April 2023

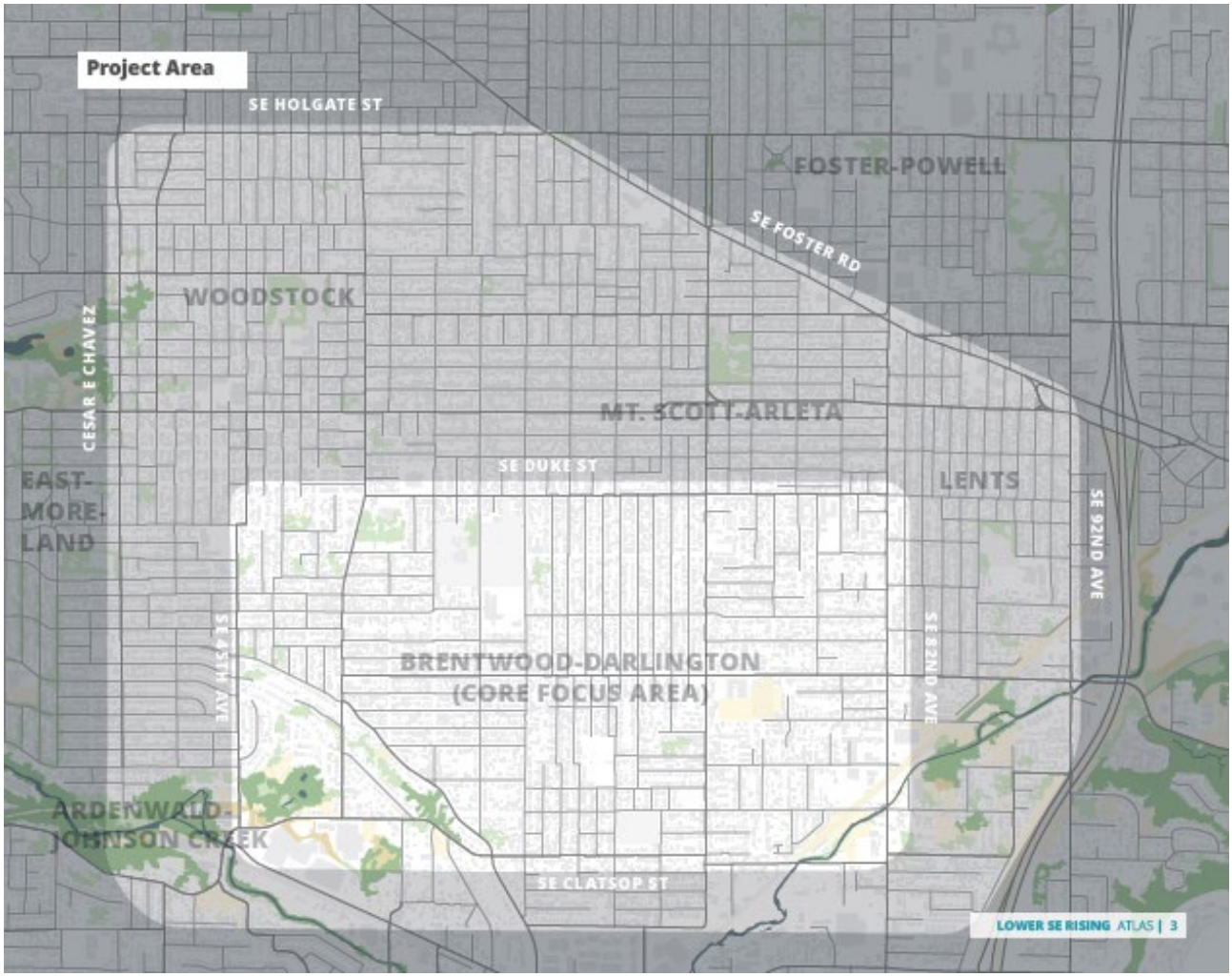
THE BUREAU OF PLANNING & SUSTAINABILITY

Lower Southeast Rising Health Assessment

Approach + Purpose

Land use and transportation policies influence health outcomes and health behaviors. To improve health outcomes and reduce health disparities it is critical to craft policy with community health needs and priorities in mind (Lowe et al, 2022). This memo aims to provide background on Lower Southeast Rising area health outcomes, health behaviors, and health determinants, make connections to themes already identified in the Existing Conditions Atlas and planning process, and serve as a guide for review of future project decisions. Data is pulled at three primary geographies, the core focus area, the project area, and the City of Portland overall.

Figure 1. Project and core focus area. (BPS, Existing Conditions Atlas, 2021).



Health Outcomes

Health outcomes are symptoms or end points of disease. Neighborhood design influences physical activity outcomes and associated healthy weight outcomes (Sallis et al, 2020). The core focus area follows similar trends as the city overall in that obesity and high cholesterol are the most prevalent outcomes, followed by high blood pressure and depression. **Obesity and depression rates are expected[1] to be slightly higher (1.3% and 0.8% respectively) in the core focus area than in the city overall.**

Table 1. Health Outcomes for Core Focus Area, Project Area, and City of Portland. CDC Places Data, 2020.

	Core Focus Area[2]	Project Area[3]	Portland
Asthma	10.3%	10.1%	10.1%
Diabetes	8.1%	7.8%	7.7%
Obesity	26.6%	25.9%	25.3%
High Blood Pressure	25.4%	25.8%	25.1%
High Cholesterol	26.1%	25.9%	26.0%
Depression	23.6%	23.3%	22.8%

Health Behaviors

Individual behaviors like tobacco use, diet, exercise, and substance use, can be attributed to about 30% of health outcomes (Hood et al, 2016). These behaviors are significantly influenced by our surrounding social and physical environments, mirroring the communities we are a part of and dictated by the choices available. Physical activity and active travel are influenced by land use mix, transportation connectivity, and neighborhood design (Smith et al, 2017). Tobacco retail density and marketing visibility affect the ease of smoking adoption and continuation for children and adults (ChangeLab Solutions, 2021; Finan et al, 2017) **Expected rates of no reported leisure activity are 1.15x higher in the core focus area than in the city overall, and rates of current smoking are 1.23x higher.**

[1] PLACES provides model-based, population-level analysis and community estimates of health measures using Behavioral Risk Factor Surveillance System and American Community Survey data.
[2] Census tracts 87.00, 88.00, & 86.00
[3] Census tracts 87.00, 88.00, 86.00, 04.01, 04.02, 05.01, 05.02, & 06.02

Table 2. Health Behaviors for Core Focus Area, Project Area, and City of Portland. CDC Places Data, 2020.

