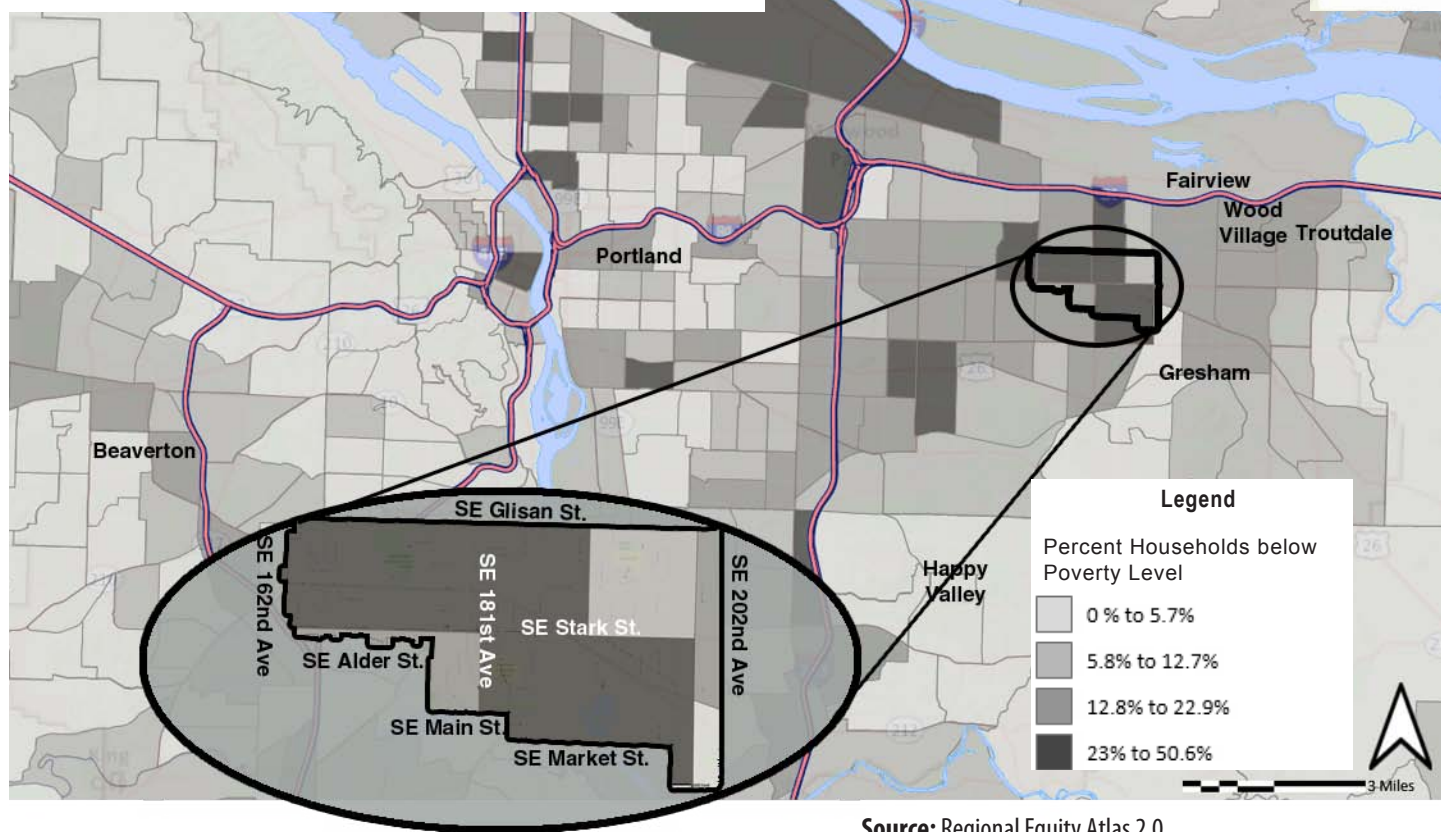
Populations of Color (Density per Acre) in Rockwood



Source: Regional Equity Atlas 2.0

Figure 3

Percent Households in Poverty in the Rockwood



Source: Regional Equity Atlas 2.0

Figure 3 shows the distribution of households living below the federal poverty level in the four-county metropolitan region. The darkest grey represents census tracts that have high rates (range of 23%-50.6%) of households living below the federal poverty level. The circled area shows a close up view of Rockwood and surrounding neighborhoods. With 27.9% of its households at or below the federal poverty level, and a median income of \$37,309, Rockwood has among the highest poverty rates in the region.^{iv}

TABLE 2

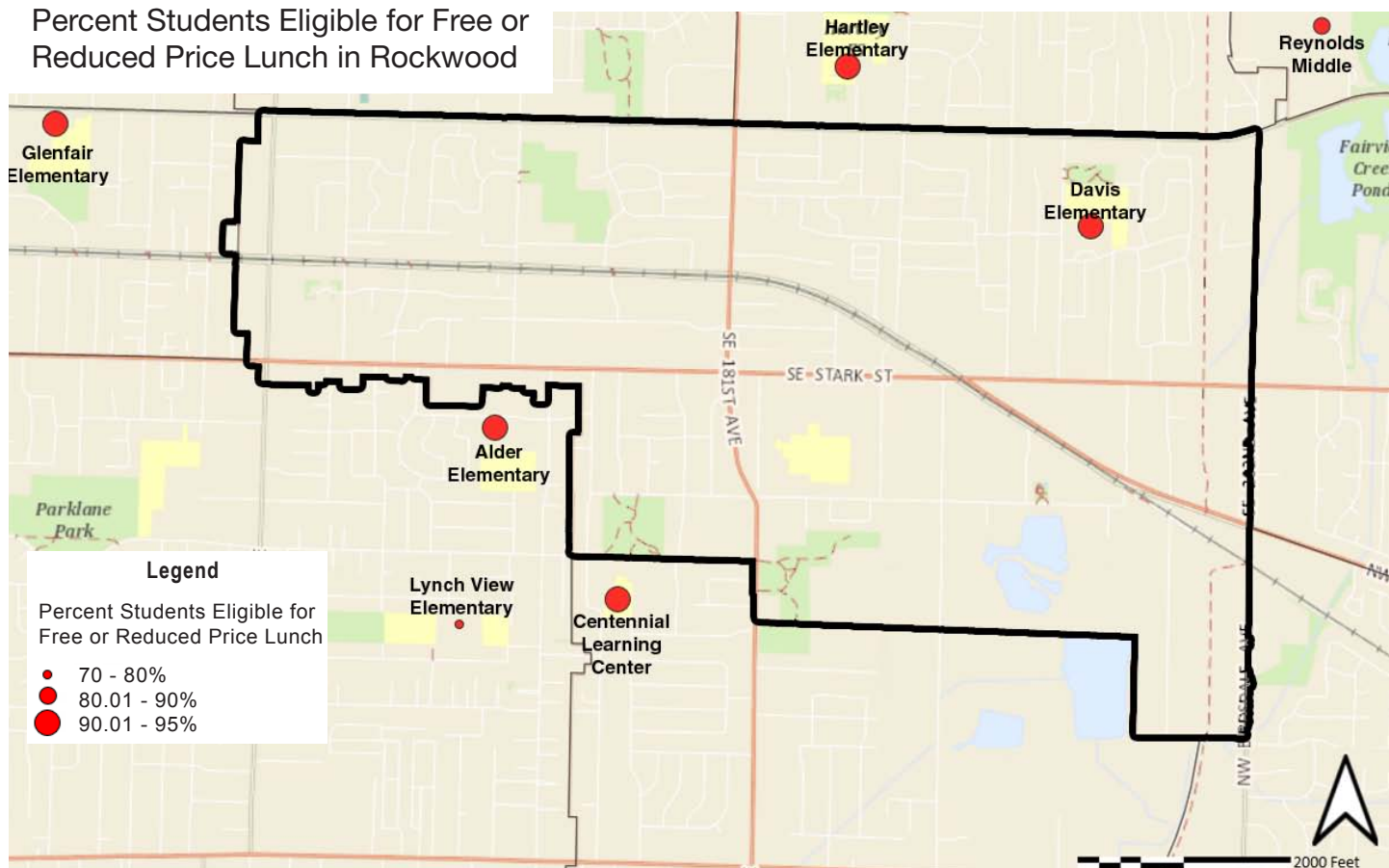
Rates of Poverty and Median Income for Rockwood, Multnomah County and Oregon*

