

Environmental Justice in Conservation: Neighborhood Impacts of Health, Housing, and Environmental Burdens

IN KANSAS CITY, MO

For: Missouri Department of Conservation and MU Extension

Report May 1, 2023 Prepared by LivZero + Greenlink Analytics, Inc.

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Background and Introduction

Background

In May of 2023, the Missouri Department of Conservation (MDC) and LivZero joined in partnership to better understand the intersectional inequities impacting the communities in Kansas City, Missouri most burdened by socioeconomic, health, and environmental factors. This alliance aims to build and maintain deep relationships with the citizens of Kansas City (MO) so we can: 1) Understand what conservation means to them, 2) Accurately assess and address what they view as ecological/ nature assets or opportunities within the community, and 3) Assist with developing conservation related priorities for their community. The purpose of the program is to develop and lead a community engagement methodology that advances conservation through an environmental justice lens that can be replicated throughout the Kansas City Metro and State of Missouri.

LivZero and Greenlink Analytics partnered to conduct a quantitative analysis to inform a data informed, community driven process that will assist MDC in better understanding the intersection of burdens impacting the communities they serve and work alongside in Kansas City (MO). With these insights, MDC aims to collaborate with residents to co-design their Community Conservation Liaison Program and strengthen their understanding of environmental stewardship within the city. This analysis, along with further research and ongoing community engagement, will help determine the areas of most need (identified as Tier I or environmental justice communities) and how to effectively support and encourage environmental safekeeping while also tending to the health and socioeconomic needs of their neighbors and partners.

Introduction

Environmental inequities are a byproduct of structural injustices, while human-induced climate change exacerbates systemic fragility these structures uphold. This report details the relationships between multiple socioeconomic structures within a built environment, such as quality of health and stable and affordable housing, to uncover how they influence the dynamic of environmental stewardship in the Kansas City metro area. It should equip MDC to tend to any gaps in community services they currently provide or approaches they currently undertake to increase engagement throughout the city. Additionally, it should provide a framework for understanding the needs of the community beyond the natural environment. Overall, this analysis aims to view conservation through a holistic lens and provide suggestions for interdisciplinary partnerships, equitable community engagement, and robust programmatic design.

Aims of this report:

- 1. Guide equitable community engagement for the co-creation of MDC's Community Conservation Liaison Program by identifying environmental justice communities.
- 2. Guide difficult, yet necessary conversations about the gravity of environmental conditions by viewing humans and our natural ecosystems as interdependent.
- 3. Serve as baseline data, identifying programmatic gaps in MDC's community efforts and providing climate equity metrics that MDC can use to measure its community impact.
- 4. Understand the relationships between structural inequities beyond the natural environment, including health, housing, and socioeconomic factors, that will support holistic and upstream programmatic and policy design.
- 5. Establish a data informed, community driven engagement process, ensuring community outreach and engagement specialists can allocate resources in areas most burdened by critical inequities.

1. In this report, the term safekeeping means to be kept away from harm, and is used interchangeably with conservation.



Environmental Justice

Definitions of environmental justice and equity will change depending on the place, context, and community one is working with. LivZero has adopted these definitions from the First National People of Color and Environmental Leadership Summit (1996) in relation to unique challenges and assets within the Kansas City metropolitan area and the local conservation movement, and will work with MDC to co-design their Community Conservation Liaison Program through these environmental justice lenses:

"Affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction."

"Affirms the need for urban areas to clean up and rebuild our cities in balance with nature, honoring the cultural integrity of all our communities, and providing fair access for all to enjoy nature."

~ First National People of Color Environmental Leadership Summit, 1996



Quantitative Analysis

Determinants

When evaluating correlations, the closer the correlation coefficient r is to -1.0 or +1.0, the stronger the relationship between two variables. The components of the built environment described in this analysis focuses solely on medium to strong positive or negative relationships with a correlation (r) of at least < -0.5 or > 0.5.