	Core Focus Area	Project Area	Portland
Binge Drinking *5 or more drinks in an occasion within the past 30 days*	20.7%	20.9%	20.7%
Current Smoking	18.1%	17.2%	14.7%
No Leisure-Time Physical Activity *Within the past 30 days*	17.8%	16.9%	15.4%
Sleeping Less than 7 Hours	27.9%	27.3%	26.2%

Prevention

Access to health care services is major determinant of health. Regular visits with health care providers for routine checkups and medical guidance can maintain physical and mental health levels. Lack of health insurance is a significant barrier to accessing needed services, as is lack of nearby health care providers and lack of reliable and accessible transportation to get to and from medical offices.

The core focus area follows similar distribution patterns of prevention indicators as the project area and city overall. **Disparities are expected to exist however in dental visits (4.6% fewer residents in core focus area) and health care coverage (2.3% more residents lack coverage in core focus area)**.

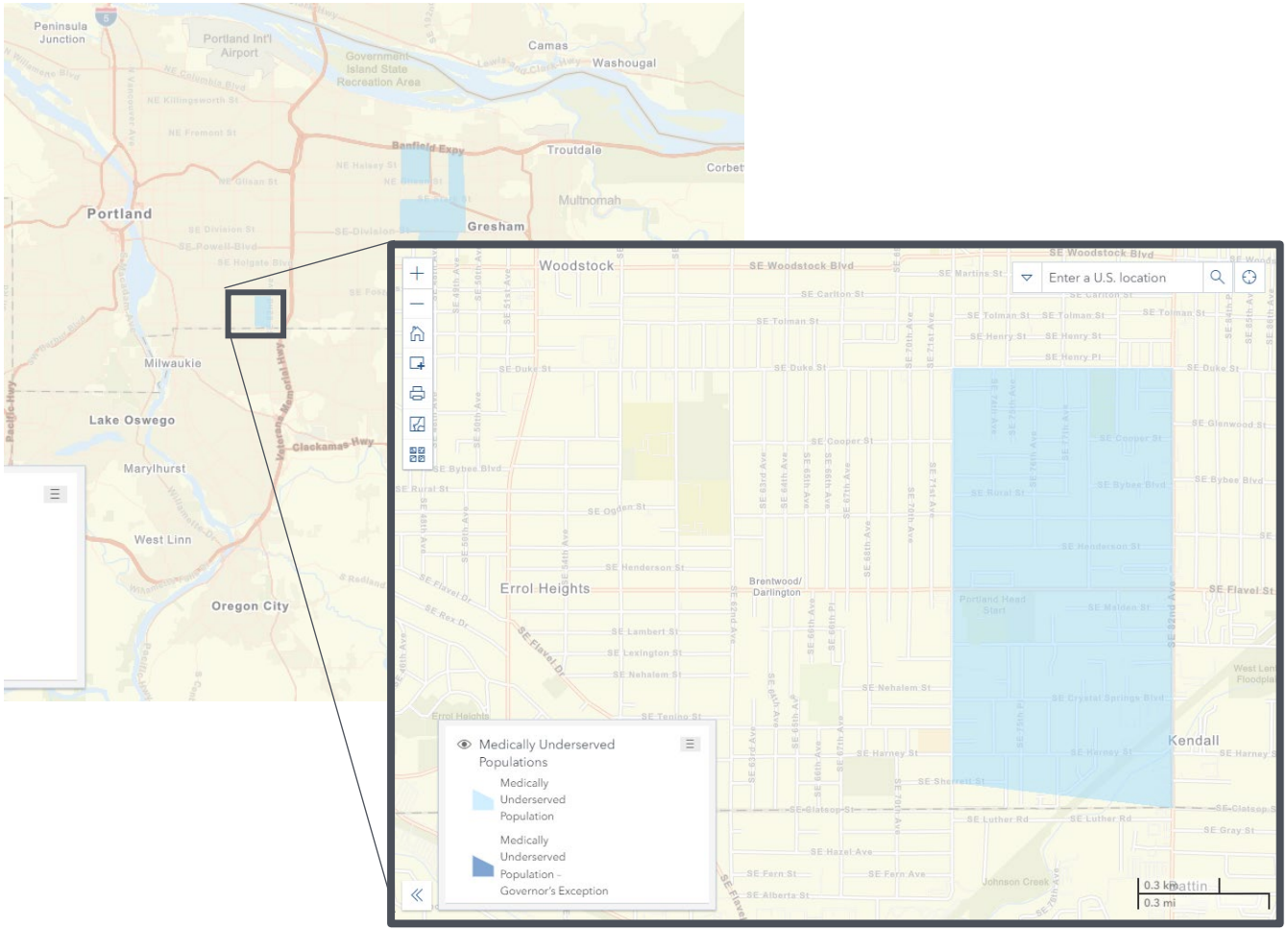
The Health Resources & Services Administration (HRSA) identifies the East end of the core focus area (bounded by 72nd Avenue, SE Luther Rd, 82nd Avenue, and SE Duke Rd) as a medically underserved population area[4] (one of only two in the city, designated as PDX FLAVEL service area) (HRSA, 2022; See Map in Appendix). Factors in this assessment include the percentage of area population living below the poverty level, percentage over 65 years, infant mortality rate, and the ratio of primary care physicians per 1,000 residents.

[4] Medically Underserved Populations (MUPs) may include groups of persons who face economic, cultural, or linguistic barriers to health care. HRSA's Bureau of Health Workforce use the four criteria (% poverty level, % over 65, infant mortality rate, and ratio of primary care physicians per 1000 residents) to decide whether a geographic area or population group is a MUP. PDX FLAVEL Service area has a 60.5 Index of Medical Underservice Score.

Table 2. Prevention Indicators for Core Focus Area, Project Area, and City of Portland. CDC Places Data, 2020.

	Core Focus Area	Project Area	Portland
Visit to Doctor for Routine Check Up in Last Year	66.8%	66.7%	68.0%
Visit to Dentist or Dental Clinic in Last Year	63.7%	65.3%	68.3%
Current Lack of Insurance Coverage	12.7%	11.9%	10.4%

Figure 2. Medically Underserved Populations, HRSA, 2022.

