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Periodic Atlas of the Metroscape: The Geography of Eating Well - Food Access in the Metroscape

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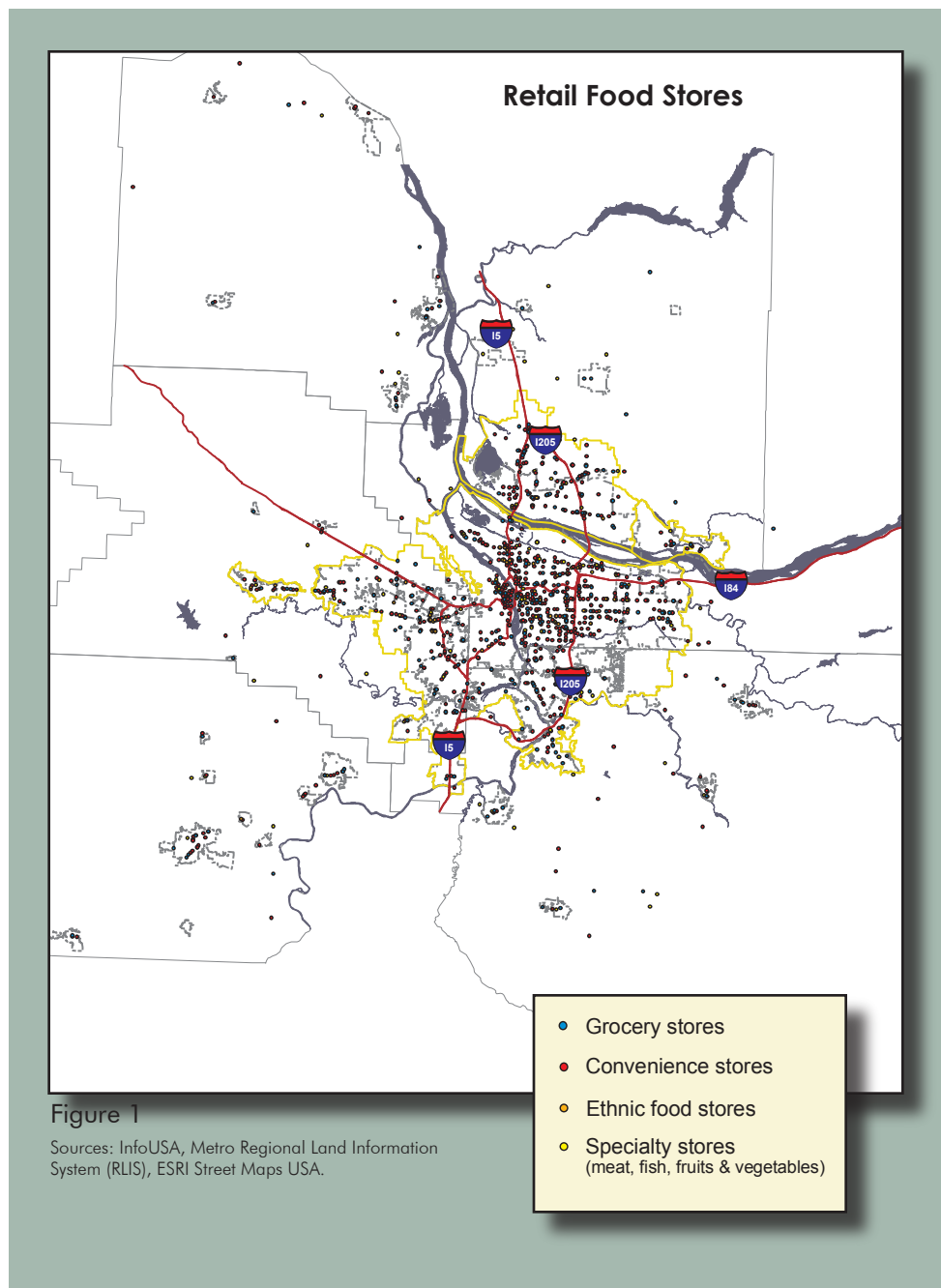
The Geography of Eating Well

Food Access in the Metroscope

by Joy Margheim

How do we get food in the metroscope? In this food-friendly place, people have a relatively broad range of options. For eating out, sources range from high-end restaurants to neighborhood pubs, food carts, or fast food. Given the region's rich agricultural soils and mild climate, many choose to grow a portion of their own food in backyard or community gardens, while others buy produce directly from a local grower at farmstands and farmers markets. Most of us, though, buy our food at a store and eat it at home. On average, according to the Bureau of Labor Statistics' Current Expenditure Survey, more than half of U.S. households' average annual expenditure on food goes to food eaten at home. A weekly trip to the grocery store and interim stops to pick up forgotten items shape our diet. Although we may cross town to shop for food at stores where prices are lower or where we can find specialty items, most of us generally shop at the store closest to home. As a result, neighborhood grocery and convenience stores reflect local demand and historic patterns of development, and we find that more stores exist where more people live.

This issue of the Atlas looks at food stores in the urban metroscope, their locations, their variety, and their neighborhood settings, all to raise some questions about food access in this region (Figure 2).



