

Environmental Racism

in St. Louis 2026

EXHIBIT C

EXHIBIT C

Environmental Racism in St. Louis 2026

Published by
The Interdisciplinary Environmental Clinic
Washington University School of Law
St. Louis, MO, USA 63130

February 9th, 2026

For more information, please visit www.environmentalracismstl.com



EXHIBIT C

ABOUT THIS REPORT

In 2019, the Interdisciplinary Environmental Clinic at Washington University School of Law prepared an in-depth analysis of the environmental injustices that disproportionately harm people of color and low-income residents in the City of St. Louis. That report, titled “Environmental Racism in St. Louis,” used publicly available data to quantify the disparate impacts of several environmental health issues pervasive throughout the City. The report also documented stories from St. Louis residents impacted by environmental racism. Six years later, we remain focused on moving St. Louis towards environmental equity.

The following report provides an updated quantitative and qualitative snapshot of seven environmental justice issues – Childhood Lead Poisoning, Asthma, Illegal Trash Dumping, Vacancy, Air Pollution, Food Apartheid, and Housing & Landlord-Tenant Relations – alongside recommendations for addressing them. We also highlight local groups working on solutions involving community organizing, legal advocacy, entrepreneurship, and more.

This report was prepared for the following organizations to assist their environmental justice advocacy efforts:



Metropolitan Congregations United puts faith into action by developing leaders who move their congregations, organizations, and communities to change public policy for the common good.

DeMarco Davidson, Executive Director

office@mcustl.com



Tenants Transforming Greater St. Louis (formerly Homes for All St. Louis) is a Black renter-led organization that catalyzes tenant associations and serves as an accountability mechanism for landlords to improve or maintain housing quality. Tenants Transforming Greater St. Louis campaigns for a more renter-friendly policy environment.

Kristian Blackmon, Executive Director

kristian@tenantstransformingstl.org



Sierra Club is America’s largest and most influential grassroots environmental organization, with more than 3.5 million members and supporters (including 28,00+ members and supporters in Missouri). In addition to protecting every person’s right to get outdoors and access the healing power of nature, Sierra Club works to promote clean energy, safeguard community health, protect wildlife, and preserve our remaining wild places through activism, public education, lobbying, and legal action.

Gretchen Waddell Barwick, Missouri Chapter Director

gretchen.waddellbarwick@sierraclub.org

EXHIBIT C

TABLE OF CONTENTS

INTRODUCTION	5
CHILDHOOD LEAD POISONING	6
COMMUNITY SPOTLIGHT: METROPOLITAN CONGREGATIONS UNITED.....	8
ASTHMA.....	9
COMMUNITY SPOTLIGHT: TENANTS TRANSFORMING GREATER ST. LOUIS	11
ILLEGAL DUMPING.....	12
VACANT PROPERTIES.....	15
COMMUNITY SPOTLIGHT: LEGAL SERVICES OF EASTERN MISSOURI	17
AIR POLLUTION.....	19
COMMUNITY SPOTLIGHT: SIERRA CLUB	21
FOOD APARTHEID	22
COMMUNITY SPOTLIGHT: ST. LOUIS CITY GREENS MARKET.....	24
HOUSING AND LANDLORD-TENANT RELATIONS.....	25
CONCLUSION.....	26
ACKNOWLEDGEMENTS	27
GLOSSARY.....	28
RESOURCES	30
ENDNOTES.....	33

EXHIBIT C

INTRODUCTION

Black St. Louisans are exposed to considerably greater environmental risks than the City's White residents. This leads to racial disparities across numerous quality-of-life measures.



Abandoned Care at St. Alexius Hospital, Gravois Park neighborhood. Photo Credit: Eric Conners. Aug. 29, 2025

In 2019, the Interdisciplinary Environmental Clinic (IEC) at Washington University School of Law worked with Action St. Louis, Arch City Defenders, Dutchtown South Community Corporation, and the Sierra Club to release the groundbreaking report “Environmental Racism in St. Louis.” The report showed that majority-Black regions of the City suffered significantly worse outcomes across several metrics of health and well-being:

- **Over 70%** of children with lead poisoning are Black
- Black children have a **2.4-times** higher rate of blood lead poisoning than White children
- **10-times** more Black children visit the ER for asthma each year than White children
- Black residents are **2-times** more likely to live in a food desert than White residents
- Home energy costs among Black communities are **2-times** higher than the City median
- **About 90%** of the City's vacant properties are located in majority-Black neighborhoods.

The report also found that majority-Black neighborhoods are more likely to file mold complaints, are subject to most of the City's illegal trash dumping and are located near most of the City's sources of industrial air pollution.

The 2019 report was an important step toward understanding the breadth of environmental injustice in St. Louis. But it is not enough to simply describe the challenges facing the City's historically disenfranchised communities; we must also propose actionable solutions.

To that end, the IEC has worked with community partners to develop evidence-based actions that can move us toward environmental equity. This report catalogues those recommendations alongside updated quantitative and qualitative analyses of the issues we discussed in 2019. While this report is hardly exhaustive, it represents a valuable tool for community groups, policymakers, researchers, and others working to effectuate positive change in the St. Louis community.

EXHIBIT C

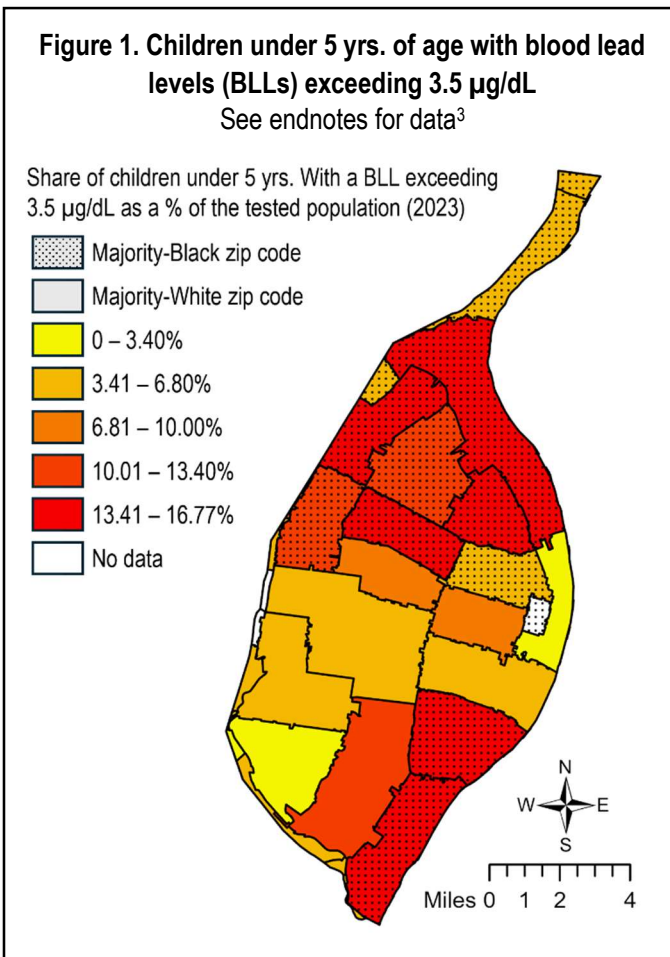
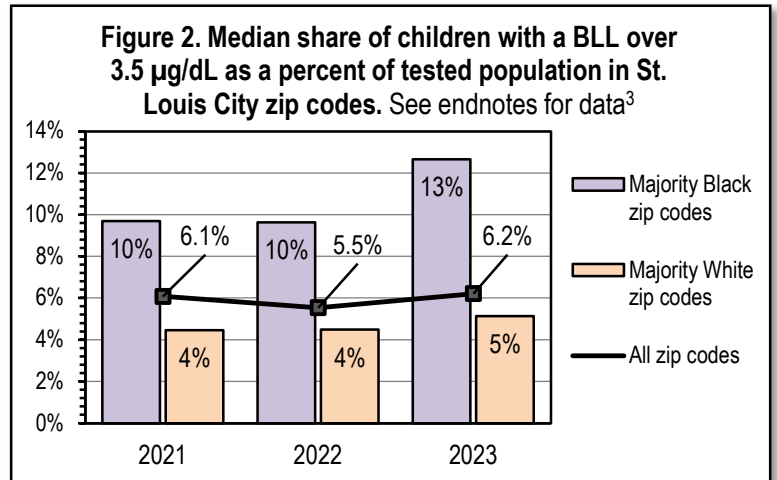
CHILDHOOD LEAD POISONING