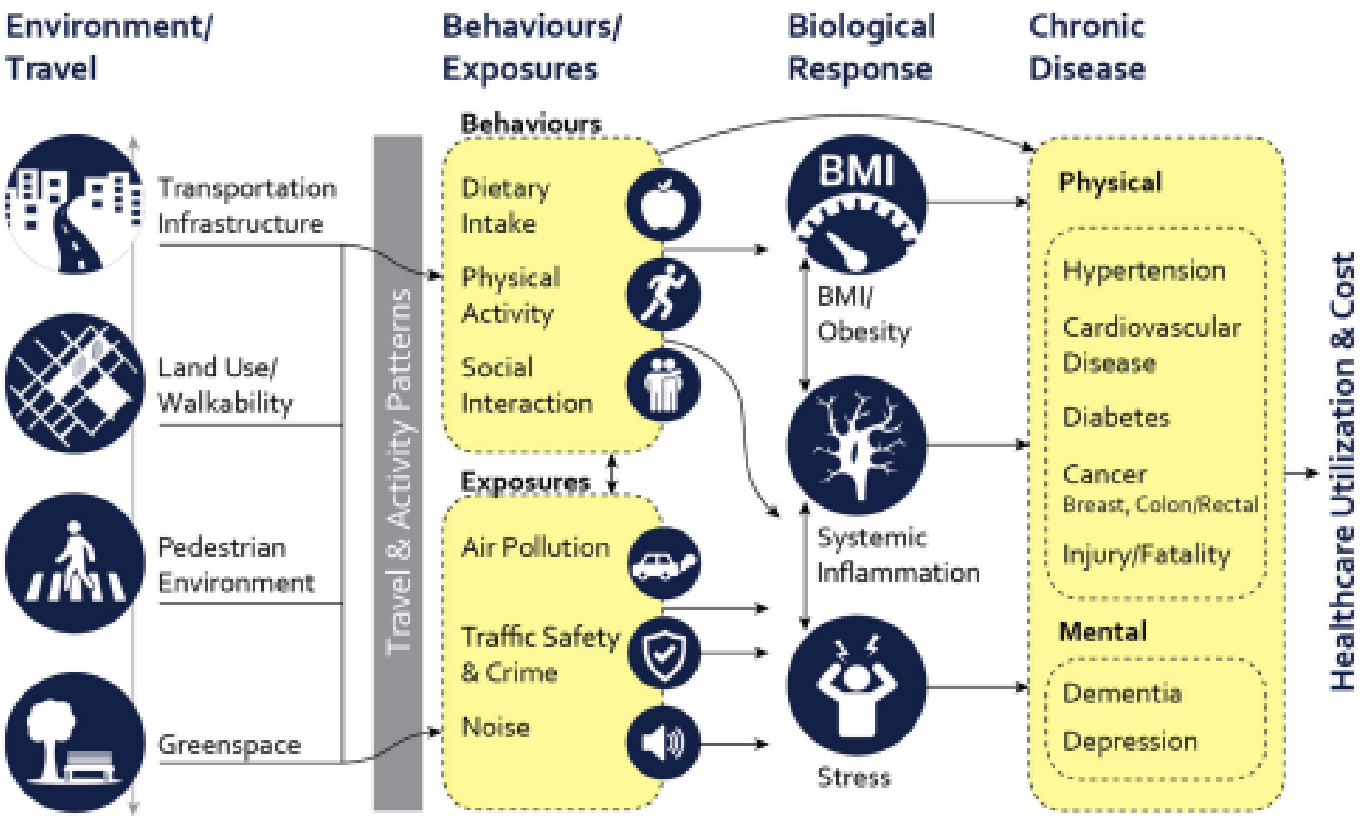


Social Determinants of Health

Social determinants of health are the conditions and contexts in which people are born, live, learn, work, play, worship, and age that affect health outcomes, health behaviors, and prevention measures. These conditions can be social, economic, political, or physical, and they include policies, systems, and environments. This memo reviews four social determinants of health identified as community priorities in the LSE Rising outreach process: 1) Affordable housing, 2) Community-serving businesses and gathering spaces, 3) Parks and green spaces 4) Neighborhood design and safety (BPS, 2022).

Rarely is one determinant solely responsible for a health outcome. Community health is the product of interdependent and cumulative exposures to environments over time. The conceptual model provided by Frank et al (Figure 2) illustrate environmental factors, behaviors/exposures, and health outcomes relevant to the Lower SE Rising plan.

Figure 3. Causal diagram linking the pathways from the built environment to chronic disease and healthcare costs (Frank et al, 2019).



Affordable Housing

The availability of affordable housing in a neighborhood provides a stable platform for residents to maintain and build their health and well-being. Affordable housing costs for rent and utilities saves room in the budget for health care, food, and other essential needs (Taylor, 2018). Maintaining low risk of displacement reduces stress and improves mental health outcomes, as longer tenures in a building have been associated with improved mental and behavioral outcomes like anxiety and depression (Maqbool et al, 2015). **A majority (82.5%) of the renters in the core focus area live in single unit detached or attached dwellings[5], far above that of the city (35.9%).** Renters tend to be between 25-44 (65%), have some college or associates degree (51.9%), make between 50K-75K (22.3%), and have moved to the area between 2015 and 2018 (38.2%).