	Rockwood	Multnomah County	Oregon
People Living at or Below 100% Federal Poverty Line	27.9%	17.1%	15.5%
Median Income	\$37,309	\$51,582	\$50,036

* Source: American Community Survey, 2008-2012

Figure 4

Percent Students Eligible for Free or Reduced Price Lunch in Rockwood



Source: Regional Equity Atlas 2.0

TABLE 3

Rockwood Elementary Schools - Percent Students Eligible for Free or Reduced Price Lunch (2010)

School Name	Percent Eligible for Free or Reduced Price Lunch
Alder Elementary School	94.3%
Hartley Elementary School	94.3%
Davis Elementary School	94.2%

Source: Regional Equity Atlas 2.0

The percentage of students eligible for free or reduced price lunch, a commonly used proxy for poverty, is also high in Rockwood with over 94% of students in three elementary schools in or adjacent to the Rockwood neighborhood qualifying for free or reduced price meals.^v

Measuring Access to Healthy Foods in Rockwood

The Community Food Security Assessment

Community Food Security Assessments (CFSAs) are often conducted in areas that lack access to healthy foods, such as low-income urban neighborhoods and rural areas. Using surveys, observation, focus groups and/or interviews, CFSAs provide baseline evidence of gaps and overall access to quality food items, an important step in addressing food insecurity. They also may provide opportunities for community members to develop leadership capacity as well as research related skills, aspects that are arguably as important as the information the assessment may reveal.

After a preliminary food access survey in Rockwood in 2007 found high levels of food insecurity, Ecumenical Ministries of Oregon (EMO) became interested in developing a more in-depth analysis of barriers to healthy food. EMO wanted to work with advocates in Rockwood, and partnered with We Are Oregon (now called the Rockwood Food Co-op Group), which had organized a sub-committee focused on improving food access and security for the neighborhood. Together they developed a CFSA to determine the level of food security experienced within the community.

Working together, EMO and We Are Oregon recruited an eight-member Neighborhood Assessment Team (NAT) from the neighborhood to develop and implement the CFSA. The NAT was responsible for making sure that the research tools maintained community relevance and that the CFSA reflected the knowledge of the local community. Determining that the most suitable research approach for the Rockwood community would be a door-to-door survey and focus groups, the NAT worked with EMO partners to become more familiar with survey creation, focus group facilitation, and data analysis. EMO supported the NAT by providing project facilitation and expertise in leadership development.

Over the course of the CFSA, the NAT gathered 100 responses through the door-to-door survey and focus groups. They collected information to better understand three major Rockwood related food issues: (1) availability of healthy foods, (2) availability of unhealthy foods, and (3) level of physical access to available healthy food. After the research data was compiled, EMO partnered with Oregon Public Health Institute to synthesize findings from the CFSA with data and maps from the Regional Equity Atlas 2.0 in order to provide Gresham's civic leaders with a foundation for policy and budgetary action to expand healthy food options in Rockwood.

The Regional Equity Atlas

The Regional Equity Atlas 2.0 is an interactive, online mapping tool created by the Coalition for a Livable Future that includes a range of measures related to healthy food access. It measures geographic proximity to full-service grocery stores and supermarkets; to farmers markets and produce stands, and to sources of unhealthy food. It also includes information on various populations groups, income, and transportation elements including transit access, sidewalks, and bike paths. Oregon Public Health Institute analyzed several key Equity Atlas maps for the Rockwood area to supplement the information gathered through the CFSA.

Measuring Access to Healthy Food Options

A community's access to healthy food can be measured by a variety of indicators^{vi} including:

- Geographic proximity to a full-service grocery store or supermarket within a neighborhood (i.e., 1 mile or less to the nearest supermarket in urban areas and 10-20 miles in rural areas is considered to provide adequate access)
- The number of grocery stores or supermarkets in a defined area
- The median or average income levels of a community
- The price and affordability of the available food
- Transportation elements related to food access, such as access to and frequency of public transportation, safe and complete sidewalks, presence of bike paths, and rates of car ownership within a neighborhood
- The presence of foods that are culturally appropriate for the community's residents²

² A comprehensive analysis of food access should take into account the range of cultural factors that may affect access, including the existence of language or other cultural barriers to existing food resources, the availability of culturally-appropriate food, culturally-influenced buying patterns, historical experiences, etc. Further research is needed, as data on cultural factors affecting food access are not currently available. This issue underscores the importance of complementing geographically-based data with community-based assessments.

Proximity to Healthy Foods

Figure 5 shows proximity to supermarkets and grocery stores in the Rockwood area, based on self-reported data by store owners.³ The darkest brown areas have the best access. The Equity Atlas scored the Rockwood neighborhood with a 4.1 out of 5 for access to a supermarket or grocery store, indicating that in most parts of the neighborhood, residents have good access to healthy food options.⁴

Despite the neighborhood's relatively good geographic proximity to grocery stores, the CFSA revealed that many Rockwood residents still experience food insecurity. This suggests that other barriers beyond physical distance are preventing Rockwood residents from accessing healthy food. The CFSA provides valuable insights into these other dimensions of food access.