No amount of lead exposure is safe for children.¹ Childhood lead poisoning can permanently damage the brain and nervous system, is associated with learning disabilities, and contributes to behavioral problems including aggression.² Making matters worse, most children with elevated blood lead levels show no immediate symptoms.

Childhood lead poisoning hits children in majority-Black zip codes the hardest

Data from the Missouri Department of Health and Senior Services (MDHSS) indicates that children living in majority-Black zip codes are consistently more likely to suffer from elevated blood lead levels (BLLs) than children living in predominantly-White zip codes (Figure 1).

In fact, our analysis indicates that in 2023, the median majority-Black zip code had a childhood lead poisoning rate of 13% – eight percentage points higher than that for the median majority-White zip code (Figure 2). This highlights that while lead exposure is a threat to all children across St. Louis, those living in majority-Black regions of the City continue to shoulder a tougher burden.



Updates to the lead testing landscape

In Oct 2021, the CDC decreased their blood lead reference value (BLRV) from 5.0 to 3.5 µg/dL. The BLRV is a screening tool to identify children who need follow-up care. The change in BLRV ensures that children with low but potentially harmful BLLs receive prompt intervention. Until recently, the Missouri Public Health Information Management System (MOPHIMS) Environment Public Health Tracking (EPHT) database did not reflect this change. **Fortunately, the database was updated in 2026, allowing users to query lead testing records based on the new BLRV.**

On Aug 28, 2022, Missouri’s Get the Lead Out of School Drinking Water Act (Mo. Rev. Stat. 160.077) established a drinking water standard for lead of 5 ppb for all Missouri schools and early childhood education programs receiving state funding.⁴ The State allocated \$27 million for public school districts to test, remediate, and filter drinking water. Results for tests at St. Louis Public Schools during the ’23 – ’24 school year can be found online.⁵ Samples for the ’24 – ’25 school year were scheduled to be released in December ’25. **However, these results have yet to be posted.**

In August 2023, HB402 expanded lead screening requirements for children in Missouri, requiring all children under 6 years of age to receive a lead risk questionnaire with optional blood lead testing at no cost. Additionally, parents of children under the age of 4 are now provided annual lead education, while their children are offered annual blood lead tests at no cost.⁶

EXHIBIT C

How can we address childhood lead exposure in St. Louis?

Improve data collection and dissemination

The State of Missouri and City of St. Louis gather substantial amounts of data on childhood lead exposure. The City of St. Louis Department of Health used to release annual reports that identified regions most at risk for childhood lead exposure. Unfortunately, the City has not released a report since 2018.⁷

WE RECOMMEND that the City release biennial lead reports. This would give parents, researchers, and other interested parties the information they need to understand trends in childhood lead exposure. Furthermore, these reports could help the City target outreach to the most at-risk communities.

We commend MDHSS for making much needed changes to the MOPHIMS EPHT database, most notably by reflecting the CDC's BLRV of 3.5 µg/dL. To ensure timely and accurate data collection, **WE RECOMMEND** that the database be regularly updated, no less than annually.

Subsidize soil testing

While lead-contaminated soil is prevalent in all urban environments, the risk is particularly high in St. Louis due to its history of lead smelting.¹² Yet residential soil testing is not included as part of the City's free lead inspection services. Instead, residents can submit soil samples to the University of Missouri Extension, which conducts lead tests for \$20 (with an additional one-time set up fee of \$25).¹³ However, this cost may present a financial barrier for many St. Louisans.

WE RECOMMEND the City partner with the University of Missouri Soil Testing Lab or other local institutions to provide subsidized testing to low-income City households, especially those with children under 6 or pregnant people.

Provide point of use water filters

Lead contaminated drinking water has no particular taste or color, which can leave residents in the dark without proper testing.⁸ Thankfully, "ANSI certified" point of use filters offer a low-cost way to remove lead from water.⁹ These can be attached directly to water faucets, inserted in refrigerator systems, or used in pitchers.^{10,11}

WE RECOMMEND the City or State provide free or subsidized point of use drinking water filters to low-income residents, particularly for households with children under 6 yrs. of age or pregnant people.

Post contamination notices in public spaces

St. Louis Public Schools recently removed miles of chain link fencing contaminated with lead paint, though these efforts are ongoing and have yet to be completed.¹⁴ While this progress is welcome, the City was aware of this problem for well over a decade and did not inform the parents or the public.¹⁵ Given the health consequences of childhood lead exposure, this silence was unconscionable.

WE RECOMMEND that the City conduct lead testing of surfaces and soils that are reasonably likely to be lead-contaminated at public areas in which children congregate (parks, playgrounds, libraries, etc.) and remedy any dangerous conditions. Upon detection of dangerous levels of lead, the City should post notices until the affected sites are remediated.¹⁶

Common sources of lead exposure

Many household items contain traces of lead that can be absorbed into the body

Adapted from: CDC, Midwest Newsroom, & The Missouri Independent



Water - Drinking water can pick up lead as it travels through lead pipes into homes



Products - Some household items like toys, dishes, or jewelry, can contain lead



Soil - Soil in urban areas can be contaminated with lead from its use in gasoline or from exterior paint



Paint - Until 1978, lead was commonly used in paint. Children in older homes can ingest or breathe in lead paint dust



Tracking in - Adults working in industries that involve lead can track it into their homes on their clothes

EXHIBIT C

Community Spotlight: Metropolitan Congregations United



Mission:

Metropolitan Congregations United (MCU) brings people of faith together through grassroots movements to address community and regional social justice issues.