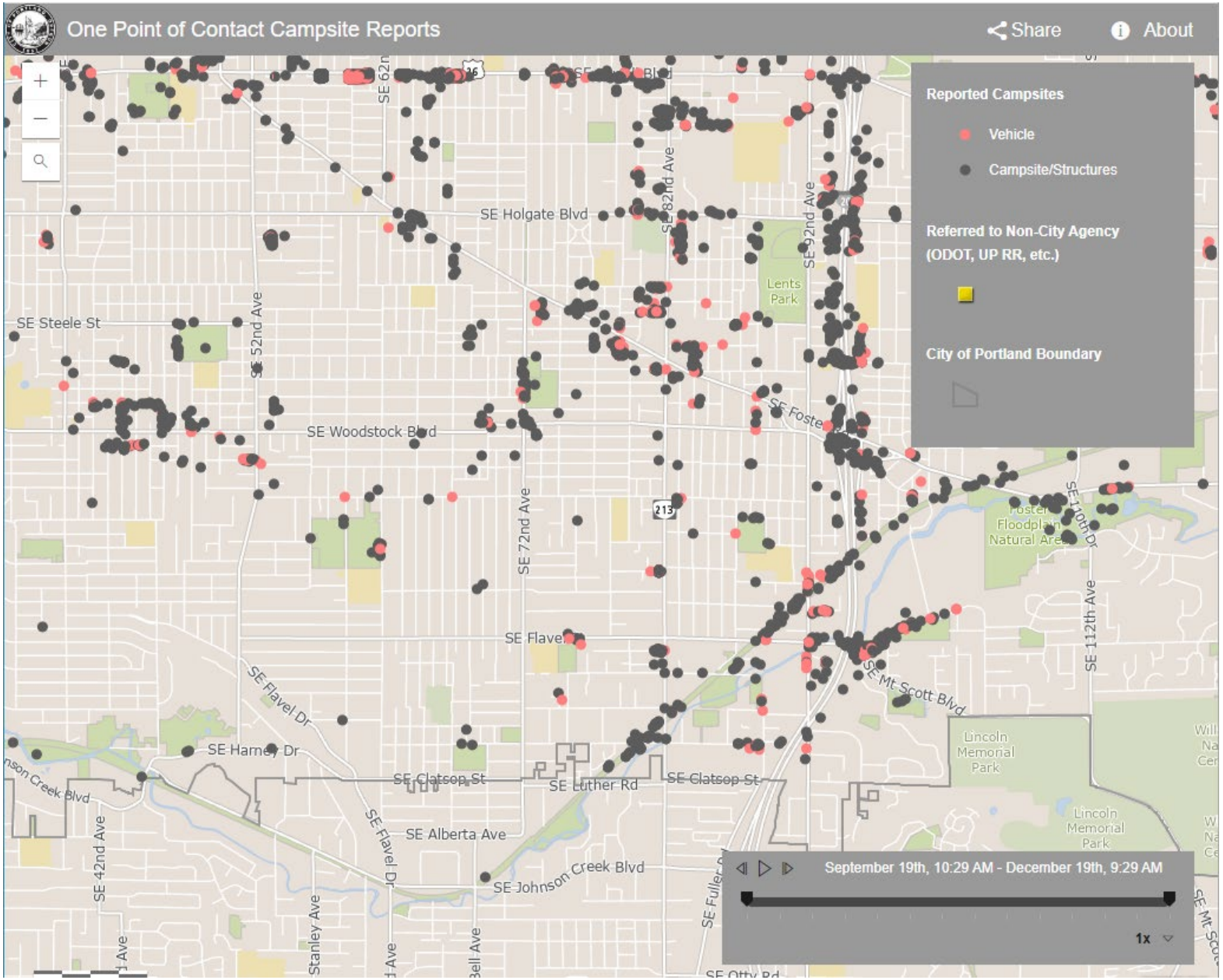
Table 3. Affordable Housing Indicators for Core Focus Area, Project Area, and City of Portland.

	Core Focus Area	Project Area	Portland
% Rental Units by Race: White[6]	85.4%	82.9%	75.1%
% Rental Units by Race: Hispanic	9.5%	10.8%	9.7%
% Cost Burdened Renters[7]	53.6%	58.8%	47.6%
% Cost Burdened Homeowners[8]	53.2%	46.3%	36.7%
% Renters in 1-unit detached or attached	82.5%	77.2%	35.9%

Unaffordable housing contributes towards houselessness, which brings a greater risk of adverse health outcomes and emergency room visits (Taylor, 2018). In fall 2022, houseless community members were typically documented living in the core focus area around the grocery stores at SE 46th Avenue and SE Woodstock Blvd, and along the Arletta Triangle Square, Mt Scott Park, and the Springwater Corridor (City of Portland, Homelessness/Urban Camping Impact Reduction Program, 2022). **Mt Scott Community Center** within Mt Scott Park is the only publicly funded shelter in the project area, and serves as a seasonal winter shelter during periods of inclement weather. The **Laurelwood Center** to the north and **Family Village Campus** to the east provide day services and limited beds to vulnerable groups in the houseless community.

[5] Single unit dwellings include manufactured and mobile homes, indicating these are a resource for renters in the area.
[6] ACS A03001B, 2016-2020 5-year estimates
[7] ACS A18002, 2016-2020 5-year estimates
[8] ACS A10049 & A10051, 2016-2020 5-year estimates

Figure 4. One Point of Contact Campsite Reports, September 19th – December 19th, 2022 (City of Portland)



Community-Serving Businesses and Gathering Spaces

As important to health as the stability of housing tenure is the quality of services and opportunities available in the neighborhood surrounding a home. These can be place-based amenities like healthy grocery stores (or unhealthy convenience stores) and medical services, or the existing social network and opportunities to build connection to people and resources. The public realm, as well as private third-spaces, both support social connection and mental health outcomes. People with strong social bonds tend to experience improved cardiovascular and mental health outcomes (ULI, 2022).

The area includes Mt Scott Community Center, coffee shop community spaces, the Brentwood Community Garden, Arleta Triangle Square public plaza, and Woodstock Farmer's Market. While serviced by several grocery stores, including Grocery Outlet and culturally specific Portland Mercado and SF Supermarket, the core focus area has a significant number of residents that are both low-income and more than ½ mile from a supermarket (USDA, 2022).

Social resilience can be broken down into social bonding (connections between people with similar backgrounds), social bridging (connections between people with different backgrounds), and linking (connections between people and organizations with resources and power) (OHA, 2020). The area has a higher diversity index than the county overall. **The project area has a higher percentage of immigrant communities than the city overall**, primarily from Mexico (22.7%), Vietnam (20.4%), and China (13.9%)[9].

Table 4. Opportunity and Connection Indicators.

	Core Focus Area	Project Area	Portland
Foreign Born[10]	19.4%	16.5%	13.4%
	Mt Scott-Arletta Zip Code (97266)		**Multnomah County**
Diversity Index[11]	72.2		57.4
Economic Connectedness[12]	51.5%		45.9%
Cohesiveness[13]	7.7%		8.2%
Civic Engagement[14]	13.6%		10.5%

[9] ACS A07001, 2016-2020 5-year estimates
[10] ACS A06001, 2016-2020 5-year estimates
[11] The likelihood that two persons, chosen at random from this area, belong to different race or ethnic groups in 2021. The total US Diversity Index for 2021 is 65.4. ESRI, ACS.
[12] The share of high (above median) income friends among people with low (below median) incomes. Opportunity Insights, Social Capital Atlas 2022.
[13] The rate with which two friends of a given person are in turn friends with one another. Opportunity Insights, Social Capital Atlas 2022.
[14] The share of people who are part of volunteering groups. Opportunity Insights, Social Capital Atlas 2022.