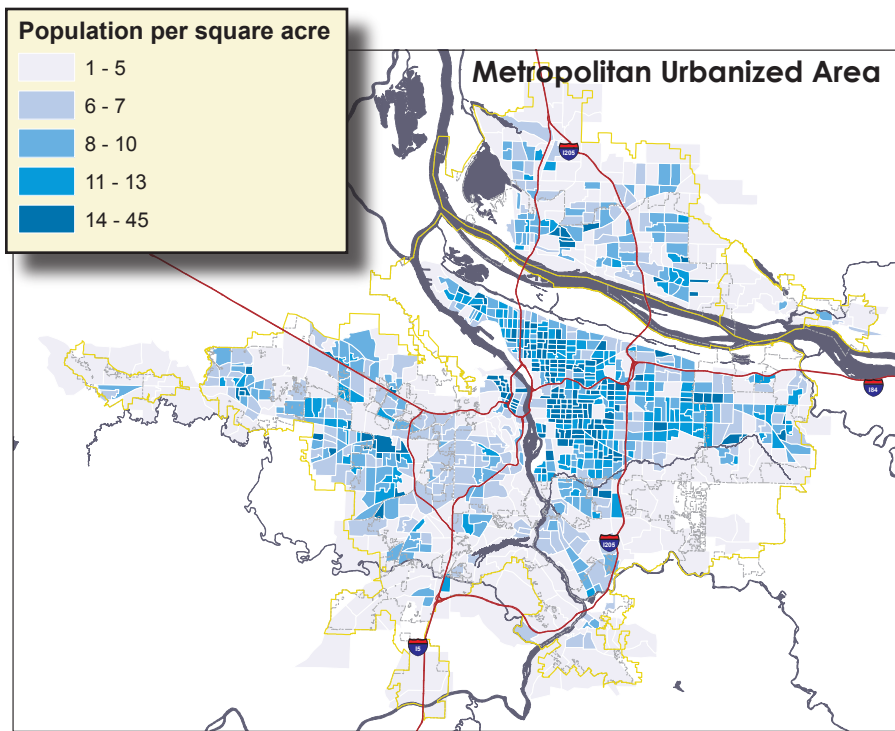


Figure 2

Source: 2000 US Census

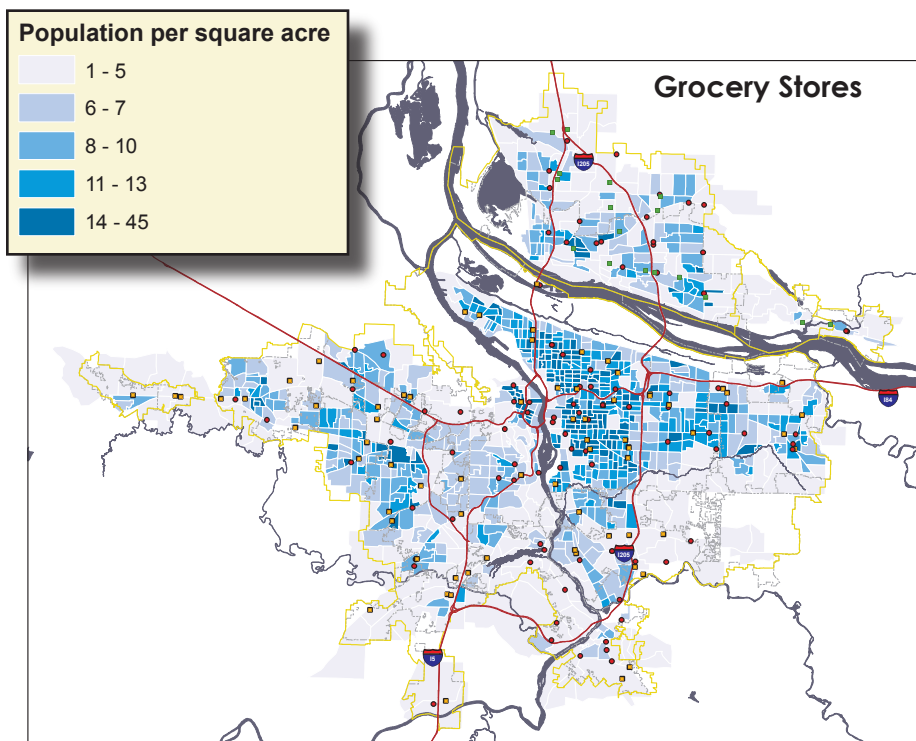


Figure 3

Sources: 2000 U.S. Census, SF3, InfoUSA, Metro Regional Land Information System (RLIS), ESRI Street Maps USA