Counties: Bates, Caldwell, Cass, Clay, Clinton, Jackson, Lafayette, Platte, and Ray

Total Census Tracts: 298

Racial Demographics (KC Metropolitan Area):

- 70.9% White
- 12% African-American / Black
- 10.5% Latine/x or Hispanic
- 3.1% Asian
- 0.6% American Indian and Alaskan Native
- 0.2% Native Hawaiian and other Pacific Islander

Health, Housing, and Environmental Determinants

Of the determinants analyzed, Kansas City's data shows medium to strong positive relationships between low income and a multitude of burdens, such as: *utility burden² poor access to healthcare, and high rates of asthma, coronary heart disease, diabetes, stroke, and mental health* with r values ranging from 0.54 to 0.71. This means as poverty increases, it is likely that the prevalence of housing and health instability does as well. Low income is concerning not only because of its connection to chronic health issues, but also because it is contingent on multiple systems that influence one's ability to stabilize a quality of life. For example, the financial strains associated with the high utility bills reflect a history of socioeconomic conditions that continue to negatively plague communities today, such as poor housing infrastructure. The data shows that Kansas City's low income is strongly correlated with housing insecurity, primarily affecting tenants renting their dwellings. The inverse stands true as well: high utility bills perpetuate income instability and hinder economic mobility, as has been demonstrated in many parts of the country.^{3,4,5}

Understanding the interconnectedness of health, housing, and socioeconomic issues helps reveal each determinant as part of greater structural injustice, and why a pattern of communities facing a cluster of challenges continues to present over time.

NOTE: Data presented in Quantitative Analysis comes from internal and external data sets from 2019 and 2020

2. Utility burden (or energy burden) is defined as the neighborhood average of the percent of median yearly income that households pay for utility bills (electricity, gas, and/ or water).

Cox, Matt. Direct Testimony of Matt Cox, PhD on Behalf of Georgia Interfaith Power and Light and Partnership for Southern Equity. In the Matter of Georgia Power's 2022 Integrated Resource Plan, Application for the Certification, Decertification and Amended Demand Side Management Plan (Dockets 44160 and 44161). May 6, 2022. Before the Georgia Public Service Commission.

4. Levy, R. and J. Sledge. 2012. A Complex Portrait: An Examination of Small-Dollar Credit Consumers. Chicago. Center for Financial Services Innovation.

5. Drehobl, A., L. Ross, and R. Ayala. 2020. "How High are Household Energy Burdens?" Washington, DC: American Council for an Energy-Efficient Economy.

Racial Disparities: Top & Bottom 5%

Many communities facing a cluster of equity challenges can often be found in certain geographic areas and among certain racial groups, especially at unequal and disproportionate rates. It is critical to understand these disparities as they inform effective policies and programs designed for the worst conditions, yet support benefits to all communities.

Below are some of the major racial disparities most prevalent throughout the entire metropolitan area. When considering top and bottom percentiles, it is important to understand that there is a range of prevalence for each determinant, which helps identify what is considered *high* and what is considered *low* based on the national average. For example, a community experiencing energy burdens of 10% or more, significantly higher than the national average of 4%, will rank in the top 5% of the energy burdens nationwide.

Determinant	National Mean	Kansas City Mean	Minimum in Kansas City	Maximum in Kansas City
Electric / Gas Burden	4.1%	5%	2%	17%
Income Stress	1.8%	1.8%	0.6%	6.8%
Renter Households	35.6%	37%	0%	92%
Access to Healthcare	15.7%	16%	7%	41%
Asthma	9.6%	11%	8%	16%
Mental Health	14.8%	15%	9%	27%
Urban Heat Intensity Index	5.3	3.7	1	9.9
Urban Tree Canopy	12.6%	12%	0%	42%

Table 1: Spread of Prevalence

Utility/Energy Burden

Throughout the Kansas City metro area, the prevalence of households experiencing energy burden has a correlation with renter households and experiencing income stress, poor access to healthcare, and high rates of chronic health issues, such as: asthma, coronary heart disease, chronic obstructive pulmonary disease, diabetes, mental health, and stroke. Energy burden, therefore, is not solely indicative of unstable socioeconomic and housing conditions, but goes hand in hand with health inequities that tend to bundle alongside it.

Top (most burdened): 47% of the most-burdened neighborhoods are predominantly inhabited by African-American / Black households. 27% are predominantly inhabited by white households. Median energy burdens range from 10-17% in these communities.

Bottom (least burdened): 100% of the least-burdened neighborhoods are predominantly inhabited by white households and experience energy burdens ranging from 1.7–2.3%.