Parks and Green Spaces

The natural environment created within cities supports improved health outcomes through a variety of different forms of contact with nature. Urban greenspace helps manage stress and anxiety, encourages physical activity, and mitigates warming temperatures and urban heat island effects.

As noted in the existing conditions report, 100% of residents live within a half mile of a public park or open space, but additional investments are needed for improvements. Areas that are outside of a 10-minute walk to a park, have higher populations of low-income residents and people of color, and experience adverse health outcomes are highlighted in Figure 5. Areas that experienced greater heat island impacts and less overnight cooling are highlighted in Figure 6, and tend to be concentrated around 82nd Avenue and Foster Rd. These areas indicate where additional tree canopy or shading strategies would be beneficial. In the Pin it, Portland outreach tool residents reported gun violence, abandoning stolen vehicles, and drug use as frequent activities around Mt Scott, Flavel, and Brentwood Parks, making them all feel unsafe for regular use for some people.

The project area, like most of Portland, experiences higher levels of exposure to $PM_{2.5}$ and diesel particulate than the rest of the state, increasing risk of adverse respiratory outcomes. **Diesel concentrations in the project area are almost twice that of the state, and the area is in 97th percentile for Air Toxics Cancer risk in the state** (EPA, 2022).

Table 5. Environmental Justice indicators for the Project Area, State, and Nation (EPA EJScreen, 2022).

	Project Area	State Avg	USA Avg
Air Toxics Cancer Risk	40 *(97th State %tile)*	32	28
Air Toxics Respiratory Hazard Index[15]	.6 *(96th State %tile)*	.47	.36
Diesel Particulate Matter (µg/m3)	.645	.337	.294
Particulate Matter 2.5 (µg/m3)	8.89	8.69	8.67

[15] The sum of hazard indices for those air toxics with reference concentrations based on respiratory endpoints, where each hazard index is the ratio of exposure concentration in the air to the health-based reference concentration set by EPA.

Figure 5. Priority areas (purple) (Trust for Public Land, 2022)

Figure 6. Urban Heat Island Severity, Trust for Public Land, Summers 2019-2020.