Over the past decade and a half, planners, public health researchers, and community activists have devoted attention to locations and types of retail food stores in urban areas. Studies on poverty, obesity, diabetes, and hunger or food insecurity raise a central question: Does the location and type of store affect consumers' ability to find healthy, affordable food? In the mid-1990s, British researchers coined the term food desert to describe neighborhoods with a combination of concentrated poverty, limited public transportation, and few or no retail food stores. Food deserts leave residents

with poor food choices, where food is relatively more expensive, with fewer nutritious options, or is simply unavailable. Researchers and community groups have looked for food deserts and explored patterns of food access in cities such as Detroit, Chicago, Austin, Los Angeles, and New York. In some cities, a farmers market, grocery store, or new public transit arrangement has helped to revitalize a community and give neighborhood residents better access to nutritious food. The term "food desert" characterizes aspects of the problems of hunger and nutrition in terms of patterns of urban development and offers solutions in terms of addressing the mix of food retail and transportation in a neighborhood. The idea is that citizens may improve their health and quality of life by paying attention to the type of food available in a neighborhood. People may choose to eat poorly no matter how many healthy options are available, but they are less likely to eat well if it is difficult to find healthy, affordable food. Such an approach focuses on factors such as concentration of people, public transit availability, and the type of food retail.

Food in the City

Most of us recognize that the price and quality of food varies greatly from neighborhood to neighborhood. A resident of the Pearl District has very different grocery options from someone in Lents, downtown Vancouver, or Hillsboro. Visiting stores at the neighborhood level reveals a lot more about why and how these differences occur. While gathering information on variation in price and quality from place to place is difficult, considering distributions of different types of food stores, particularly grocery and convenience stores, is helpful. Drawing on research conducted in other cities, we can use type of store as an indicator of the relative price and quality of food in a neighborhood. This approach produces generalizations, but generalizations suggest patterns.

Grocery stores and convenience stores differ in their offerings of food, its quality, and its price. A grocery store will have a full range of food items, including meat and produce as well as canned goods. Shoppers expect to fill all of their household food needs for several days with a single trip to the grocery. Moreover, households on a budget are likely to get the most nutritional bang for their buck at a grocery store, which

generally has the shelf space to offer more economical choices, such as larger package sizes or bulk options.

Convenience stores boast limited shelf space and different access to wholesalers, and thus tend to offer more highly processed, snack-type foods. Because they typically offer smaller package sizes, smaller stores such as convenience stores are relatively expensive (hence the assumption that a consumer is paying for convenience, not necessarily quality). While they play an important role in urban life and may stock widely different items depending on their ownership and clientele, convenience stores usually are not a reliable source for healthy, economical meals.

The North American Industrial Classification Standard (NAICS) number distinguishes between grocery stores and convenience stores. In the analysis here, in addition to the NAICS classification, any store of 2,500 square feet or smaller is classified as a convenience store. Such assumptions limit the level of detail of our exploration, because understanding household access to food would require closer analysis of the price and quality of food available within individual stores in a particular neighborhood. Although we generally know what to expect inside a Safeway or Plaid Pantry, the actual offerings may differ greatly from neighborhood to neighborhood. Non-chain stores are even more difficult to evaluate based on name and floor space alone. In addition, this type of analysis does not address how household members actually shop for food. If food options are limited in their neighborhood, they might shop at a store close to work or along their commuting route. They might catch a ride with a friend to shop at a store across town. Or they might find other ways to carefully pick and choose the best options in terms of quality and price from available stores in order to provide their household healthy and affordable meals. Regardless of these alternatives, generalizing store type and location can help us think about how food fits with other urban patterns.

The issue of grocery store access is about proximity (Figure 3). Households within walking distance of a grocery store have good access to food even though they might shop elsewhere. Those who have to travel farther, particularly people who are on a limited income or are dependent on public transit, might face more challenges for healthy eating.

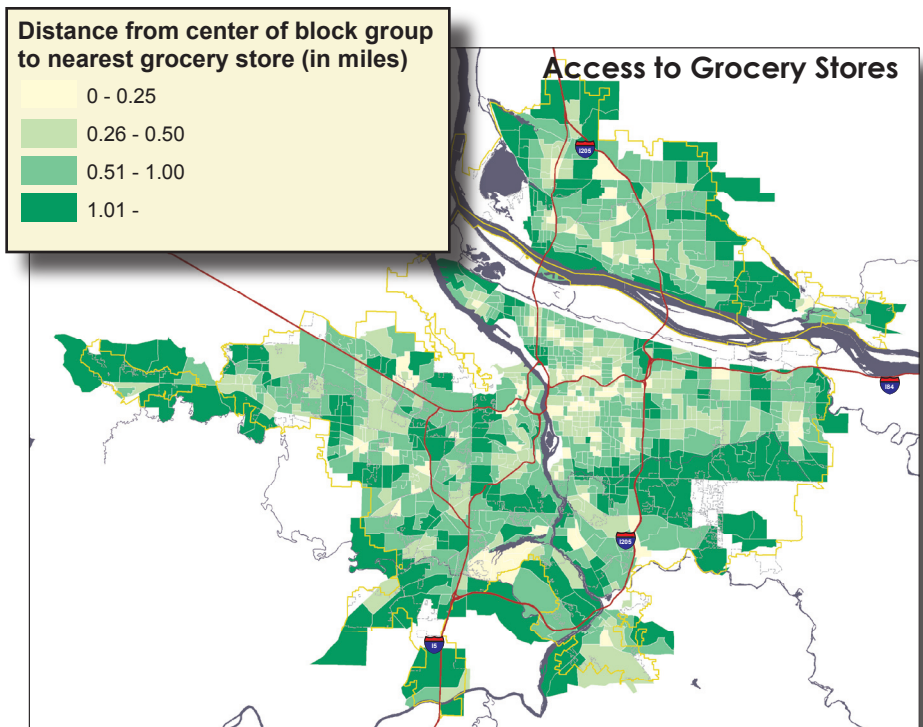


Figure 4

Sources: 2000 U.S. Census, SF3, InfoUSA, Metro Regional Land Information System (RLIS), ESRI Street Maps USA