DeMarco Davidson, Executive Director: DeMarco grew up in Robertson, a once-thriving Black community just north of Lambert Airport. Almost everyone was involved in his local church, which served as a pillar of the community. When the airport decided to expand its operations, government officials began buying homes for a fraction of their value. The church tried to hold out and advocate for the neighborhood's interests, but soon discovered radioactive waste from the Manhattan Project on its land and lost everything. Former Robertson residents, including DeMarco's family, now suffer with increased cancer rates from their long-term exposure to radioactive waste.^{17,18} DeMarco works with MCU because he believes in congregations' ability to organize around local issues, including environmental racism.

Beth Gutzler, Lead Environmental Justice Organizer: Like many parents in St. Louis, Beth Gutzler has had to navigate raising children in an area plagued by environmental injustice. Beth and her children lived in a home by the airport contaminated with asbestos tiles and lead paint. This contributed to her family and neighbors experiencing significant health problems, including high cancer rates and unusual numbers of ear infections.¹⁹ Beth wants to help parents by fighting against environmental injustices.

Myisha Johnson, Environmental Justice and Housing Organizer: After being diagnosed with cancer, Myisha turned to faith and received support from her community and pastor. Myisha soon realized that many other parishioners were suffering from chronic health issues, many of which were linked to environmental hazards beyond their control. Myisha works with MCU to build community and address the daily environmental injustices that St. Louisans experience.

Challenges Addressed: St. Louis residents need safer, more affordable homes in healthier environments. MCU believes St. Louis needs to implement rent control policies, protect against utility rate hikes, enforce the recently passed mold ordinance,²⁰

and increase protections against poor air quality. These policy changes must be accompanied by systemic improvements that increase equality and fairness for environmental justice communities.

MCU is also concerned about the harm caused by regional floods, which pose a threat to the City's outdated and dilapidated housing stock. Repairs are out of reach for many people, and lingering moisture leads to mold growth, which in turn worsens indoor air quality. In addition, many St. Louisans live in food deserts, with limited access to affordable fresh foods. While congregations and neighborhood members try to help through efforts like community gardens, it is not sufficient in the face of such widespread barriers to healthy foods.

Helping Communities: Poor regional air quality is a significant health hazard in St. Louis, yet it goes largely unrecognized. Case in point: there are only a few active air monitors in the City. MCU filled that gap by installing additional monitors on churches.²¹ This includes the monitor on Epiphany Church in South City, which came about following community concerns around pollution from the Veolia Incinerator in Sauget.

MCU is also tackling St. Louis's school-to-prison pipeline by addressing lead contamination at schools.²² MCU's coalition played an important role in pushing through the "Get the Lead out of School Drinking Water Act," requiring every school to make their water fountains lead-safe.

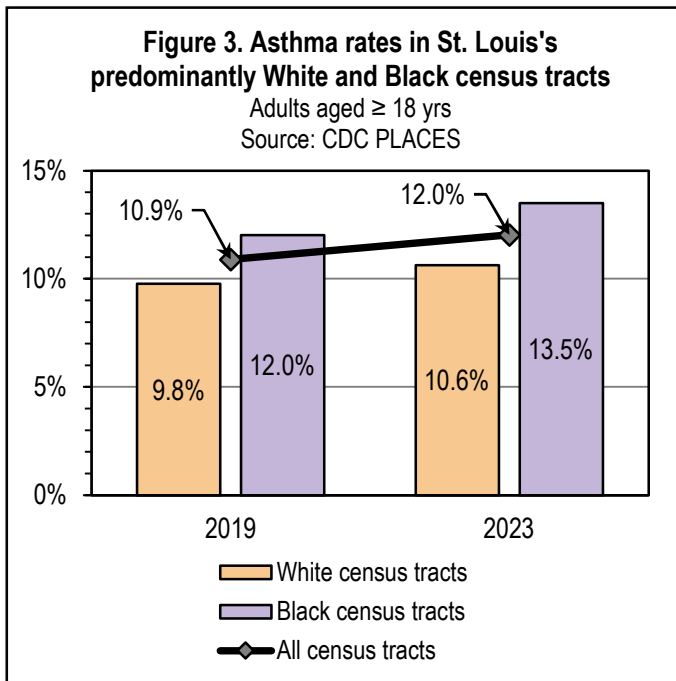
Barriers to Action: Funding is a significant challenge. Grants help, but do not provide all the funding MCU needs to accomplish its goals. Moreover, reductions in institutional faith, increased political polarization, and the struggle of engaging with an already overburdened community make it difficult to build coalitions and motivate residents to engage in activism. Still, MCU has made great strides in fostering community relationships.

EXHIBIT C

ASTHMA

A 2024 report from the Asthma & Allergy Foundation of America listed St. Louis as the #17 Asthma Capital in the country based on asthma prevalence, asthma-related emergency department visits, and asthma-related fatalities.²³ The report ranked St. Louis #1 in asthma-related fatalities and #6 in poverty, a significant risk factor for asthma. The 2025 follow-up suggests that St. Louis has modestly improved (overall rank: #32), though the City remains high on the list of asthma-related deaths at #2.²⁴

As we demonstrated in 2019, Black St. Louisans – particularly children – suffer worse asthma outcomes than White residents. A study published that same year by Dr. Kelly M. Harris at Washington University detailed further racial and socioeconomic disparities in asthma outcomes (**Box 1**). More recent data from the CDC show that this racial divide persists, at least among adults (**Figure 3**). While we do not present child-specific data in this report, we have no reason to think that the disparities presented in our 2019 report have improved.²⁵

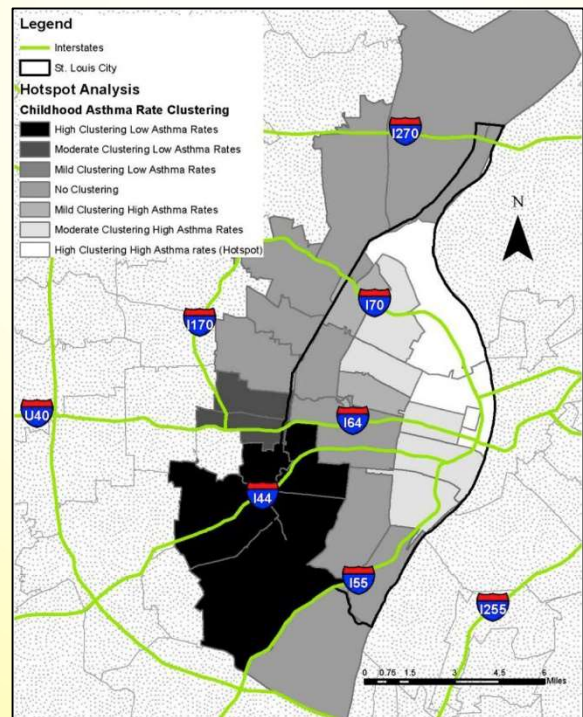


While there are many factors behind the City's exceptionally poor asthma outcomes for Black residents, environmental factors such as high levels of air pollution likely play a significant role. In fact, St. Louis ranks highest in airborne particulate matter concentrations among all Missouri counties.²⁶ As we discuss in the **"Air Pollution"** section, this hits Black residents hardest.