Affordability

The Equity Atlas website notes that "Geographic proximity to food retailers is just one component of access. For many households, the availability of affordable food is a far more relevant measure of access." Responses from community members in the CFSA survey and focus groups indicate that, indeed, lack of affordable food is a key contributor to residents' food insecurity. Seventy-one percent of survey respondents cited price as the main factor contributing to their decisions about what food to purchase.^{vii} While the Rockwood neighborhood's primary full-service grocery store is an Albertsons (located in the neighborhood's northwest corner), many residents reported travelling an average of 6.3 miles to obtain food because Albertsons is too expensive. The most frequent destination for these shoppers was the WinCo store (on NE Halsey

and NE 102). Residents reported that WinCo is more affordable and is also easily accessible on public transit via a direct bus route along NE Halsey. Studies with price comparison surveys in Washington and Idaho confirm that WinCo is indeed cheaper than Albertsons.^{viii, ix}

Farmers Markets

The "Proximity to Farmers Markets and Produce Stands" map (figure 6) shows two farmers markets or produce stands located on the edges of the Rockwood neighborhood. Fifty-five percent of CFSA survey respondents reported having shopped at a farmers market or farm stand. However, the CFSA survey did not include a definition of "farmers market" and did not collect data on how recently or how frequently respondents shopped at a farmers market. This limits the conclusions we can draw about whether the two farmers markets on the map are, in fact, used by and meeting the needs of Rockwood residents.

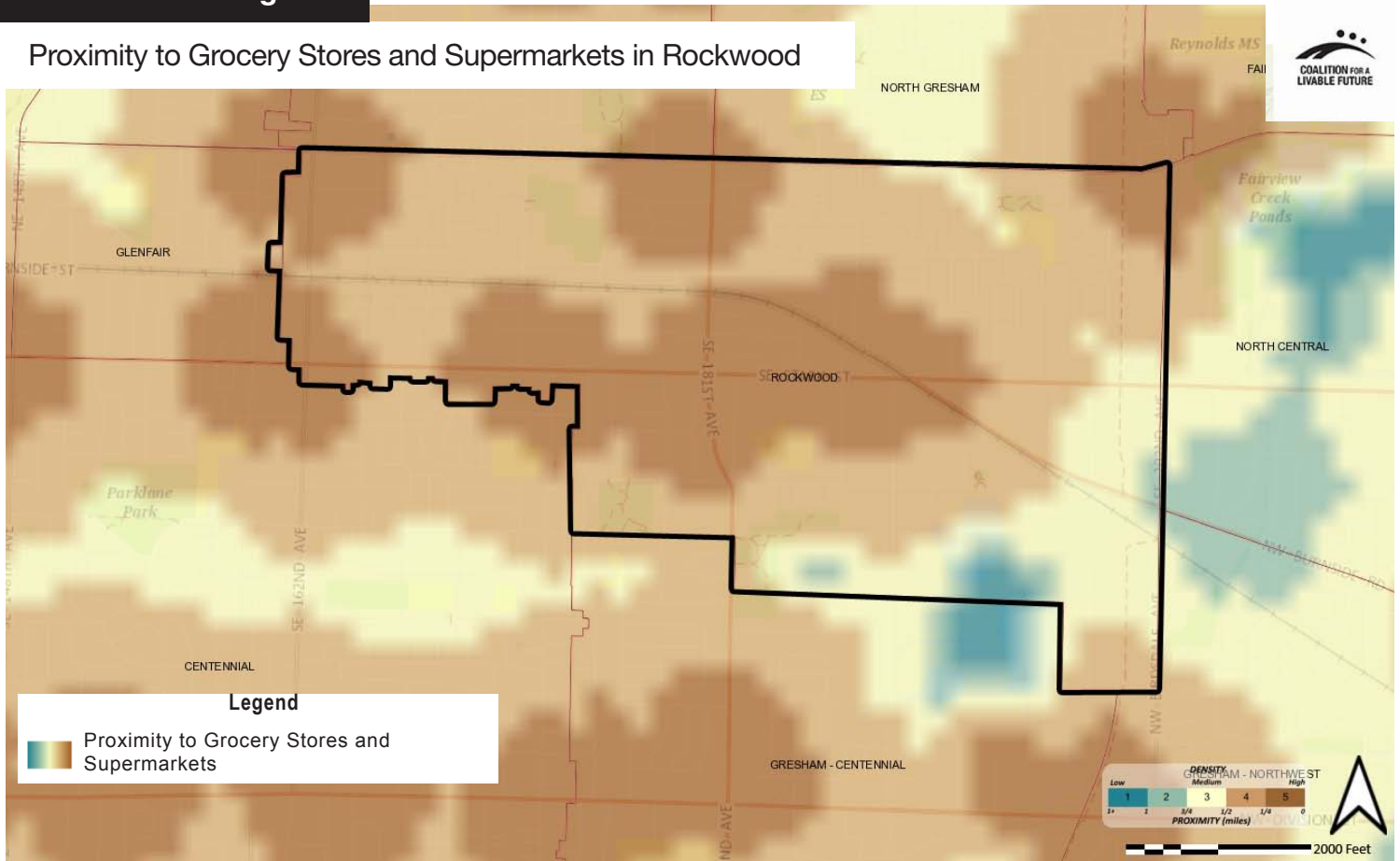
It is possible that respondents considered a nearby store called "Growers Outlet" to be a farmers market. Located in the neighborhood's northwest corner, Growers Outlet is a year round, enclosed market that sells a range of local, in-season produce along with a product selection that includes dairy, breads, and bulk foods, but no meat or fish. Growers Outlet stocks conventional, organic, packaged, and bulk food items, including many that are locally-grown or processed. Basic items, such as rice, may be available in conventional and organic varieties, and in packages of different sizes as well as in bulk. This range of product selection combined with the range of price points makes the store both attractive and affordable to a broad range of consumers. This may be why the CFSA revealed interest in and use of this store across social and economic boundaries.

³ The Equity Atlas uses the North American Industry Classification System (NAICS) to determine the locations of food retailers and to identify which retailers qualify as full-service grocery stores. Some advocates have concerns about using NAICS data to determine proximity to food retailers. The NAICS coding system reflects self-reported data from store owners, who select from options such as grocery store, convenience store, or liquor store. The self-identification may result in some inconsistencies in classification and diminish the overall reliability of the classifications. NAICS data are often aggregated to combine grocery and convenience stores, making a conclusive determination of a community's access to a full-service grocery store difficult. The Equity Atlas maps only include stores classified as grocery stores in an effort to address this issue.

⁴ The Equity Atlas assigns a proximity score to every neighborhood in the region based on the average proximity of each block in the neighborhood to a supermarket or grocery store. A score of "5" indicates proximity to a store within ¼ mile, while a score of "1" or below indicates proximity to a store greater than 1 mile.