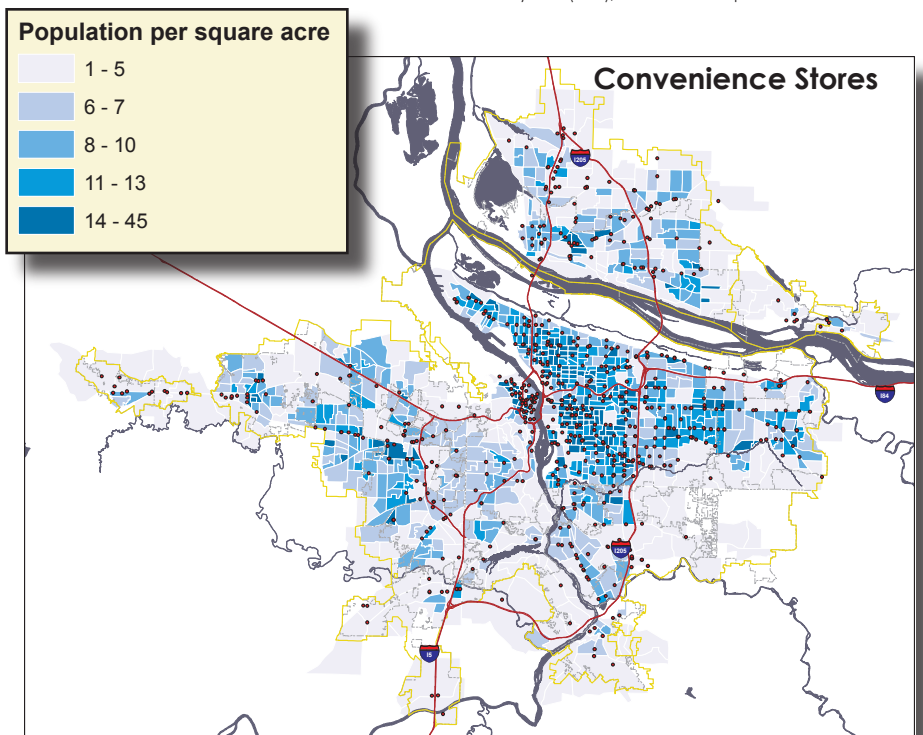


Figure 5

Sources: 2000 U.S. Census, SF3, InfoUSA, Metro Regional Land Information System (RLIS), ESRI Street Maps USA

Figure 4 shows patterns of access to grocery stores by measuring the distance from each census block group to the nearest grocery store. Light-colored areas are within a quarter mile of the nearest grocery, while the darkest areas are more than a mile away. In many ways, this pattern shows the logic of urban development. Block groups farthest from a grocery store tend to be larger areas on the urban fringe, while those nearest a store tend to be in the central city.