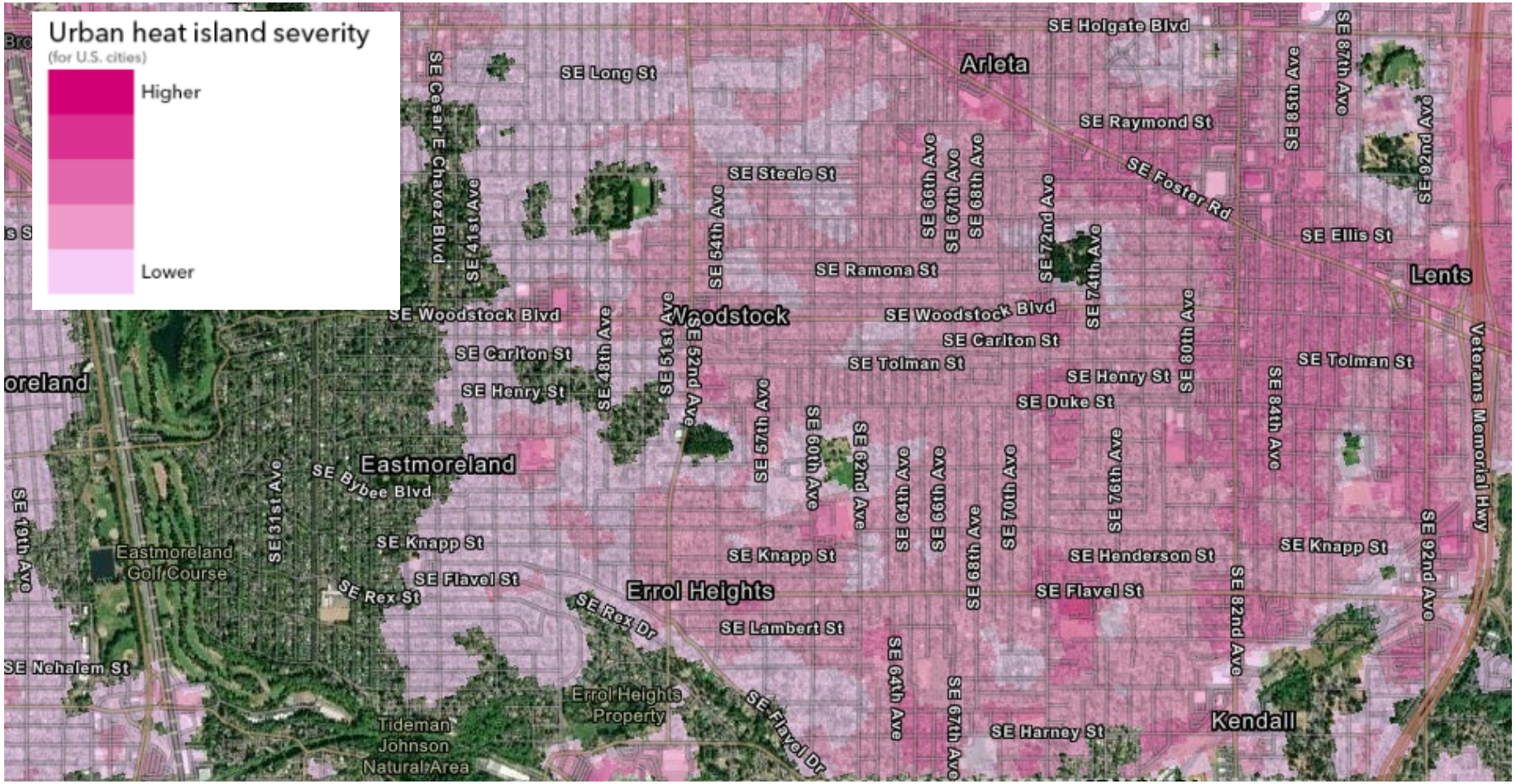
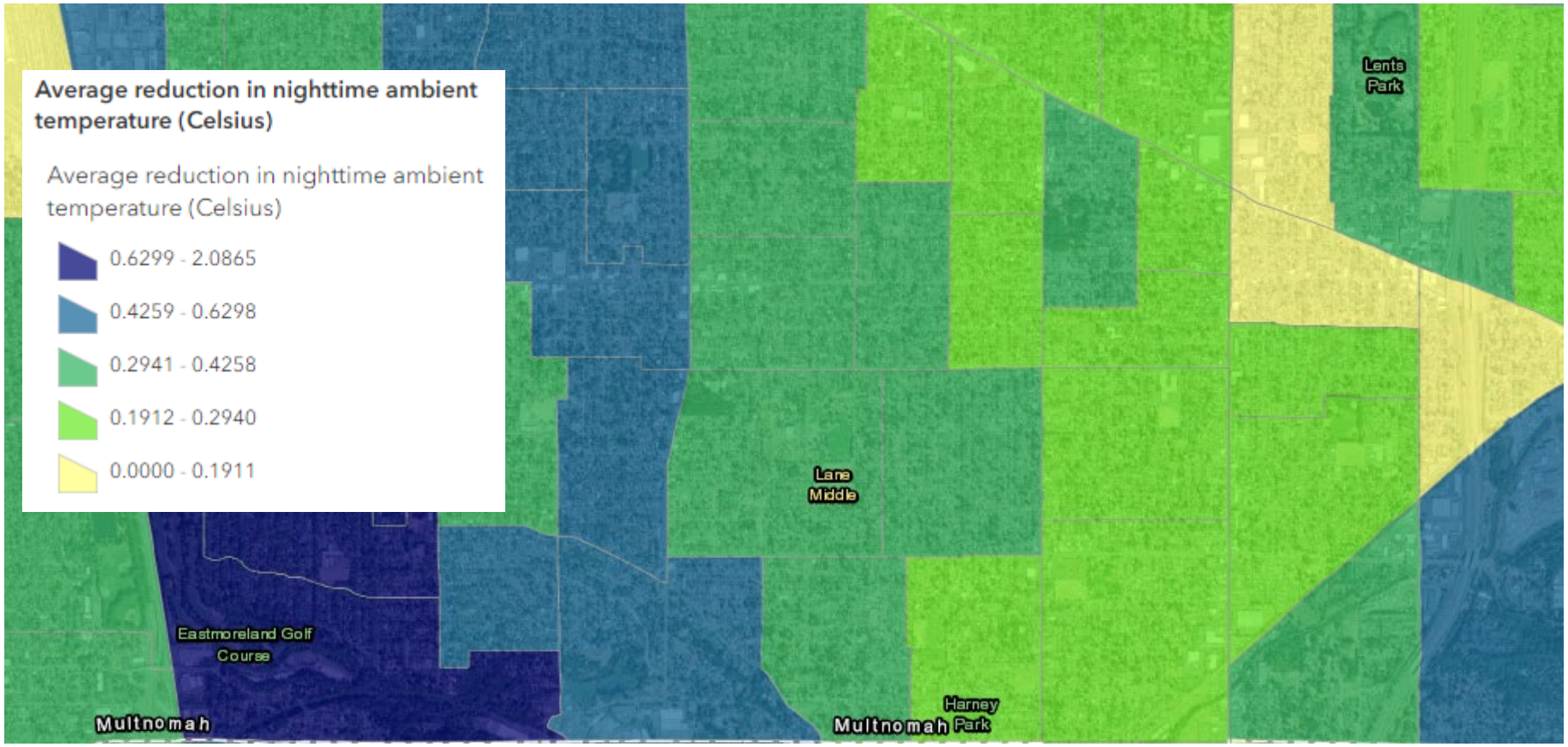


Figure 7. Average reduction in nighttime ambient temperature, EnviroAtlas, 2019.



Neighborhood Design and Safety

Neighborhood design that promotes safety and mobility for all improves health outcomes and well-being. Regular physical activity helps prevent several physical and mental health outcomes. The macroscale pedestrian environment (i.e. mixed land use, street connectivity, and residential density) is an important determinant of community physical activity levels, as is the microscale (i.e. street and building design, sidewalks, and aesthetics) (Botchwey, Dannenberg, & Frumkin, 2022). People who report feeling safe from crime are 27% more likely to achieve higher levels of physical activity (Rees-Punia et al, 2018). Houseless community members in Portland disproportionately experience traffic injury and fatality, in part because of increased time on the road system (Domine et al, 2022).

The EPA National Walkability Index, evaluating intersection density, proximity to transit stops, the mix of employment opportunities, and the balance between residential and commercial mix, ranks the core focus area as above average walkability, except for the lower SE census block group between SE Clatsop, SE Henderson, SE 72nd Ave, and 82nd Ave, which scores average (EPA, 2022).[16] This provides a different, complimentary lens on walkability to the pedestrian infrastructure-oriented analysis in the Existing Conditions Report. Strava running data shows higher activity levels in the street networks in the north and west of the core focus area, with less activity mapped in the southwest (Strava, 2022). All sources point to needed investment/improvement in the SE area of the project area.

A review of built environment intervention efficacy on physical activity levels with health equity considerations found the strongest level of evidence for tandem streetscape improvements (two or more of: crosswalk/sidewalk improvements, improved bike parking, traffic calming features), multiple component park upgrades (two or more of: fitness equipment, walking track, fencing, landscaping new surfaces, lights), and temporary road closures with play equipment made available (Smith et al, 2017),

Elements of the social environment like community trust, availability of neighbors watching, opportunity to see friendly faces can encourage physical activity (Salvo et al, 2018), whereas litter, graffiti, crime, discrimination, and racism discourage physical activity (Botchwey, Dannenberg, & Frumkin, 2022). The social environment can be categorized into social capital (social interaction, level of connection, activity norms, and participation in organizations), perceived safety (both specific and non-specific to crime), physical signifiers (aesthetics, maintenance, greenspace, and lighting), and general neighborhood satisfaction (interesting things to do, quality schools, etc) (Iroz-Elardo et al, 2021). Frequently reported

[16] It is also important to highlight this index uses a scale that measures *national* walkability. Portland standards and expectations around walkability may differ at the *local* scale.

campsites documented in the project area in fall 2022 tend to overlap with routes in neighborhoods that experience less recreational physical activity.