Figure 5

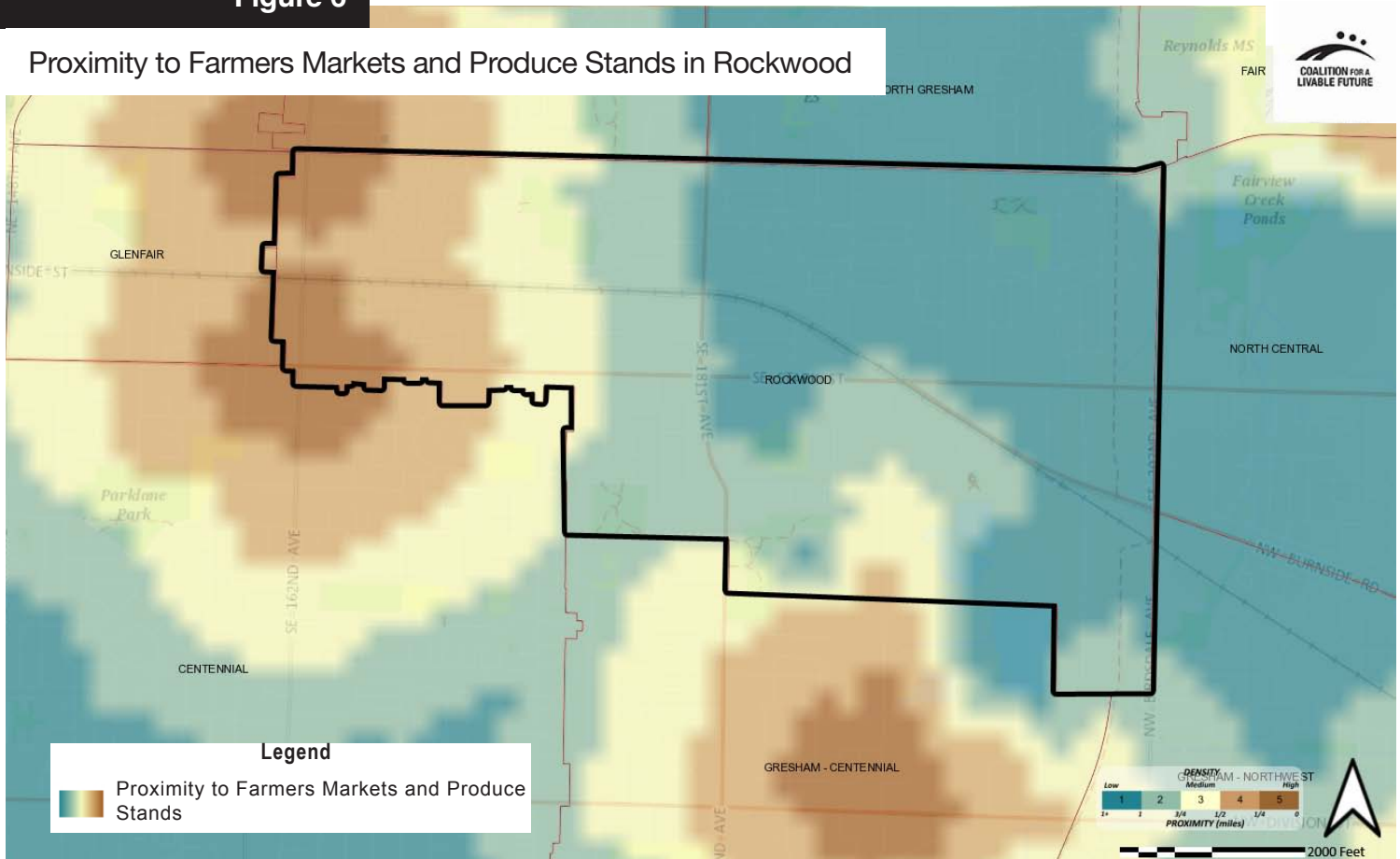
Proximity to Grocery Stores and Supermarkets in Rockwood



Source: Regional Equity Atlas 2.0

Figure 6

Proximity to Farmers Markets and Produce Stands in Rockwood



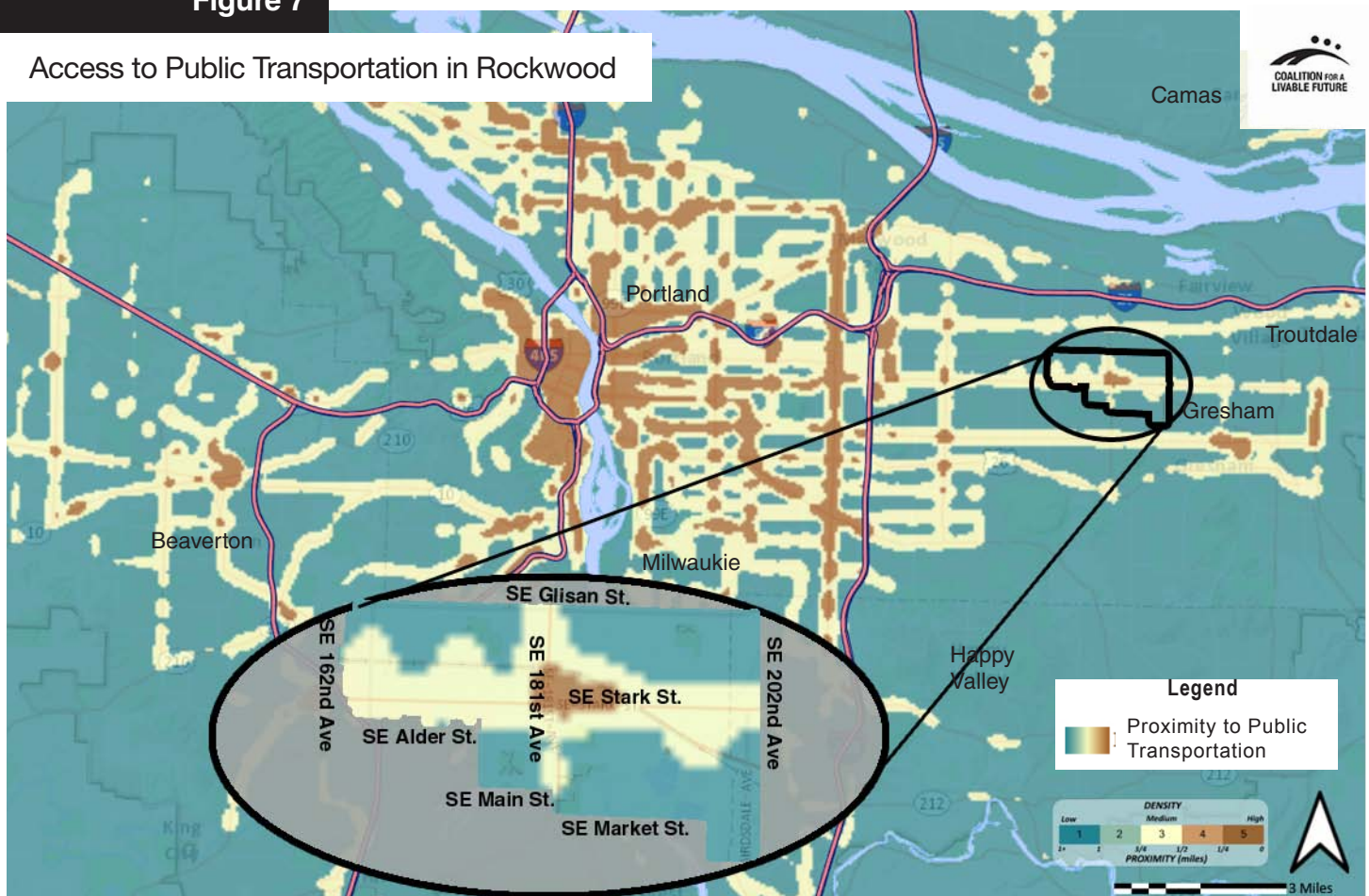
Source: Regional Equity Atlas 2.0

Transportation

The distance local residents must travel to obtain affordable food, and the modes of transportation available for their use, are important determinants of food access. While the majority of respondents (63%) reported driving as their primary mode to obtain groceries, a sizeable portion of neighborhood respondents (28%) rely primarily on public transportation.