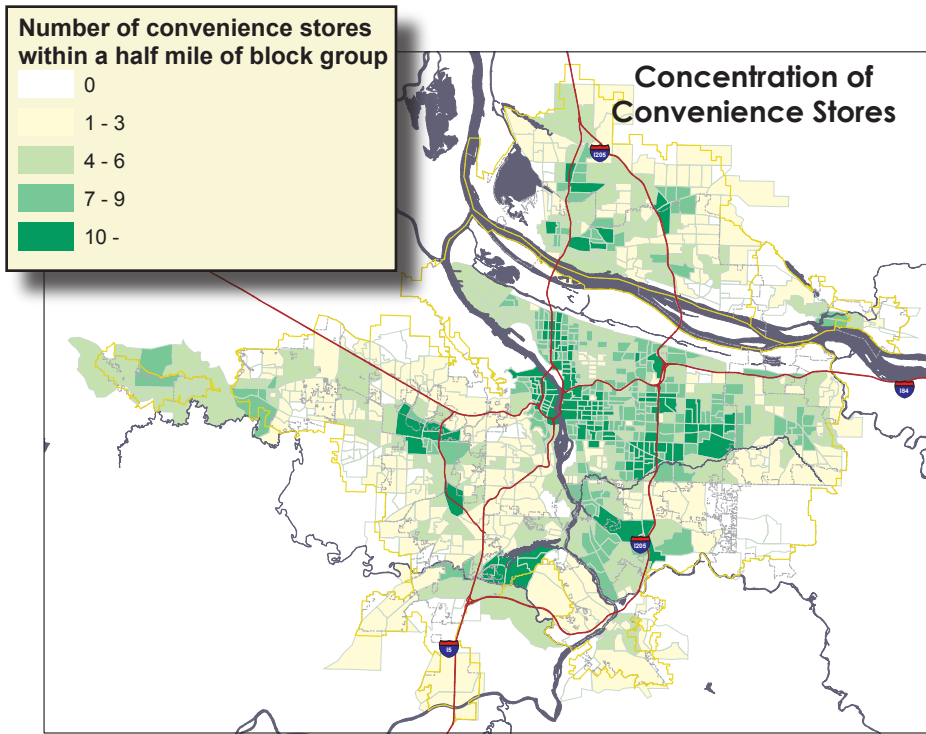


Figure 6

Sources: 2000 U.S. Census, SF3, InfoUSA, Metro Regional Land Information System (RLIS), ESRI Street Maps USA

The concern regarding convenience stores is relative concentration (Figure 5). An area with many convenience stores may offer few incentives to healthy eating, particularly if there are no grocery stores nearby. Figure 6 indicates the number of convenience stores within a half-mile radius of each block group. Light-colored areas have no convenience stores within a half-mile radius, while the darkest areas have 10 or more. Convenience stores tend to concentrate in the central city core, where population density is higher. In Oregon, in particular, many areas around downtown Portland and on the east side of the Willamette River show concentrations of convenience stores.

The measure of grocery store access will be affected by the area of the block group, because it calculates distance from the center of each block group. A large block group may have a grocery store next to one boundary, yet the store might still be more than a mile from the center of the area. Whether this area truly has poor access to a grocery store depends on where people live within the block group. Similarly, a relatively large block group with a half-mile buffer will encompass a larger area than a small block group with the same buffer, possibly including many convenience stores. Nevertheless, using store type and location to identify areas where healthy food might be relatively easy or difficult to obtain will allow us to look at how food access relates to other urban patterns.

Other Urban Patterns

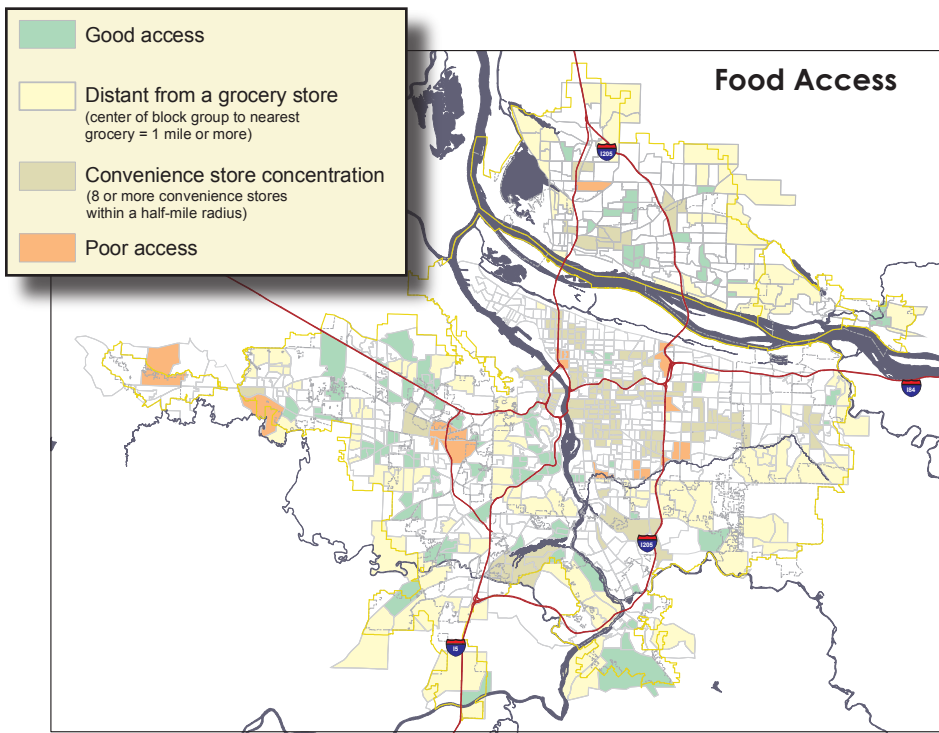


Figure 7

Sources: 2000 U.S. Census, SF3, InfoUSA, Metro Regional Land Information System (RLIS), ESRI Street Maps USA

Figure 7 uses rough criteria for proximity to a grocery store and concentration of convenience stores. This measure tells us a little about the patterns of food access in the metroscape. The green areas have good food retail access—three or fewer convenience stores within a half mile of the edge of the block group and a grocery store within a half mile of the center of the block group. The orange areas have poor access—eight or more convenience stores within a half mile of the block group and no grocery store within a mile of the center of the block group. Gray areas have poor access by one measure (groceries or convenience stores) but good access by the other. In both Oregon and Washington, the areas with good access outnumber those with poor access. In Oregon, good access is more likely on the west side and poor access on the east, particularly in outer southeast Portland.