Although the neighborhoods with the highest concentrations of Latine/x and Hispanic households were not in the top or bottom 5%, they experience energy burdens well above the national average of 4%, ranging from 6.8% to 9.7%.

Census Tract No.	Energy Burden	Neighborhood(s)
77	17%	North Town Fork Creek
154	17%	Forgotten Homes, Independence Plaza, Parkview, Paseo West, Pendleton Heights
52	15%	Center City, Linwood Homeowners-Ivanhoe
23	13%	East Community Team North
38	13%	Santa Fe
155	13%	North Blue Ridge, Northeast Industrial District, Sheffield
56.01	12%	Oak Park Northwest, Santa Fe
117	12%	Unavailable*
221	12%	Harlem
78.02	12%	Mount Cleveland, North Town Fork Creek, Sheraton Estates, Swope Parkway-Elmwood
156	12%	Western Blue Township
22	11%	Central Blue Valley And Park Tower Gardens, East Community Team North, West Blue Valley
10	11%	Pendleton Heights
102.04	10%	Calico Farms, Hickman Mills, Terrace Lake Gardens
57	10%	Ingleside, Palestine East, Palestine West And Oak Park Northeast

Table 2: Top 5% Energy Burden by Census Tract & Neighborhood⁶

6. Kansas City Neighborhood Boundaries, City of Kansas City, MO, 2023 Image 1: Energy Burden in Kansas City, MO from Greenlink Equity Map (GEM)



Renting Households

Throughout the Kansas City metro area, renter households are correlated with multi-family housing, high energy burdens, income stress, poor access to healthcare, high rates of asthma, and poor mental health conditions. Renters in and around Kansas City are more likely to cope with inequitable housing and health conditions, indicative of larger socioeconomic structures.

Top (highest renter): In the neighborhoods with the highest density of renter households, renters makeup 77% to 92% of the total. 33% of these neighborhoods are predominantly inhabited by African-American / Black households and 60% are predominantly inhabited by white households.

Bottom (lowest renter): In the neighborhoods with the lowest density of renter households, renters make up 0% to 6.4% of the total. 100% of these neighborhoods are predominantly inhabited by white households.

Although the neighborhoods predominantly inhabited by Latine/x and Hispanic communities were not in the top 5%, 41% to 56% of households in these neighborhoods are renter households.

Census Tract No.	Renter Occupied Households	Neighborhood(s)
97	92%	Boone Hills, Legacy East, Santa Fe Hills
11	91%	Quality Hill, Westside North
157	91%	CBD Downtown
167	91%	Broadway Gillham, Hanover Place, Valentine
154	90%	Forgotten Homes, Independence Plaza, Parkview, Paseo West, Pendleton Heights
152	81%	River Market
178	81%	Broadway Gillham, Central Hyde Park, Hanover Place, North Hyde Park
43	80%	Crown Center, Hospital Hill, Longfellow, Union Hill
102.01	80%	Hidden Valley, Oakwood
174	79%	Loma Vista, Oakwood, Sechrest
161	79%	18th And Vine And Downtown East, Beacon Hills, Forgotten Homes, Independence Plaza, Wendell Phillips
221	79%	Harlem
132.03	78%	Ruskin Heights
158	78%	Crossroads, Crown Center, Hospital Hill
73	71%	Country Club Plaza, Park Central-Research Park, Plaza Westport, South Plaza, West Plaza