Asthma symptoms are further exacerbated by poor housing quality, which can increase exposure to environmental triggers. Decades of disinvestment has led to an aging housing stock in

Box 1: WashU Research Highlights Asthma's Disparate Impacts

In 2019, Assistant Professor Kelly M. Harris – leader of the Health Equity, Opportunity, and Education Laboratory at Washington University in St. Louis – published a study exploring how childhood asthma varies based on geography and demographic markers in St. Louis. Harris identified high asthma hotspots clustered in regions with high concentrations of older public housing, condemned/demolished properties, lower levels of vehicle ownership, and lower access to healthcare. These asthma hotspots are predominantly Black, lower income, and more reliant on Medicaid. This analysis reinforces our findings from 2019: **the burden of asthma falls most heavily on historically disenfranchised communities in St. Louis.**



High asthma "hotspots" shaded white in North St. Louis.
Source: Harris KM. "Mapping Inequality: Childhood Asthma and Environmental Inequality in a Case Study of St. Louis, Missouri" (2019).

EXHIBIT C

the majority-Black areas in North St. Louis, leaving residents at greater risk of environmental exposure.²⁷ The “Vacancy” section expands on the City’s housing infrastructure issues.

Finally, limited access to healthcare can worsen asthma outcomes by leaving individuals without the tools they need to manage their symptoms. As **Figure 4** illustrates, low access to healthcare is strongly correlated with asthma rates in St. Louis.²⁸

Moreover, superimposing these data on a map of the city reveals that census tracts with the **highest asthma prevalence** and **lowest access to healthcare** are primarily located in North City (**Figure 5**). As has been documented elsewhere (including this report), this region of the City is predominantly-Black and low-income.

Recommendations for addressing asthma

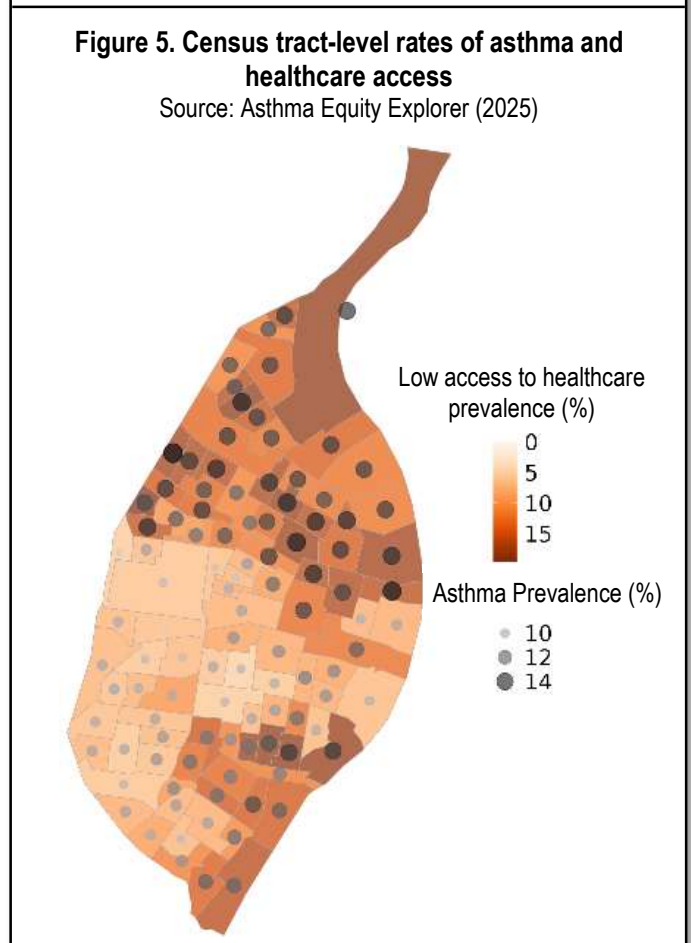
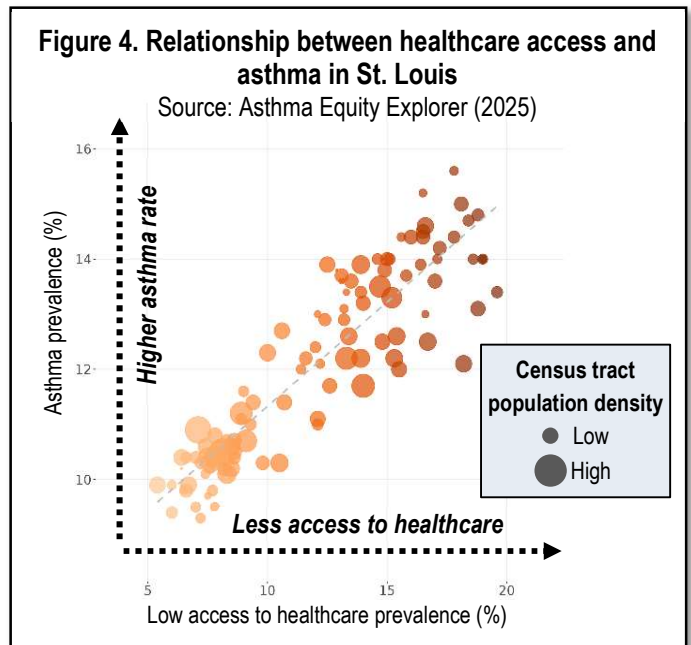
The Health Equity Advancement & Leadership (HEAL) Program

In 2022, the Asthma and Allergy Foundation of America (AAFA) launched the Health Equity Advancement and Leadership (HEAL) program to address asthma disparities in America borne out by systemic racism and other social determinants of health.²⁹ St. Louis was one of 4 cities to obtain funding during the HEAL program’s inaugural year, receiving \$125,000 to spearhead “Asthma Care for Older Adults.”³⁰ This partnership between Clayton-based St. Louis Oasis and the St. Louis AAFA Chapter offers one-on-one asthma education, home visits or virtual meetings to identify asthma triggers, and no-cost products such as air purifiers and bedding.³¹ **WE RECOMMEND** that the City continue to explore programs like HEAL by partnering with local medical providers, federal funders, and non-profits that can deliver aid to those with limited access to healthcare.