Food access is related to population density: stores locate where there are enough people to make a retail operation profitable. Figure 8 suggests that several of the block groups in the metroscape appear to have relatively poor access to food retailers because they are lightly populated, particularly along the urban fringe. In Beaverton, an area of high population density is bordered by a cluster of areas with potentially poor food access and low density to the north and east and by areas with good access to the south and west. Along the I-205 corridor in east Portland, in contrast, several areas with poor food access are lightly populated but surrounded by fairly heavy population concentrations.

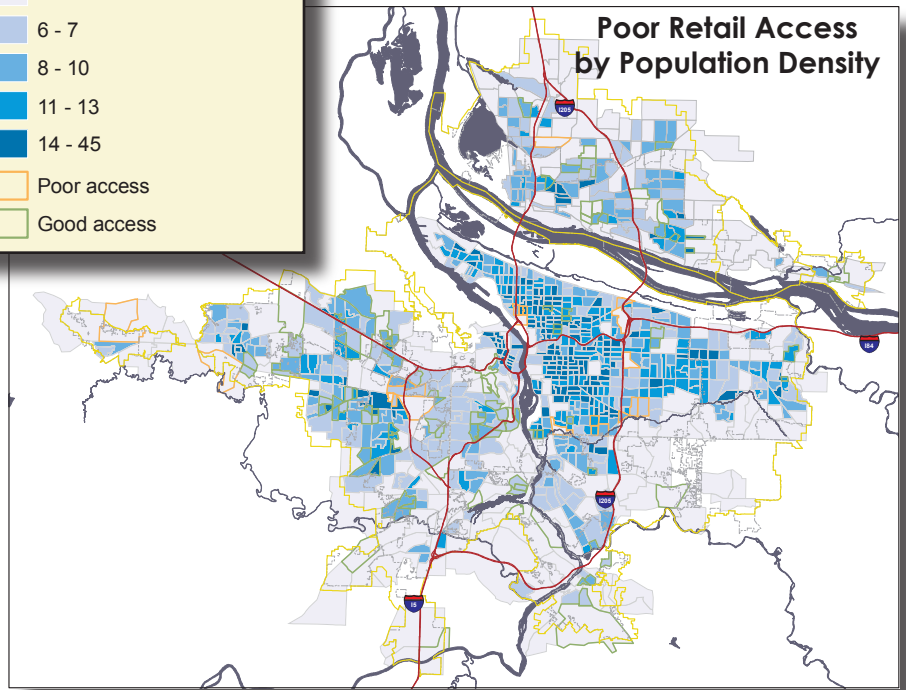
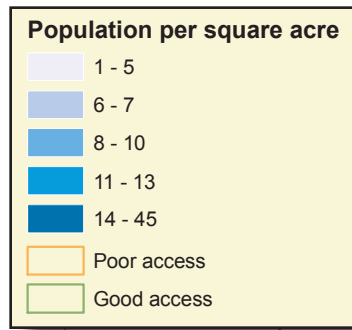


Figure 8

Sources: 2000 U.S. Census, SF3, InfoUSA, Metro Regional Land Information System (RLIS), ESRI Street Maps USA

Percentage of households with annual income below 18 percent of federal poverty level

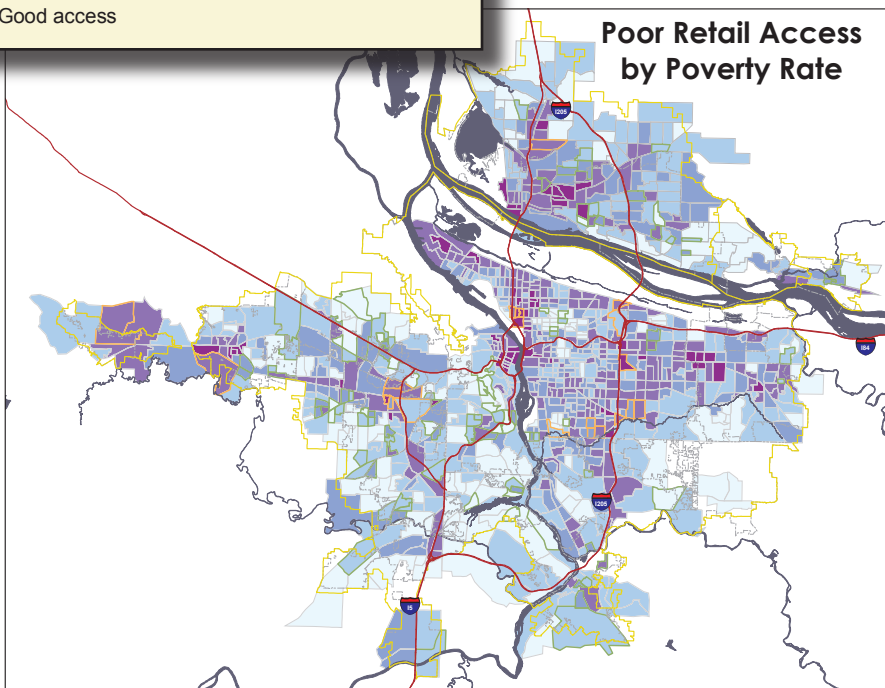
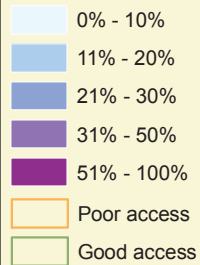