Table 3: Top 5% Renter Occupied Households by Census Tract & Neighborhood

luity Map (GEM)		ighborhood(s)	Santa Fe Hills	rth		ver Place, Valentine	endence Plaza, Parkview, Paseo		l Hyde Park, Hanover Place, North	Hill, Longfellow, Union Hill		echrest	town East, Beacon Hills, Forgotten laza, Wendell Phillips			er, Hospital Hill	Central-Research Park, Plaza Vest Plaza
irom Greenlink Eq		Nei	Boone Hills, Legacy East,	Quality Hill, Westside Nor	CBD Downtown	Broadway Gillham, Hanov	Forgotten Homes, Indepe West, Pendleton Heights	River Market	roadway Gillham, Central Hyde Park	Crown Center, Hospital H	Hidden Valley, Oakwood	Loma Vista, Oakwood, Se	18th And Vine And Down Homes, Independence P	Harlem	Ruskin Heights	Crossroads, Crown Cente	Country Club Plaza, Park Westport, South Plaza, W
s City, MO 1		Renter Occupied Households	92%	91%	91%	91%	%06	81%	81%	80%	80%	%62	%6L	26%	78%	78%	71%
lds in Kansa		Census Tract No.	97	11	157	167	154	152	178	43	102.01	174	161	221	132.03	158	73
Image 2: Renter Occupied Househol	inside city kenses city kenses city kenses city kenses city kenses city	- Franksion			Irie Village		Leawood	Hothes Park		Red Bridge							

Urban Heat Intensity Index (UHII)

Throughout the Kansas City metro area, no strong correlations between living in areas with a high urban heat intensity were found. However, urban heat intensity should not be taken out of consideration for how changes in climate, including hotter temperatures and inconsistent seasons, could exacerbate poor housing quality and disproportionately affect individuals and communities with higher rates of chronic health issues. Communities coping with these issues have demonstrated lower resilience to high temperatures in other cities, resulting in higher mortality rates and other negative health outcomes, typically taking action after the fact.⁷ Additionally, this analysis shows that neighborhoods predominantly inhabited by white households are experiencing the highest rates of urban heat intensity. This could be due to a number of factors, such as new luxury apartment complexes centered in downtown where heat tends to concentrate due to lack of green space.

Top (highest urban heat intensity): 64% of the neighborhoods with the highest urban heat intensity are predominantly inhabited by white households and 9% are predominantly inhabited by African-American / Black households and experience a high urban heat intensity index ranging from 8.6-9.9.

Bottom (lowest urban heat intensity): 100% of the neighborhoods with the lowest urban heat intensity are predominantly inhabited by white households and experience an intensity index of 1.

Census Tract No.	Urban Heat Intensity Index	Neighborhood(s)
98	9.9	Boone Hills, Santa Fe Hills
99	9.9	Lea Manor, Western Hills
93	9.7	Ward Parkway, Ward Parkway Plaza, West Waldo
94	9.7	Rockhill Manor, Rolling Meadows, Tower Homes, Waldo Homes
100.01	9.5	Lea Manor
100.02	9.5	Willow Creek
101.05	9.5	Country Lane Estates, Foxcroft And Glen Arbor, Verona Hills
91	9.2	Tower Homes
95	9.2	Legacy East, Marlborough Heights/Marlborough Pride
97	9.2	Boone Hills, Legacy East, Santa Fe Hills
90	8.8	East Meyer 6, East Meyer 7
92	8.8	Ward Parkway
88	8.6	Foxtown East, Self Help Neighborhood Council, Swope Park Campus
193	8.6	Unavailable*

Table 4: Top 5% Urban Heat Intensity Index by Census Tract & Neighborhood

7. Some examples include Chicago and Phoenix, where significant actions were taken after hundreds died: https://www. scientificamerican. com/article/ chicago-learnedclimate-lessons-fromits-deadly-1995-heatwave1/

https://www. theguardian.com/usnews/2022/jan/27/ phoenix-arizonahottest-city-coolingtechnologies

Ripley				Neighborhood(s)	Boone Hills, Santa Fe Hills	Lea Manor, Western Hills	Ward Parkway, Ward Parkway Plaza, West Waldo	Rockhill Manor, Rolling Meadows, Tower Homes, Waldo Homes	Lea Manor	Willow Creek	Country Lane Estates, Foxcroft And Glen Arbor, Verona Hills	Tower Homes	Legacy East, Marlborough Heights/Marlborough Pride	Boone Hills, Legacy East, Santa Fe Hills	East Meyer 6, East Meyer 7	Ward Parkway	Foxtown East, Self Help Neighborhood Council, Swope Park Campus	Unavailable*
			Selec	Urban Heat Intensity Index	9.9	9.9	9.7	9.7	9.5	9.5	9.5	9.2	9.2	9.2	8.8	8.8	8.6	8.6
				Census Tract No.	98	66	93	94	100.01	100.02	101.05	91	95	97	06	92	88	193
North Kansas City	s City Kansas City	Englewood		Raytown							Holmes Park							