Preferences for walking conditions can also vary by demographic group. Qualitative research on walkability has shown Mexican American preferences for social interaction, destinations, and community identity in walking environments (somewhat reflected in outreach focus group findings), whereas non-Hispanic white preferences are for calm, quiet, and environmental aesthetics. This indicates investment in physical infrastructure should be accompanied by more broad strategies to improve the social environment specific to local communities to improve walkability and health outcomes for all (Adkins et al, 2019).

Figure A3. National Walkability Index, Project Area, EPA 2021. The Southeast neighborhood blocks in the core focus are below average walkable among walkability nationally, and the lowest in the project area.

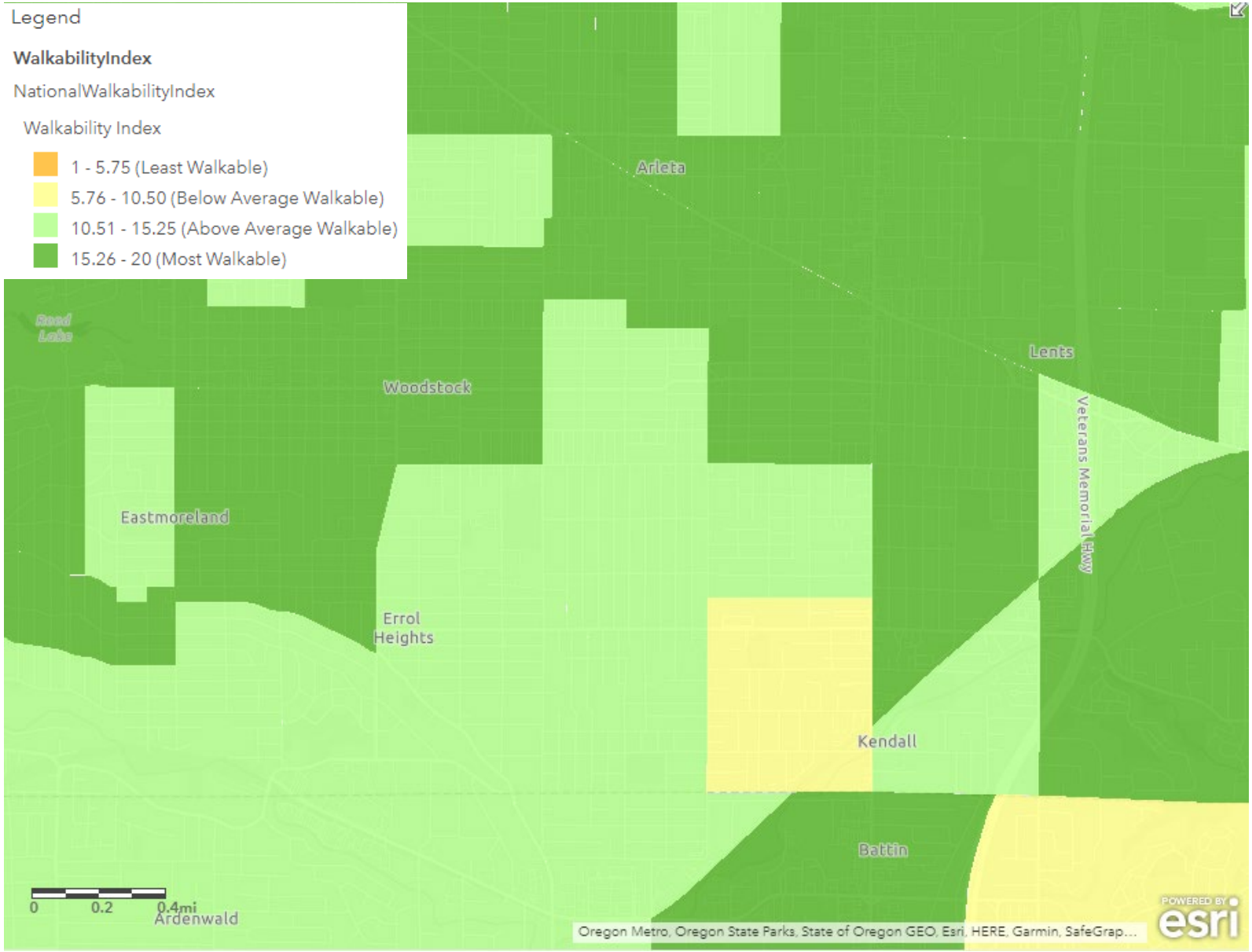


Figure A4. Running Heat Map, Core Focus Area. Brighter and bolder yellow indicates higher trafficked routes. Strava, 2022.