Addressing Asthma in Schools

When schools play a role in effective asthma management, they can help to reduce absences and disruptions within the classroom and support children’s ability to participate in physical education.³² To that end, **WE RECOMMEND** that Missouri require school nurses to undergo advanced asthma training. This will help nurses reduce students’ asthma attacks and empower them to train other school personnel on asthma prevention techniques.³³

Additionally, AirNow.gov’s **Air Quality Flag Program** provides schools with a low-cost, low-effort way to keep students, teachers, and caregivers informed about fluctuations in air quality that impact asthma symptoms. Each day, schools put out a color-coded flag corresponding to the day’s air quality.³⁴ On days where air quality is poor, schools can be proactive about students’ asthma triggers by adjusting activities and reducing exposure to air pollution. This gives schools and caregivers actionable steps to help children mitigate their symptoms.³⁵ AirNow.gov also offers air quality emails and texts, flag program newsletters, outdoor activity guides, air quality lesson plans, and other resources. Despite the



potential benefits, this program is only active in a few schools in East St. Louis and at the Kirkwood Middle School.³⁶ Given the low barrier to entry – a set of five flags can be purchased for \$100 – **WE RECOMMEND** that schools adopt the program .

EXHIBIT C

Community Spotlight: Tenants Transforming Greater St. Louis



To get involved:

Renter Hotline: (314) 252-8356
www.tenantstransformingstl.org

Sunni Hutton, Co-Founder: Sunni has experienced poor housing conditions and knows how far landlords will go to maintain an unjust status quo. After learning of a bedbug infestation at her apartment, Sunni quickly discovered that both her landlord and the City were unable – or unwilling – to address the problem. So, Sunni and her neighbors decided to create the change on their own. They wrote their landlord a letter threatening a rent strike and publicized his inaction on social media, forcing him to address the infestation. Sunni then hosted a meeting to build community and inform renters about their rights, kickstarting her career in social justice organizing.



Mission:

Improving housing justice for renters and tenants through advocacy and organizing. Tenants Transforming Greater St. Louis's members work to create policy that promotes safe and equitable housing for all.

Challenges Addressed: Tenants pay increasingly expensive rent for homes that expose them to environmental hazards like lead and mold, yet lack the resources that would make it easy to fix those issues themselves. Costly repairs are out of reach for many people living paycheck to paycheck; landlords are able to raise rent while neglecting their responsibilities; and the City struggles to identify and rectify the problems facing tenants.

Policies & Goals: Tenants Transforming Greater St. Louis pushes to improve coordination among City Departments involved in rental code enforcement. They also advocate for improvements in the law to protect tenants from landlord retaliation, require rental unit inspections, create a statutory warranty of habitability, and enshrine the tenant's right to organize.

Helping Individuals: Tenants Transforming Greater St. Louis empowers tenants to improve their living conditions by informing them about their rights. It maintains tenant-led organizations

and hosts a hotline to address the issues renters regularly face, including legal issues and energy burdens.

Helping Communities: Tenants Transforming Greater St. Louis was instrumental in enacting several city ordinances that improved tenants' rights. These include the creation of a tenant's right to counsel; the start of a rental registry; the requirement that landlords provide safe temperatures in rentals, and mandates around mold prevention and remediation.³⁷ Tenants Transforming Greater St. Louis is currently working with the City to map out the code enforcement process.

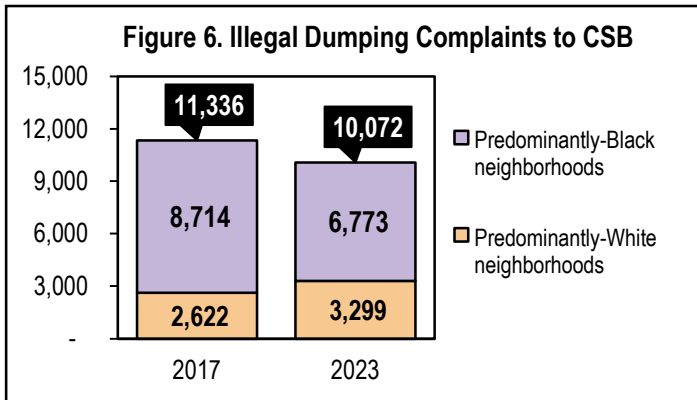
Organizational Hurdles: Funding is always a challenge for nonprofits. It is especially difficult for Tenants Transforming Greater St. Louis, as their work focuses on community organizing that leads to legislative victories. While this work is critical, it often occurs outside of the public's eye. The process of creating systemic change is lengthy and complicated, often exacerbated by a revolving door of City Leadership.

EXHIBIT C

ILLEGAL DUMPING

Illegal trash dumping reduces property values, endangers human health, and is even linked to violent crime.^{38,39} Moreover, it intersects with several challenges outlined in this report. For instance, vacant buildings and lots are attractive targets for those seeking to dispose of waste. As we show below, this crime of convenience disproportionately impacts Black residents.

By some measures, illegal dumping has modestly improved since our last report. In 2017, the Citizen's Service Bureau (CSB) received 11,336 illegal dumping complaints. By 2023, this fell about 11% to 10,072 (Figure 6).

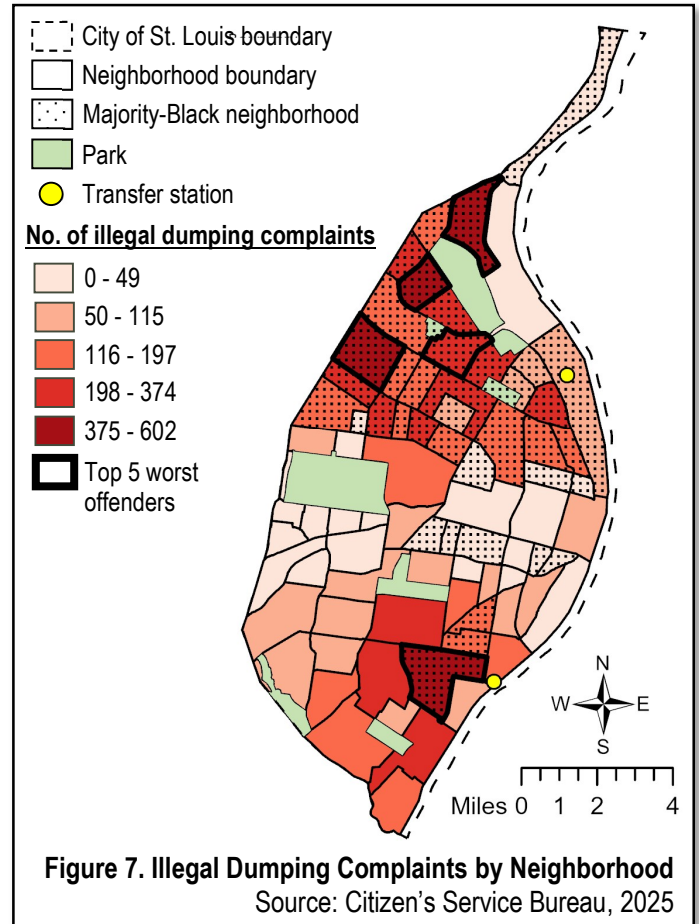


But by other measures, the problem is as bad as ever. Most concerning is the fact that predominantly-Black and low-income areas of the City continue to endure the bulk of illegal dumping (Figures 6 and 7).