Image 3: Urban Heat Index in Kansas City, MO from Greenlink Equity Map (GEM)

Urban Tree Canopy

Throughout the Kansas City metro area, no strong correlations between living in areas with a dense tree canopy coverage were found within this study. However, urban tree canopy should not be taken out of consideration for how changes in climate, including hotter temperatures and inconsistent seasons, could exacerbate the degradation of our natural ecosystems. Tree canopy coverage is only one element of an ecosystem, however, and should be paired with other strategies to improve the biodiversity and health of an entire ecosystem, man-made and natural. Expanding tree canopy coverage can lead to reduced urban heat islands and energy consumption, improved mental health stormwater management, and contribute to climate change mitigation and adaptation.^{8,9,10}

Top (highest urban tree canopy coverage): 80% of the neighborhoods with the highest urban tree canopy coverage are predominantly inhabited by white households and 7% are predominantly inhabited by African-American / Black households, experiencing a high density of urban tree canopy coverage ranging from 31% to 42%.

Bottom (lowest urban tree canopy coverage): 53% of the neighborhoods with the lowest urban tree canopy coverage are predominantly inhabited by white households and 40% are predominantly inhabited by African-American / Black households, experiencing a low density of urban tree canopy coverage of 0%.

Although the neighborhoods predominantly inhabited by Latine/x and Hispanic households were not in the top 5%, they still experience some of the lowest density of tree canopy coverage in the city ranging from 0.1% to 5.5%.

Census Tract No.	Tree Canopy Coverage	Neighborhood(s)
161	0%	18th And Vine And Downtown East, Beacon Hills, Forgotten Homes, Independence Plaza, Wendell Phillips
43	0%	Crown Center, Hospital Hill, Longfellow, Union Hill
54	0%	Key Coalition
56.01	0%	Oak Park Northwest, Santa Fe
56.02	0%	Oak Park Northwest
67	0%	Southmoreland
69	0%	Plaza Westport, 'Southmoreland
71	0%	Plaza Westport, West Plaza
87	0%	Blenheim Square Research Hospital,'Neighbors United For Action
92	0%	Ward Parkway
93	0%	Ward Parkway, Ward Parkway Plaza, West Waldo
154	0%	Forgotten Homes, Independence Plaza, Parkview, Paseo West, Pendleton Heights
157	0%	CBD Downtown
159	0%	CBD Downtown, Paseo West
169	0%	Broadway Gillham, Hanover Place, Valentine

 Table 5: Bottom 5% Tree Canopy Coverage By Census Tract & Neighborhood

8. https://www. epa.gov/greeninfrastructure/ reduce-urban-heatisland-effect

9. Mark S. Taylor, Benedict W. Wheeler, Mathew P. White, Theodoros Economou, Nicholas J. Osborne,

Research note: Urban street tree density and antidepressant prescription rates—A cross-sectional study in London, UK, Landscape and Urban Planning, Volume 136, 2015, Pages 174– 179, ISSN 0169-2046,

https://doi. org/10.1016/j. landurbplan.2014. 12.005.

10. Safford, H., Larry, E., McPherson, E.G., Nowak, D.J., Westphal, L.M. (August 2013). Urban Forests and Climate Change. U.S. Department of Agriculture, Forest Service, Climate Change Resource Center. www.fs.usda. gov/ccrc/topics/ urban-forests

Asthma

Throughout the Kansas City metro area, households experiencing high rates of asthma are moderately correlated with renter households and those experiencing income stress, energy burden, poor access to healthcare, and high rates of chronic health issues, such as: coronary heart disease, chronic obstructive pulmonary disease, diabetes, mental health, and stroke. Asthma, therefore, is not solely indicative of poor indoor and outdoor air quality, but also a slew of health, housing, and income inequities that tend to cluster together.

Top (highest rates of asthma): 100% of the neighborhoods with the highest rates of asthma are predominantly inhabited by African-American / Black households and experience the highest rates of asthma ranging from 14-16%.

Bottom (lowest rates of asthma): 100% of the neighborhoods with the lowest rates of asthma are predominantly inhabited by white households and experience the lowest rates of asthma ranging from 8.4% to 8.8%.