Figure 9

Sources: 2000 U.S. Census, SF3, InfoUSA, Metro Regional Land Information System (RLIS), ESRI Street Maps USA

Access also relates to income distribution. Perceptions of the market may cause more convenience stores and fewer grocery stores to locate in low-income neighborhoods, while neighborhood preferences may block both from locating in high-income neighborhoods. Figure 9 shows how food access relates to the distribution of poverty in the metroscape, measured as the percentage of households in each block group with an annual income below 185 percent of the federal poverty level, which is the cutoff for eligibility for the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and for reduced-price school meals. While areas with high access span most of the range of poverty distribution, areas with limited access do appear to be associated with higher concentrations of poverty.

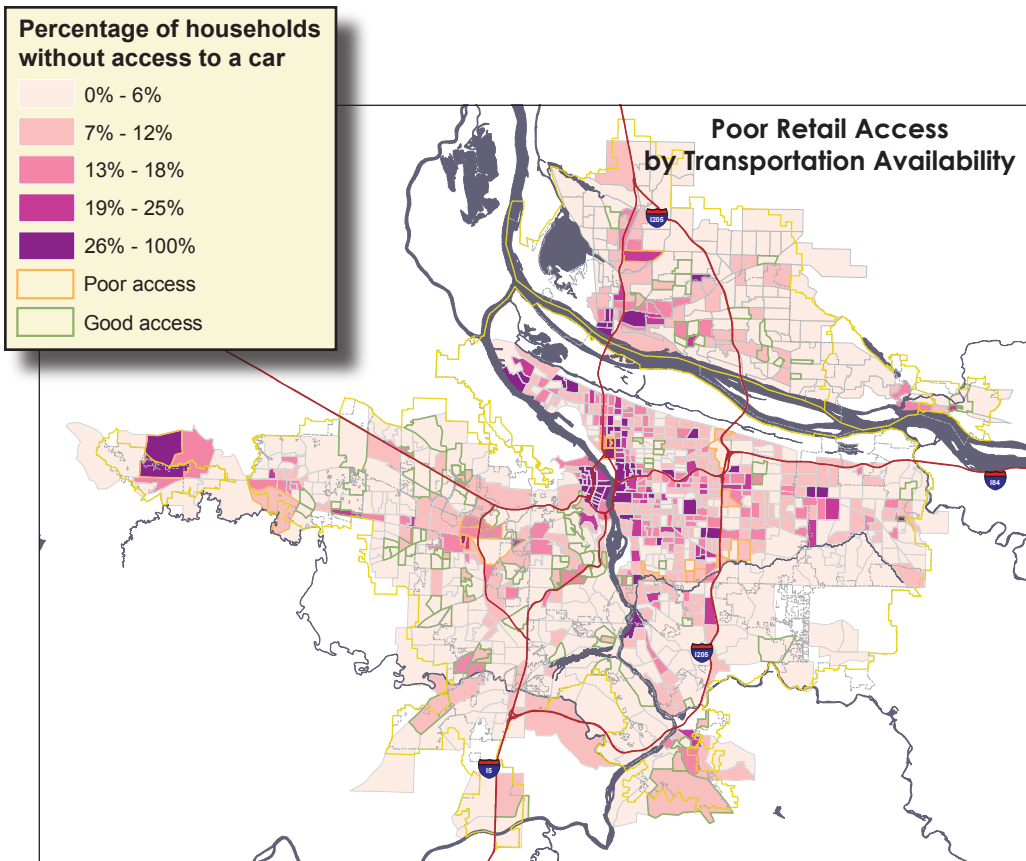


Figure 10

Sources: 2000 U.S. Census, SF3, InfoUSA, Metro Regional Land Information System (RLIS), ESRI Street Maps USA

The role of transportation also might access household access to food. For households with cars, availability of food in the immediate neighborhood may be a small matter. For those without cars, particularly low-income households, having good food within walking distance can make all the difference. Figure 10 shows how areas with potentially poor food access overlap with household access to an automobile. In most of the areas identified as having poor access by both convenience store and grocery store measures, the percentage of households without access to a car was higher than the mean for the region. However, the region's relatively good public transit system may help moderate problems with food access. Even though taking a bus or the Max train to a grocery store might be time-consuming and difficult, widespread public transit broadens some people's options. Compact development and widespread public transit distinguish the metroscape from other regions of the country and make a difference for access to food as well.



Figure 11

Sources: InfoUSA, Metro Regional Land Information System (RLIS), ESRI Street Maps USA

Other Urban Food Resources

Groceries and convenience stores are not always the only neighborhood food options, of course. Ethnic food stores or stores that specialize in meats, seafood, or fruits and vegetables might fill gaps in household food needs. Figure 11 shows the distribution of such stores in the metroscape. A cluster of ethnic food stores in central Beaverton improves the options in an area with otherwise limited food access, potentially providing more nutritious or culturally acceptable foods to households in those areas. The east side of the metroscape houses many ethnic and specialty retailers, although those stores generally are not near areas with particularly good or limited access.