In 2022, the City issued a record 678 summonses amounting to 818 charges for illegal dumping⁴⁰. The three areas with the most summonses were the 22nd Ward, 1st Ward, and 4th ward.⁴¹ Each of these wards encompasses majority-Black neighborhoods like Wells Goodfellow, Hamilton Heights, Kingsway West, Kingsway East, Greater Ville, and The Ville.

Additionally, while the total number of illegal dumping complaints from predominantly Black neighborhoods fell from 2017 to 2023 (Figure 6), the neighborhood-level numbers reveal persistent problem areas. In 2017, six neighborhoods received the most complaints: **Baden, Dutchtown, Greater Ville, Penrose, Walnut Park East, and Wells Goodfellow**.⁴² Each of these neighborhoods is over 90% Black.

In 2023, those same neighborhoods were among the top eight worst offenders, with just five neighborhoods – **Walnut Park East, Dutchtown, Wells Goodfellow, Baden, and Penrose** – accounting for roughly one-quarter of all complaints (Figure 7). Thus, the story of illegal dumping in St. Louis remains mixed, as the data show persistent racial disparities despite modest progress.



Recommendations for addressing illegal trash dumping

Minimize incentives to illegal dumping and track outcomes
Efforts to combat illegal waste disposal must contend with *why* people engage in this behavior (Box 2). If a proposed initiative does not specifically address one of these motivating factors, it is doomed to fail. **WE RECOMMEND** that the City set up a formal task force, with representatives from the Mayor's Office, Forestry, Sanitation, Police, City Attorney's Office, Vacancy Collaborative, and Missouri Department of Natural Resources to develop a proactive plan that targets these specific motivating factors. Philadelphia's "litter cabinet" and New Jersey's Clean Communities both provide good models for action.⁴³

EXHIBIT C

Additionally, it is imperative that City officials gauge the success of any initiative using specific and measurable criteria. Key success metrics might include:

- ☑ **Tonnage reduction:** Decrease in total volume of illegally dumped materials collected
- ☑ **Cost savings:** Reduced municipal spending on cleanup and remediation
- ☑ **Site frequency:** Fewer repeat incidents at chronic dumping locations
- ☑ **Financial recovery:** Revenue generated from fines and penalties
- ☑ **Complaint reduction:** Fewer complaints (city-wide and neighborhood-level)
- ☑ **Equity:** Bring majority-Black regions in line with majority-White regions across all relevant metrics

Look to other cities for guidance

St. Louis can learn from other cities that have tackled this issue. For instance, Philadelphia's recent Zero Waste Litter Action Plan offers a framework of short- and long-term priorities around litter enforcement and clean public spaces.⁴⁴ Baltimore adopted a 10-Year Solid Waste Management Plan including multi-agency, city-wide clean-up events, a recycling cart initiative, and a small hauler program to facilitate small commercial waste haulers.⁴⁵ Plans like these can offer useful frameworks for City officials.

Beautify vacant lots

Currently, the City responds to illegal dumping through policing and by sending clean-up crews when dumping is reported. Cleaning up trash is an important but temporary fix. Proactive beautification efforts (e.g., turning vacant lots into pocket parks) and deterrents (e.g., installing fencing or bollards) offer more permanent solutions. The St. Louis Vacancy Collaborative's Vacancy to Vibrancy Small Grants Program empowers local groups to make such changes.⁴⁶ Local organizations can apply for \$1,500 - \$5,000 for vacant lot beautification. As of 2025, grantees receive full project support from the Vacancy Collaborative and Pocketparks,⁴⁷ ensuring efficient and effective implementation.

WE RECOMMEND that vacant lots with longstanding illegal dumping issues should be prioritized for revitalization. This will not only have a positive effect on vacancy, but also reduce illegal dumping and its downstream effects.

Re-think City Transfer Stations

St. Louis city residents can deposit up to twelve loads of waste per year at City Transfer Stations.⁴⁸ There are two Transfer Stations: one located in the Near North Riverfront neighborhood, and one along the Mississippi River near the Mt. Pleasant and Marine Villa neighborhoods (**Figure 7**).

Why do People Engage in Illegal Dumping?

- ⇒ Lack of convenient disposal sites
- ⇒ Ignorance of consequences
- ⇒ Lax enforcement
- ⇒ To save money
- ⇒ Laziness

Illegal Dumping: Who Dumps Illegally?
N.C. Department of Environmental Quality

Box 2

Stations only operate during business hours (M-F, 8:00 AM – 4:00 PM); weekend service was discontinued on June 30, 2023.⁴⁹ To dispose waste, residents must bring proof of City residency (e.g., a recent utility bill), while renters must also show evidence that their property owner pays the Solid Waste Fee. Waste from businesses, charities, churches, or other non-profits, or individuals suspected of “hauling for hire,” are currently rejected.

These barriers to use, though likely born out of pragmatic concerns related to capacity and misuse, may have the unintended consequence of exacerbating illegal dumping throughout the City by making the proper channels more difficult (if not impossible) to use.

WE PROPOSE eliminating or adapting these restrictions to help encourage disposal at Transfer Stations. For instance:

- ⇒ **Reconsider operating hours.** Expand hours to include some weekends and non-business hours.
- ⇒ **Expand the user base.** Permit disposal by charities, churches, non-profits, and similar organizations.
- ⇒ **Allow non-City residents to use Transfer Stations.** Over half of the record number of illegal dumping citations issued in 2022 were for people living outside of St. Louis.⁵⁰ These out-of-town dumpers could not have used City Transfer Stations even if they wanted to due to the City residency requirements mentioned above. While these rules may be intended to stem the influx of outside waste, they have the unintended effect of incentivizing illegal disposal elsewhere in the City.
- ⇒ **Educate the public.** The City and other stakeholders (e.g., neighborhood associations) must inform the public about how best to utilize transfer stations.

EXHIBIT C

Track the impacts of recent changes to enforcement

Enforcement largely falls upon the City's Environmental Investigation Unit (EIU). EIU relies on citizen reports through CSB along with footage from 255 cameras installed throughout St. Louis.

In 2023, EIU completed a pilot program of new cameras, with an expansion funded through \$1 million from the American Rescue Plan via the St. Louis Infrastructure Plan (Board Bill 184).⁵¹ The year prior, voters approved Prop F, which increased the maximum fine for illegal dumping from \$500 to \$1,000. Offenders must also complete 40 hours of community service.⁵² It remains to be seen whether additional cameras and increased fines lead to fewer illegal dumping complaints.