Figure 7 illustrates the availability of public transit to Rockwood residents, measured by proximity to transit stops and the frequency of rides through those stops. It indicates that transit access is “high” in the center of the

Rockwood neighborhood, where the MAX line runs and stops. However, transit access is lower in the neighborhood surrounding the MAX line and is virtually non-existent on most of the neighborhood’s north-south corridors. This severely limits options for obtaining food by residents who rely on public transit. Consider for example, the popular Growers Outlet market described above. It is located on NE 162nd St. and NE Glisan St., just outside of the Rockwood neighborhood boundaries. Rockwood residents dependent on public transit effectively have no access to it, because, as shown on figure 7, there are no direct transit lines to it.

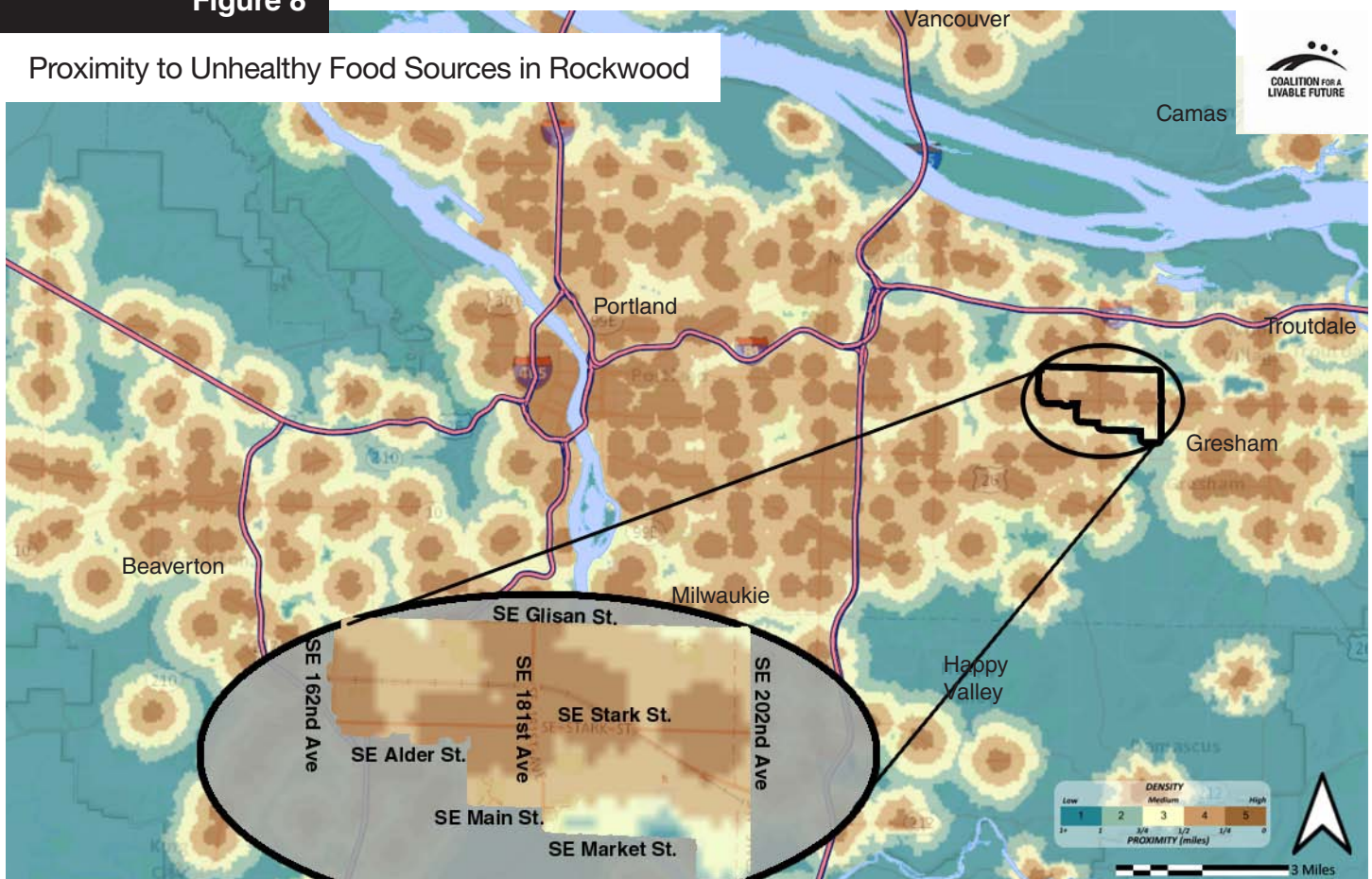
Figure 7**Access to Public Transportation in Rockwood**

Source: Regional Equity Atlas 2.0

Proximity to Unhealthy Foods

National studies have shown that while the availability of healthy food options in a neighborhood is an important determinant of residents' health, the density of unhealthy vs. healthy food options is also a key factor.^x Residents of neighborhoods with a ratio of unhealthy food outlets to healthy food outlets of 4:1 or greater are far more likely to have high rates of obesity and Type 2 diabetes than residents where there is greater balance.^{xi} For this reason, it is also important to note the relative ease of access to unhealthy food options in Rockwood.

The Equity Atlas shows Rockwood as having a high density of unhealthy food options in the neighborhood, scoring 4.27 out of possible score of 5, indicating that most locations in the neighborhood are within ¼ to ½ mile of an unhealthy food source. This finding is consistent with national research findings that neighborhoods with predominantly low-income African American and Latino residents have greater proximity to corner stores and lower proximity to full-service supermarkets than predominantly white neighborhoods.^{xii}

Figure 8**Proximity to Unhealthy Food Sources in Rockwood**

Source: Regional Equity Atlas 2.0

Health Outcomes Related to Access to Healthy Food Options in Rockwood and the Region

Rockwood residents experience high rates of many of the negative health outcomes associated with low access to healthy food options, including obesity, Type 2 diabetes, and cardiovascular disease, as illustrated by the following maps and tables.

Figure 9 shows rates of diabetes by neighborhood with the darkest purple areas experiencing the highest rates of diabetes, the light pink areas experiencing the lowest range of rates of diabetes, and the lavender areas experiencing low-mid range of rates. The rate of diabetes in Rockwood is 9.8%, which is among the highest rates in the region. Other east county neighborhoods have similarly high rates.

Figure 10 shows rates of body mass index (BMI), a common measure for obesity that is calculated using a person's weight and height.^{xiii} A score of 25 or above is considered overweight.^{xiv} Average BMIs in Rockwood's census tracts range from 24.61-26.1, indicating that significant portions of Rockwood residents are overweight or obese.