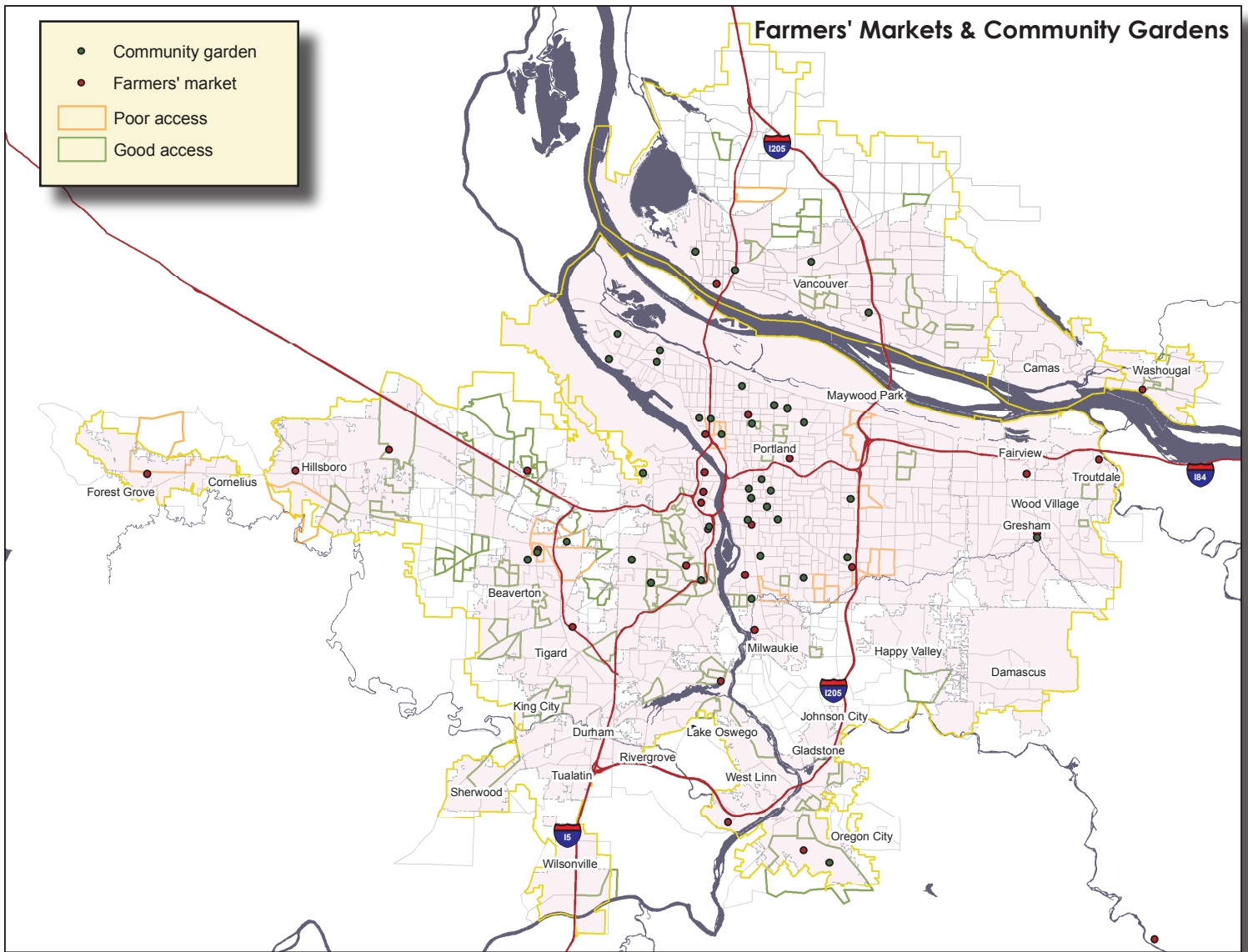


Figure 12

Sources: InfoUSA, Metro Regional Land Information System (RLIS), ESRI Street Maps USA

Fresh produce is often a critical need in areas with poor food access. Fruits and vegetables are important parts of a balanced diet, but stocking produce almost requires a weekly trip to the store. For some, a nearby farmers market or community garden might supply produce that is not available in nearby stores. Figure 12 shows the locations of farmers markets and community gardens in the metroscape. Because locating addresses for community gardens is difficult, this map likely overlooks a few. Even so, the map suggests that a number of areas lacking farmers markets could benefit from them, particularly in Clark County and in the outer east side of the Oregon metro area.

The Portland-Vancouver region consistently touts its distinctiveness. Regional attention to compact development and public transit continues to attract and retain residents. But how do these elements affect other patterns of daily life? When we look at food, are we any different than other metropolitan areas?

Joy Margheim is a Ph.D. student in Urban Studies at the College of Urban and Public Affairs, Portland State University. The author thanks David Banis for his assistance.