As the city continues to monitor illegal dumping activity, **WE RECOMMEND** that the city contextualize its data alongside these changes to understand what effect – if any –they have on illegal dumping. The City should be prepared to understand the causal relationship between these changes and the number of complaints it receives.

For instance, do regions that receive new cameras show a decrease in complaints? Do increased fines generate more revenue? Without those kinds of details, it will be unclear whether these changes to monitoring and enforcement practices are effective at mitigating illegal dumping.

Ramp up enforcement around problem industries

Large-scale, industrial illegal dumping is a significant problem in St. Louis. Based on the types of waste recovered, it appears that tire recyclers, demolition companies, and builders generate an outsized amount of illegally dumped waste.⁵³ Thus, EIU should be proactive about ensuring these industries comply with existing ordinances. **WE RECOMMEND** that EIU conduct spot checks at the job sites of industries known to engage in illegal dumping.

WE ALSO RECOMMEND that the City enact policies requiring high-risk industries to maintain proof of proper waste disposal, such as paid receipts from waste haulers or landfills. Proof of proper disposal should be required for post-construction occupancy permits, or to renew tire recyclers' facility and hauling permits. Failure to provide proof of appropriate disposal should be met with escalating penalties, based on the frequency and severity of the problem.



Illegal dumping in the Baden neighborhood in North St. Louis. Photo credit: Eric Conners.

EXHIBIT C

VACANT PROPERTIES

St. Louis has a significant problem with vacant, deteriorating, and/or unsafe properties.⁵⁴ These properties are more than just an eyesore; vacancy is self-perpetuating and leads to other forms of blight like illegal trash dumping and criminal activity. High vacancy rates decrease property values in the area, erasing generational wealth in affected neighborhoods. As with many public health issues, vacancy disproportionately impacts St. Louis's Black and low-income residents.

St Louis is home to over 21,000 vacant properties

In 2019, we found that upwards of **90%** of the City's vacant properties were located in majority-Black neighborhoods. At that time, just three neighborhoods – Wells Goodfellow, Jeff Vanderlou, and Greater Ville – contained about **25%** of all vacant properties.

Little has changed since then. Today, **87%** of the City's 21,000+ vacant properties are located in majority-Black neighborhoods (**Figure 8**). The three majority-Black neighborhoods mentioned above still contain about **25%** of all vacant properties.

Hypervacancy hits North St. Louis hardest

When a neighborhood's vacancy rate exceeds 20%, it becomes "hypervacant." St. Louis is home to 27 hypervacant neighborhoods. All of them are majority-Black, with each neighborhood having a median Black population share of 96%. All but one is located in North St. Louis (**Figure 9**).

North St. Louis is also home to the Top 10 most hypervacant neighborhoods in the City. These neighborhoods contain almost half of the City's vacant properties, despite covering only about 10% of the City's land area. They are all over 90% Black.

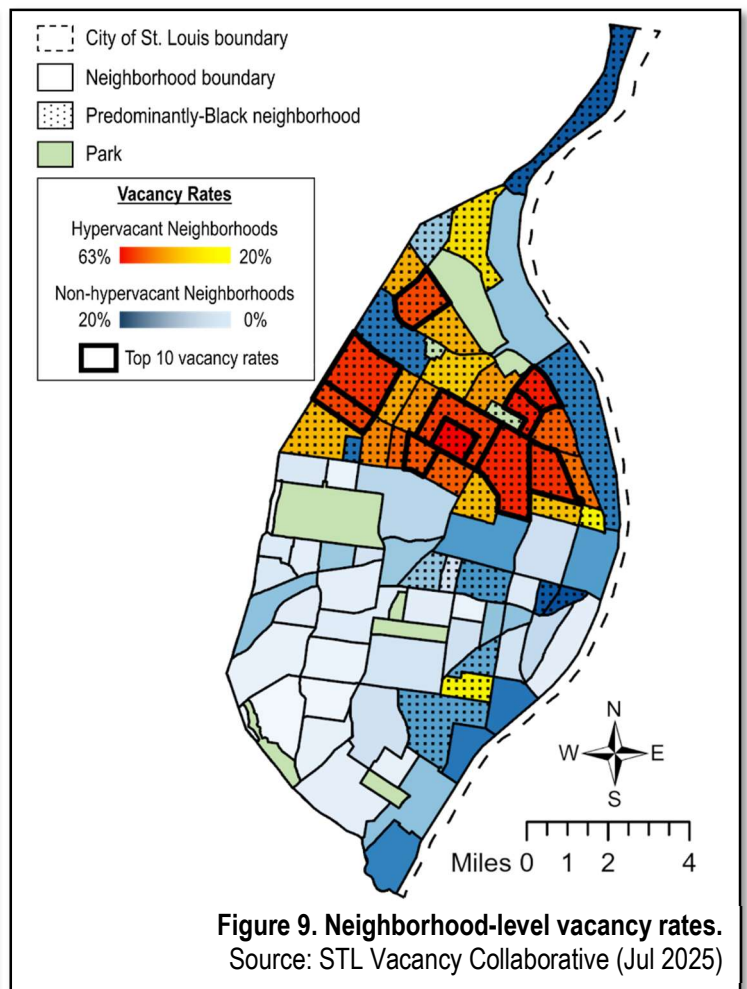
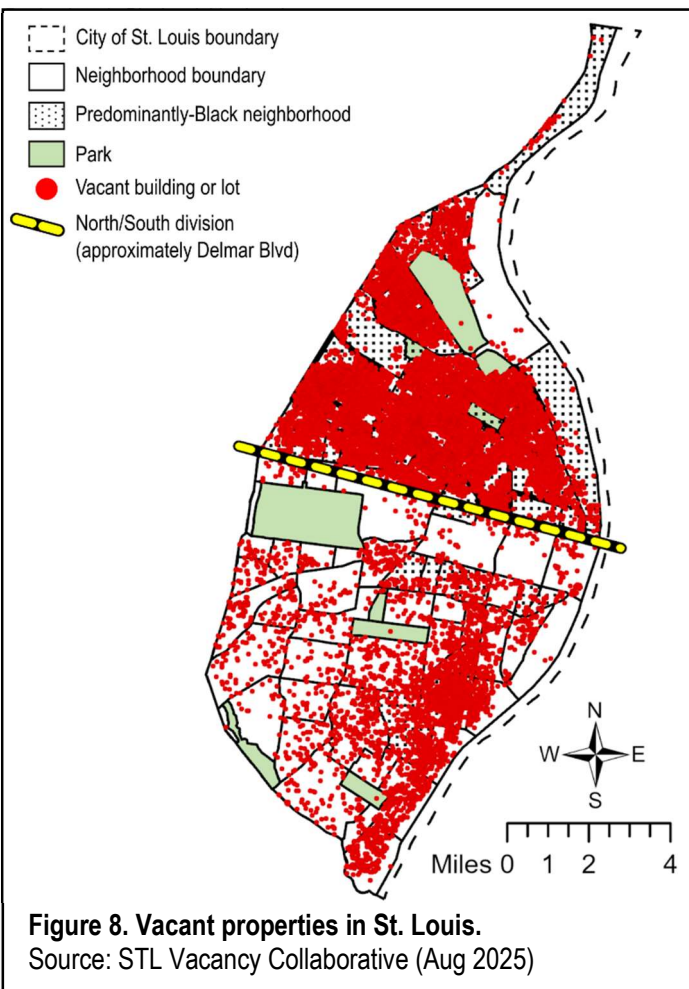