Although the neighborhoods predominantly inhabited by Latine/x and Hispanic communities were not in the top 5%, they still experience some of the highest rates of asthma ranging from 11% to14%.

Census Tract No.	Asthma Rate	Neighborhood(s)						
154	16%	Forgotten Homes, Independence Plaza, Parkview, Paseo West, Pendleton Heights						
56.01	15%	Oak Park Northwest, Santa Fe						
96	15%	Legacy East, Marlborough East, Marlborough Heights/ Marlborough Pride						
87	15%	Blenheim Square Research Hospital, Neighbors United For Action						
55	15%	Ivanhoe Northeast, Linwood Homeowners-Ivanhoe						
37	14%	Washington Wheatley						
54	14%	Key Coalition						
88	14%	Foxtown East, Self Help Neighborhood Council, Swope Park Campus						
56.02	14%	Oak Park Northwest						
58.01	14%	Boulevard Village, Dunbar, Knoches Park						
63	14%	Ivanhoe Southeast, Ivanhoe Southwest, Manheim Park						
132.03	14%	Ruskin Heights						

Table 6: Top 5% Asthma Rates by Census Tract & Neighborhood

				nborhood(s)	dence Plaza, Parkview, Paseo	Fe	⊡ast, Marlborough Heights∕	Hospital, Neighbors United For	d Homeowners-Ivanhoe			ighborhood Council, Swope		Knoches Park
6			Blue Springs	Neigh	Forgotten Homes, Independ West, Pendleton Heights	Oak Park Northwest, Santa	Legacy East, Marlborough E Marlborough Pride	Blenheim Square Research Action	Ivanhoe Northeast, Linwoo	Washington Wheatley	Key Coalition	Foxtown East, Self Help Nei Park Campus	Oak Park Northwest	Boulevard Village, Dunbar, k
		Selsa		Asthma Rate	16%	15%	15%	15%	15%	14%	14%	14%	14%	14%
	Independence			Census Tract No.	154	56.01	96	• 87	55	37	54	88	56.02	58.01
	Englewood		Raytown	///////////////////////////////////////			4		ż					
y Kansas city							Lolmon Brud							

Ivanhoe Southeast, Ivanhoe Southwest, Manheim Park

Ruskin Heights

14 % 14 %

132.03

63

Additional Determinants: Access to Healthcare and Mental Health

African American / Black and Latine/x and Hispanic communities live in areas with poor access to healthcare, with as much as 35% of African American / Black and 38% of the Latine/x and Hispanic communities. The weighted average of the metro region is 16%, indicating that these communities face challenges to access that may be more than twice the regional average. Similarly, while mental health did not fall into the top 5%, African American / Black and Latine/x and Hispanic communities live in areas with some of the highest rates of poor community-wide mental health throughout the region, as high as 27% and 23%, respectively (the metro region average is just under 15%).

Households with High Housing Burden

Households with adjusted high living costs (housing burden) explains the number of households with living costs exceeding 30% of the median income. While no strong positive correlations were found with housing burden, there are 15 census tracts with living costs in the top 5%, well exceeding 30% ranging from 39% to 61%. The neighborhoods within the top 5% housing burden include: North Town Fork Creek, Blue Hills, Knoches Park, East Blue Valley, West Blue Valley, Blue Valley Industrial, Central Blue Valley and Park Tower Gardens, Lykins, Ivanhoe Southeast, Ivanhoe Southwest, Manheim Park, Oak Park Northwest, Santa Fe, Key Coalition, Washington Wheatley, Pendleton Heights, East Community Team South, South Blue Valley, East Community Team North, Forgotten Homes, Independence Plaza, Parkview, Paseo West, Key Coalition, and Wendell Phillips.



Summary

A history of disinvestment in parts of Kansas City continues to influence an imbalance in opportunities across the city. This analysis reveals that elements of the built environment, both man-made and natural, are interconnected. When an individual lives in a neighborhood with low tree canopy and high utility bills, their health may also be at risk. When thinking about a community's role in conservation, understanding the interdependency of the socioeconomic structures prohibiting or enabling one to engage is critical to safekeeping not just natural environments, but also the neighborhoods that reside within nature. Given the geographic and racial disparities outlined in this analysis, setting environmental justice targets in program design is imperative to ensuring safe and equitable access to Kansas City's natural ecosystems, parks and recreation centers, and stable conditions that improve one's health.