Figure 11 shows rates of cardiovascular disease by neighborhood. Rockwood's cardiovascular disease rate is 1.98%. In contrast, most of the neighborhoods on Portland's inner east and west sides as well as many western and southern suburbs have cardiovascular disease rates in the 0.57-1.5% range. However, Rockwood remains slightly below the county average of 2%.^{xv}

TABLE 3

Health Outcomes: Rockwood and Multnomah Co.

	Rockwood	Multnomah County
BMI as a Measurement of Obesity	Women BMI: 24.96 – 26.57 Men BMI: 25.82 – 26.63	Women BMI: 23.48 Men BMI: 25.53
Type 2 Diabetes	9.8%	7.2%
Cardiovascular Disease	1.98%	2%

Source: Regional Equity Atlas 2.0

Summary of Findings from the Rockwood Community Food Security Assessment

Analysis of the data using the Regional Equity Atlas, community surveys, and focus groups revealed that the environment in Rockwood today does not support residents' health. Many Rockwood residents have difficulty accessing healthy foods due to (1) the limited availability of affordable healthy food options within the neighborhood; (2) the broad availability of unhealthy food options; and (3) the limits that the public transit system places on transit-dependent residents who want to access sources of healthy food options outside of the neighborhood. Consistent with national research showing the connection between lack of access to healthy food and disease rates, Rockwood residents experience higher rates of obesity and obesity-related chronic disease such as diabetes and cardiovascular disease.

Upstream Approaches to Improving Access to Healthy Food Options

There is broad consensus among both public health professionals and community advocates that stemming the epidemic of obesity and related chronic diseases, as well as reducing health disparities, will require upstream strategies. Upstream approaches target community and policy level factors to make healthy food more accessible, thereby supporting individuals to make healthy choices and reducing the need for downstream medical interventions.

A complete roster of upstream strategies to improve health outcomes in Rockwood would include approaches that focused on increasing household income, improving access to high quality education, job training, and career development, increasing options for physical activity, and addressing the shortage of high quality affordable housing, as well as healthy food access strategies. The more comprehensive the approach, the more likely it is that health outcomes in Rockwood will improve significantly.