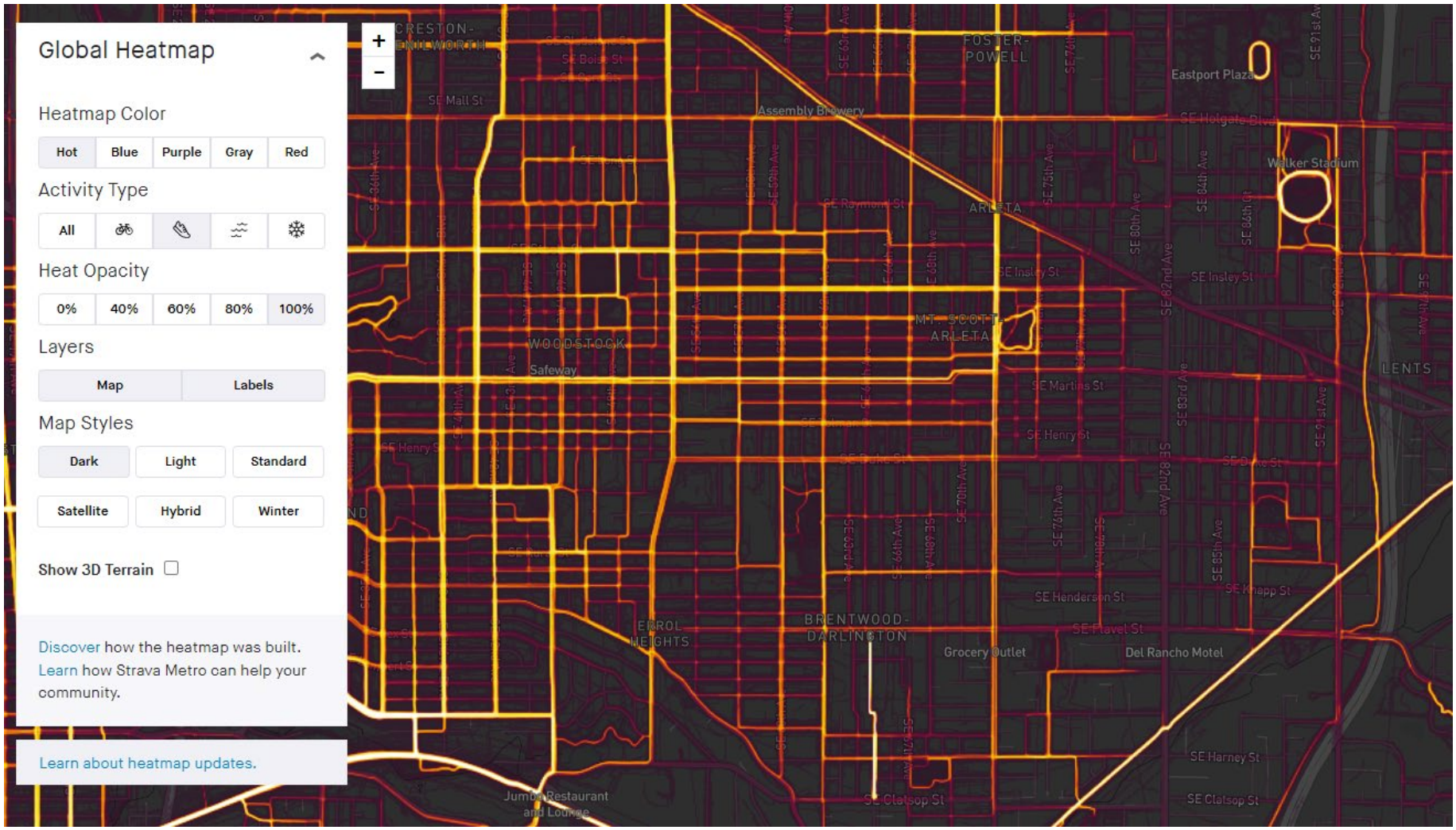
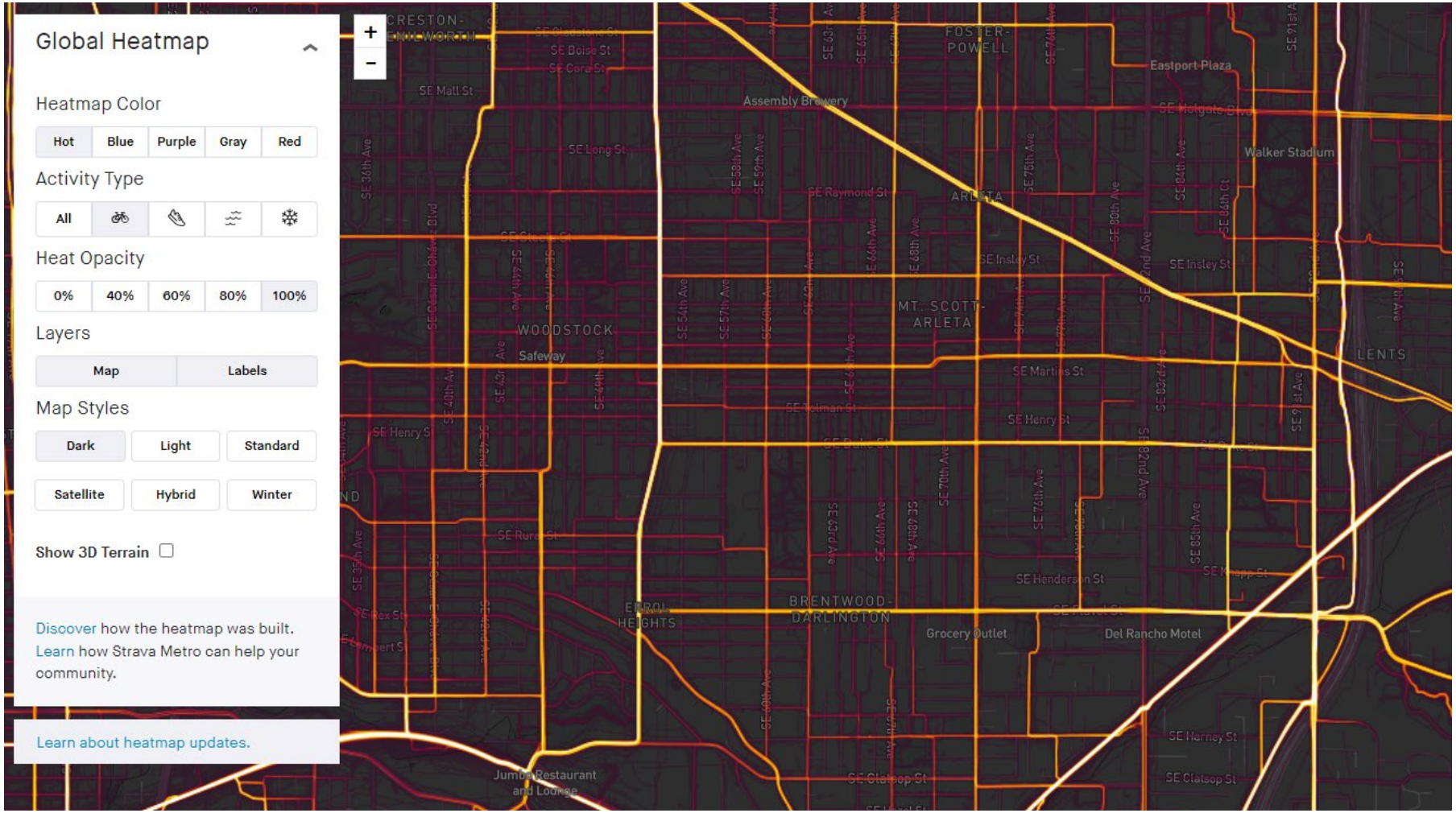


Figure A5. Cycling Heat Map, Core Focus Area. Brighter and bolder yellow indicators higher trafficked routes. Strava, 2022.



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