Census Tract No.	Inequities	Neighborhood(s)						
154	High Renter Occupied Households, High Urban Heat Intensity Index, Low Tree Canopy Coverage, High Asthma Rates, High Housing Burden	Forgotten Homes, Independence Plaza, Parkview, Paseo West, Pendleton Heights						
56.01	High Energy Burden, Low Tree Canopy Coverage, High Housing Burden, High Asthma Rates	Oak Park Northwest, Santa Fe						
54	High Asthma Rates, Low Tree Canopy Coverage, High Housing Burden	Key Coalition						

Additional Statistical Summary

- 47% of the most utility/energy burdened neighborhoods are predominantly inhabited by African-American / Black households and 27% are predominantly inhabited by white households throughout the metro region.
- Neighborhoods predominantly inhabited by Latine/x and Hispanic households experience energy burdens well above the 4% national average.
- 33% of the neighborhoods with the highest proportion of renter households are predominantly inhabited by African-American / Black households and 60% of neighborhoods predominantly inhabited by white households.
- 41% to 56% of neighborhoods predominantly inhabited by Latine/x and Hispanic households are renter households.
- 64% of the neighborhoods with the highest urban heat intensity are predominantly inhabited by white households and 29% are predominantly inhabited by African-American / Black households.
- 53% of the neighborhoods with the lowest urban tree canopy coverage are predominantly inhabited by white households and 40% are predominantly inhabited by African-American / Black households.
- Neighborhoods predominantly inhabited by Latine/x and Hispanic households experience some of the lowest density of tree canopy coverage throughout the metro region.
- 100% of the most burdened neighborhoods are predominantly inhabited by African-American / Black households, experiencing the highest rates of asthma throughout the metro region.
- Neighborhoods predominantly inhabited by Latine/x and Hispanic households experience some of the highest rates of asthma throughout the metro region.
- African American / Black and Latine/x and Hispanic communities live in areas with poor access to healthcare compared to other areas within the metro region.
- African American / Black and Latine/x and Hispanic communities live in areas with some of the highest rates of poor community-wide mental health throughout the metro region.



About LivZero and Greenlink Analytics

About LivZero

LivZero is a place-based, participatory research firm that partners with community-based organizations to develop interdisciplinary climate solutions that genuinely reflect community experience. We're committed to addressing the historical, current, and systemic barriers that prevent communities most negatively impacted by climate change from being the decision-makers and story-tellers in policy and program development by providing them with the platform to lead and create local solutions.

We understand that to create place-based solutions, we must first understand our sense of place and the native lands we walk on. Our firm originated in Kansas City, Missouri - the native homelands of the Wahzhazhe (Osage), Kanza (Kaw), Jiwere (Otoe), and Nutachi (Missouria) peoples, along with many others who have been displaced from their ancestral lands. We respect and are fully aligned with pre-colonial, First Nations' beliefs in the sacredness of Mother Earth. We believe our relationship to Mother Earth is vital to addressing the human-induced climate crisis and reestablishing our inherent, symbiotic connection with nature.

This is a process of healing: ourselves, our communities, and the natural ecosystems we exist within. Throughout this process, we will encounter difficult, yet necessary conversations. And we are here to guide you through these heavy moments, holding your hand in an exercise of envisioning spaces where we all thrive together.

We are committed to elevating Indigenous leadership and stewardship in our work.

About Greenlink Analytics

Greenlink Analytics is an Atlanta-based 501(c)(3) nonprofit organization working to advance a clean energy transition as fast and fair as possible. Our team combines expert knowledge, data analytics, and machine learning to solve the most pressing climate and social issues, including energy burdens and pollution impacts, with the goal of improving lives and the environment.

We are among the best in the nation at helping people understand the impact of decisions made by and for them at the community, city and state level. We produce highly technical analysis and translate it into understandable formats that enable better decisions for the future. Data allows people to understand where they've come from and charts a course towards where they want to go. Knowledge is power, after all. Ultimately, we help develop the policy and program decisions that address the bedrock issues of climate change and inequitable development in the U.S.