Figure 9

Rate of Type II Diabetes

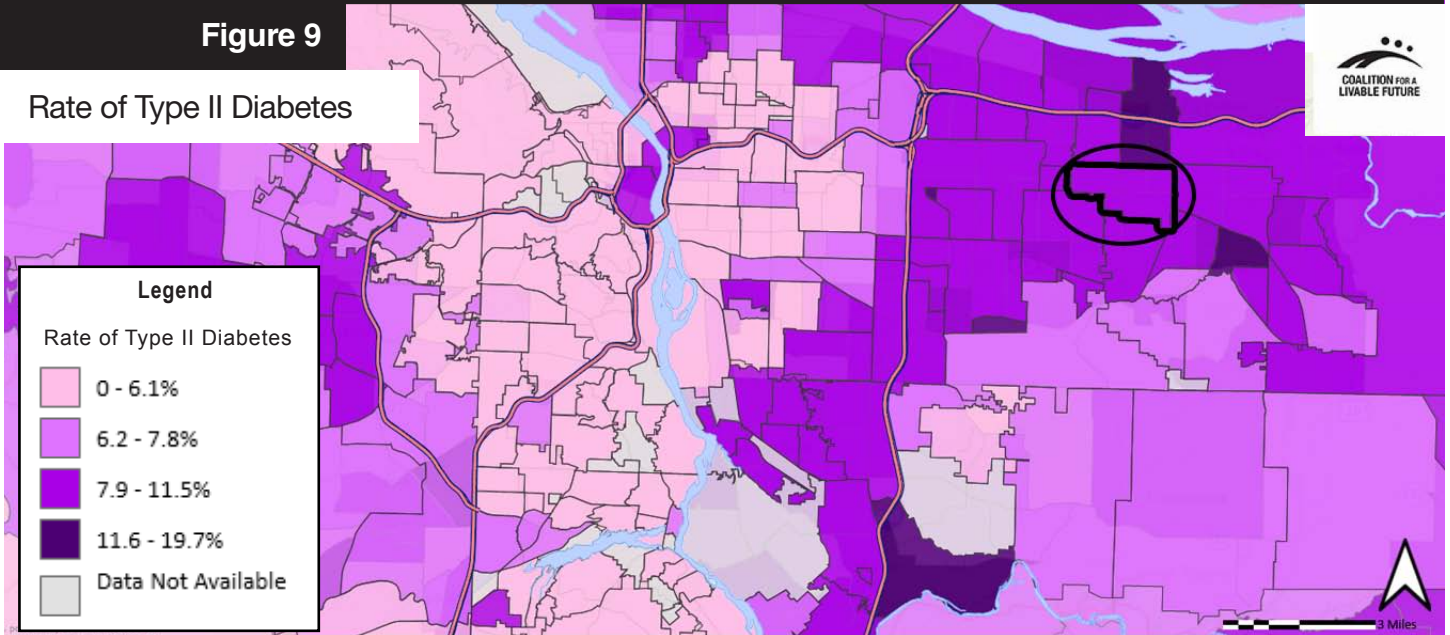


Figure 10

Rate of Cardiovascular Disease

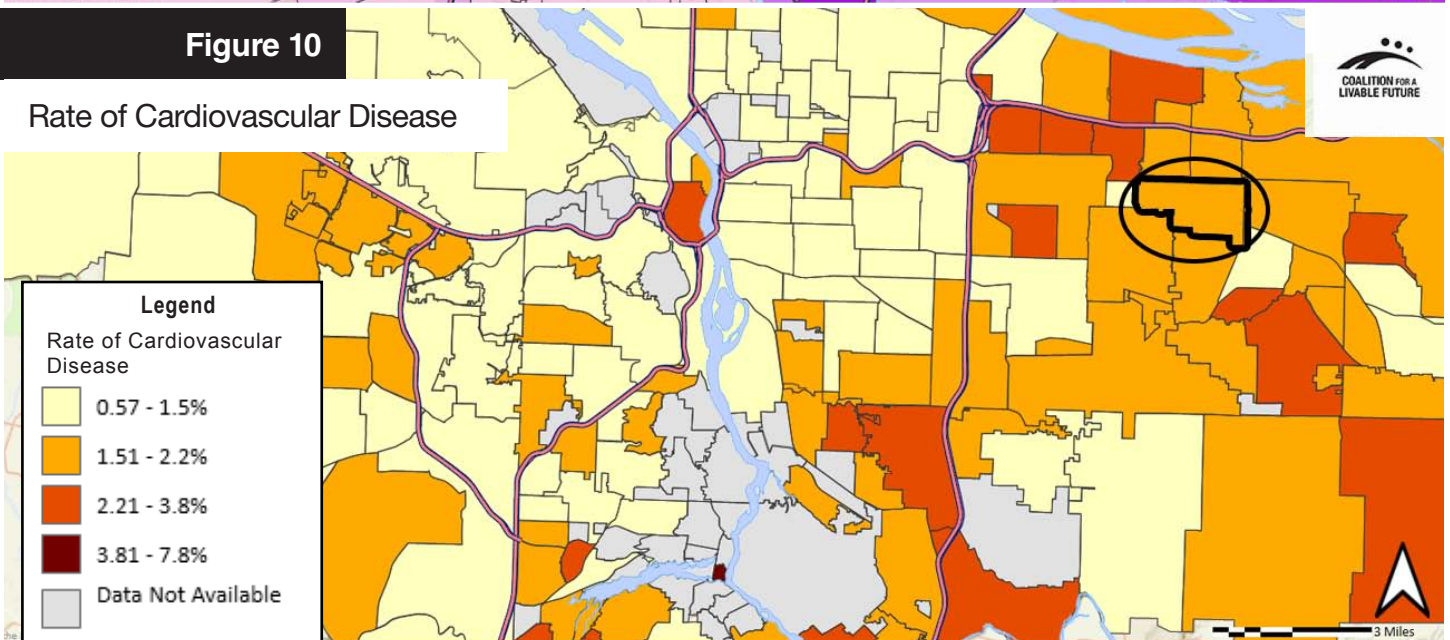
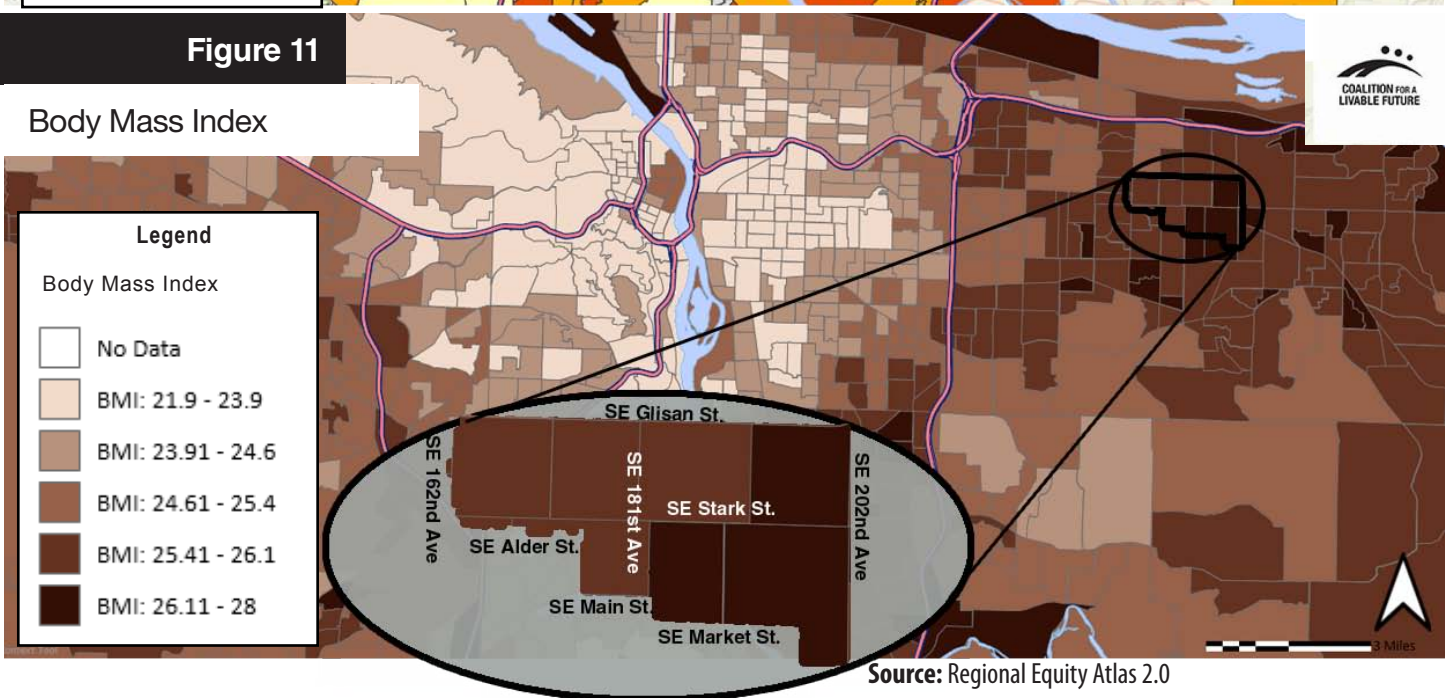


Figure 11

Body Mass Index



Source: Regional Equity Atlas 2.0

While comprehensive strategies are the most effective approach to improving health outcomes, studies have shown that strategies that focus specifically on making healthy food more accessible and affordable can still have a valuable impact on residents' health. Many communities are creating partnerships and exploring new service delivery models with local government agencies and community-based organizations. For example, nationally and regionally, we have seen corner stores and convenience stores dedicate space to vending fresh fruits and vegetables, with the purchase of refrigeration equipment, display cases and signage subsidized by local government. We have also seen for profit and non-profit ventures develop and use mobile grocery stores to bring produce and staple goods to low-access areas.

Farmers Market: A Community Driven Approach

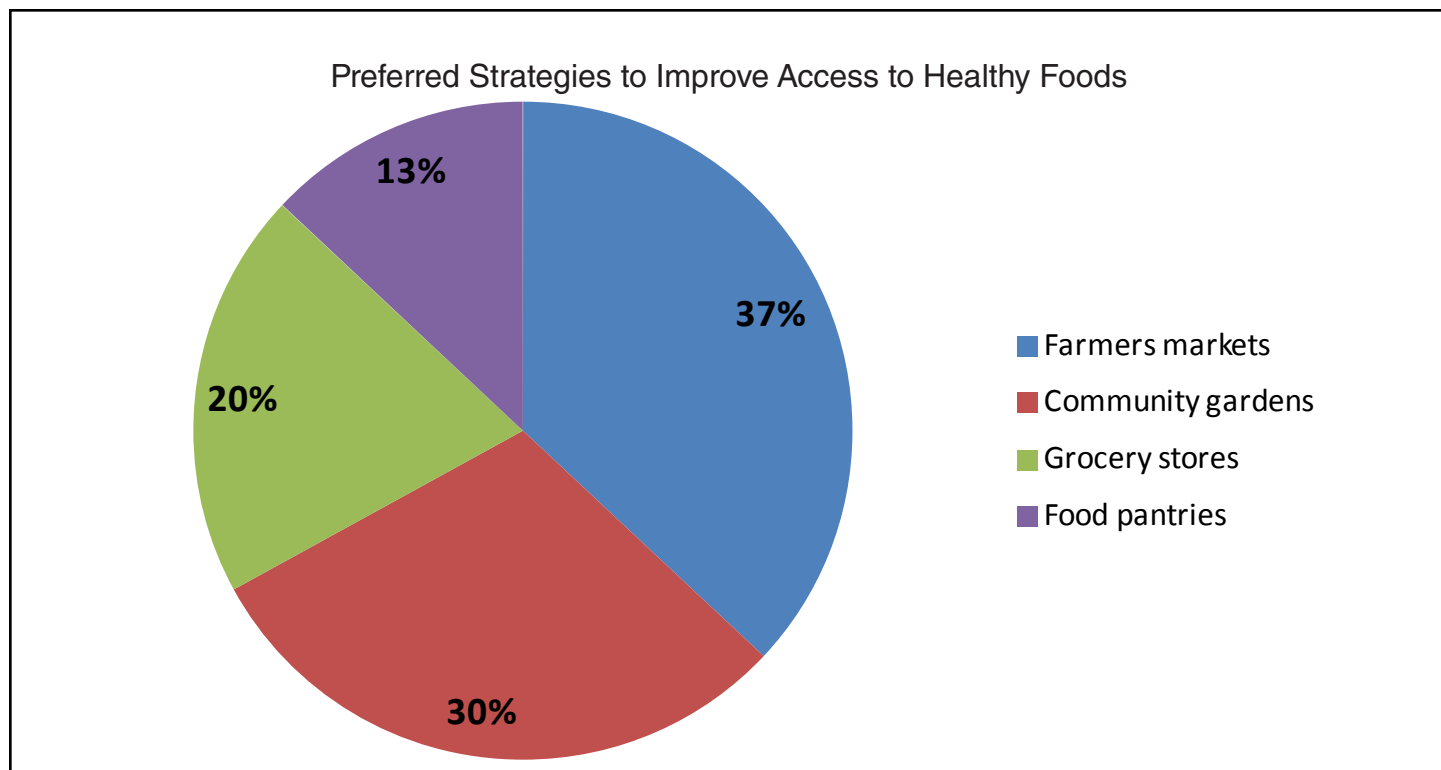
Community-driven strategies are widely believed by public health practitioners to be the most successful approach to making healthy food more accessible and affordable. The vast majority of CFSA survey respondents (97%, n=228) expressed interest in community-based interventions to increase healthy food access in Rockwood. Of those interested in increased access, the most popular intervention was

the creation of a farmers markets, with 37% of respondents prioritizing farmers markets as their preferred option compared with 30% for grocery stores, 20% for community gardens, and 13% for food pantries (see chart 1, n=228).

The remainder of this paper will examine how a farmers market could contribute to improved community health and access to healthy food options in Rockwood. The Rockwood Food Co-op Group, formerly known as the Rockwood Food Justice Group, has been and will continue to investigate opportunities related to the remaining strategies to increase healthy food access in Rockwood.

Farmers Markets and Low Income Communities

A farmers market is an event where farmers, producers, and vendors gather to sell fruits, vegetables, flowers, herbs, dairy products, baked goods, prepared foods and other hand-crafted, artisan products. Farmers markets are scheduled to recur at a specific location, and often serve as a community centerpiece, attracting visitors and community members alike while promoting social interaction and the generation of community connections.





Plaza Del Sol - Rockwood

Source: Oregonian

Farmers markets also have the potential to increase access to healthy, fresh foods when established in underserved areas. Many markets take advantage of technological advances that allow processing of the USDA's Supplemental Nutrition Assistance Program cards (also known as SNAP or EBT, and popularly referred to as Oregon Trail or food stamps). This increases both shopping and product selection for families experiencing economic hardship, reducing their reliance on nearby convenience or grocery stores. This benefit would be relevant to Rockwood residents as 74% of survey respondents reported having used SNAP in the past and 51% reported using WIC (Special Supplemental Nutritional Program for Women, Infants, and Children).

Farmers markets can also help customers stretch their limited food assistance dollars. Sixty-six percent of CFSA survey respondents identified having difficulties in stretching their food assistance dollars to the end of month, and 36% reported not knowing where to turn when their food assistance funds run dry. Increasingly, farmers markets are taking steps to narrow this gap through partnerships with area organizations or businesses to serve as financial sponsors that provide SNAP or WIC matching dollar programs to recipients.

Providing incentives for low-income shoppers to frequent farmers markets can have the additional benefits of engaging hard to reach populations in community activities and encouraging fresh fruit

and vegetable consumption among low-income residents. For example, participants in a Spanish-speaking focus group conducted as part of the CFSA noted that while they may prefer to cook from scratch, they have a difficult time accessing fresh foods. As a result, most of the vegetables they consume are canned or processed. Canned and processed vegetables typically have much more salt and fewer nutrients than fresh vegetables.

The City's Role in Farmers Market Development

The City of Gresham passed a Healthy Eating Active Living (HEAL) resolution in 2012 as a result of a citywide community engagement process to understand community needs.^{xvi} Project partners have reported that the Gresham City Council has prioritized food access on its 2014 work agenda. The City of Gresham Redevelopment Office has expressed interest in hosting a farmers market at Plaza del Sol at 187th and Stark. This site offers good access to the MAX, the region's light rail system. EMO and the Rockwood Food Co-op group are in the process of securing this site for a farm stand or farmers market; other areas are also under consideration.

Cities can play an important role in supporting the creation of farmers markets by:

- Defining farmers markets in the comprehensive plan and zoning code and making them an allowed use;
- Passing ordinances to allow farmers markets in previously off-limits places, such as schools and parks;
- Connecting farmers market managers and board members with business leaders in the community who could finance and promote matching programs;
- Assisting with locating a farmers market site that has adequate car and bike parking, access to public transit, and safe walking; has attractive adjacent property uses, such as parks and retail; and that can provide a venue for cooking demonstrations, local music and other market and community festivities.

Conclusion

Through the use and application of the Regional Equity Atlas 2.0 in conjunction with the Community Food Security Assessment, we are able to better understand and communicate the barriers to accessing healthy food options experienced by Rockwood community members. The Regional Equity Atlas 2.0 maps provided insights into the neighborhood's demographics and made physical distance and public transit access challenges clear. The CFSA provided insights into the lived experience of Rockwood residents.

Through this combined approach, we came to understand that physical proximity is but one of the dynamics affecting healthy food access in Rockwood. Although some neighborhood residents live close to grocery stores, they shop at stores outside the neighborhood that are more affordable. Transportation is also a key factor in healthy food access. The limited access to high-frequency transit lines in the neighborhood adds to the challenges residents experience in trying to access healthy food.

Creating a farmers market in Rockwood would significantly expand residents' access to healthy food options. The market should be planned carefully to ensure that it serves the needs of the community and surrounding area. While the research outlined in this paper provides a good starting point, more detailed market research will be needed. Because of the tremendous racial and ethnic diversity of Rockwood residents, we also encourage research to better understand Rockwood residents' cultural food needs, buying habits, interest in farmers markets, preferred price points, and desired product selection.

Finally, while a farmers market offers an immediate and promising strategy to improve food access for Rockwood residents, additional work is needed to better understand and address the social, economic, and structural barriers that affect community health in Rockwood.

Project update:

In early 2014, EMO received a two-year grant from the Northwest Health Foundation Kaiser Community Fund to support the Rockwood Food Opportunity Project. The goals of this project include addressing some of the issues identified in the CFSA while continuing to build community capacity through the training and deployment of community health workers. One strategy of the project is increasing the availability of fresh produce. This strategy is informed by and will be implemented in collaboration with Multnomah County's Healthy Retail Initiative.

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