EXHIBIT C

Recommendations for addressing vacancy

Improve Tax Foreclosure Processes for Vacant Code-Violating Properties

Many of St. Louis's vacant, code-violating properties are also tax delinquent. Because abandoned properties tend to deteriorate over time, the length of abandonment affects the cost and feasibility of rehabilitation. A faster, more efficient tax foreclosure and sale process would lead to increased private interest and investment in vacant homes.⁵⁵ **WE SUPPORT** the St. Louis Vacancy Collaborative's recommendation to enact policies, legislation, and practices that improve the City's capability to foreclose and sell vacant, code violating, tax delinquent properties.⁵⁶

Improve Enforcement of Building and Property Maintenance Codes

St. Louis's ordinances require properties to be free from nuisance conditions. Vacant properties that comply with these ordinances are less likely to deteriorate beyond salvage. Unfortunately, given the large number of vacant structures, the Building Division lacks sufficient resources to effectively enforce the code. **WE RECOMMEND** that the Building Division appoint a property inspector whose sole responsibility is the inspection

and management of vacant properties. **WE ALSO RECOMMEND** that code enforcement officials adopt the strategic approach advocated by the St. Louis Vacancy Collaborative and prioritize: (1) conducting roof inspections and enforcement to limit water infiltration; (2) securing vacant structures; (3) code enforcement on absentee owners; and (4) code enforcement on absentee landlords.⁵⁷

Vacancy: Educate Homeowners About Beneficiary Deeds

A home is often the largest asset one passes on to their heirs at death. When a property owner dies without an appropriate estate plan, their relatives must go through the probate courts to gain control of the property. This process may be too difficult or costly for survivors. As a result, many properties end up in legal limbo with no owner.⁵⁸

Thankfully, there is a low-cost option to avoid this: Beneficiary Deeds. These simple documents, once put on file with the Recorder of Deeds, allow people to pass on real estate without having to go to court.⁵⁹ **WE RECOMMEND** that the City and nonprofit organizations increase public education campaigns about Beneficiary Deeds, focusing their efforts on areas with high rates of vacancy.



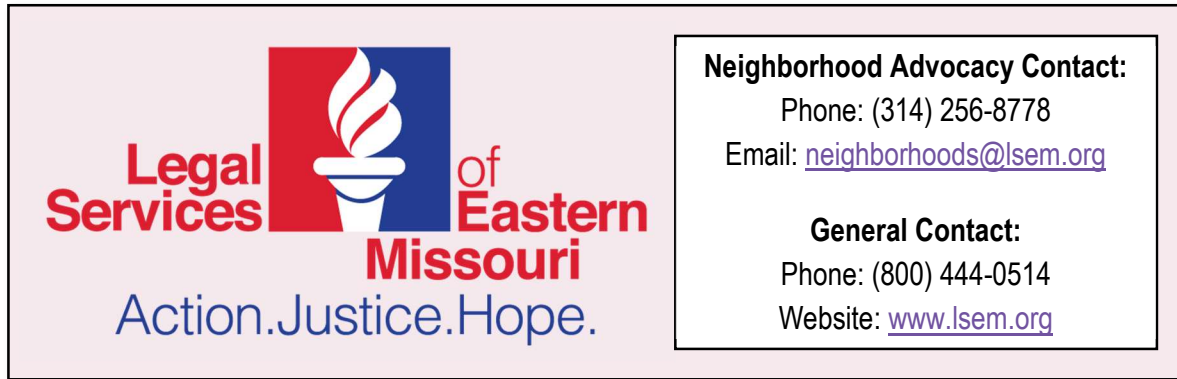
Top left and bottom right: the abandoned Care at St. Alexius Hospital property on S. Jefferson in the Gravois Park neighborhood in South City.

Top right: an abandoned property on Annetta Avenue in the Baden neighborhood in North St. Louis.

Photo credit: Eric Connors

EXHIBIT C

Community Spotlight: Legal Services of Eastern Missouri



Mission:

Legal Services of Eastern Missouri (LSEM) advances justice through legal representation, education, and supportive services. LSEM has provided free legal help to more than 1 million low-income individuals and families in need of legal representation on civil matters.

Challenges Addressed: Low-income people and families in St. Louis face myriad barriers to justice. A person's race and zip code play an outsized role in determining the resources and opportunities available to them. Environmental harm disproportionately affects residents of our regions' poorest neighborhoods.

Helping Individuals: LSEM advances justice through legal representation, education, and supportive services. Each year LSEM represents some 7,000 individuals to address their civil legal needs. These individual cases include, among other things, assistance accessing health coverage, public benefits, and health care; advocacy for those facing eviction, loss of housing assistance and poor living conditions; defending consumers facing debt actions and protecting consumers from fraudulent or abusive schemes; and representation in family law cases to help survivors leave abusive situations and make a new start.

Helping Communities: LSEM also partners with the community to improve lives, promote fairness, and create opportunities for those in need. They collaborate with many community partners to monitor and address environmental justice issues like blight, disinvestment, energy burdens, and housing instability. LSEM's Neighborhood Advocacy program is specifically dedicated to preserving homeownership, preventing property abandonment, and assisting neighborhoods to reclaim and rehabilitate vacant and abandoned property through court actions.

Overcoming Barriers: The civil legal needs of low-income people and families in our community far outstrip available resources. Further, the legal system often advantages people with money, resources, and power. In the face of these challenges, LSEM strives to act for and with others to be a voice for justice and to provide hope for those in need.

Meet Some Members of the Team at Legal Services of Eastern Missouri



Dan Glazier, Executive Director and General Counsel: Dan grew up in a household that valued giving back. His mother, a social worker, and his father, a dentist who offered pro bono services, emphasized the idea of tikkun olam – “repair and improve the world.” Dan has put his parents’ lessons into practice as he has worked to help his clients over his 40 years of professional service.

Lisa D'Souza, Teitelman Chair: Lisa is passionate about making our region a place where everyone has an equal opportunity to thrive. She focuses on litigation and other impact advocacy tools to achieve systemic change and strives to empower her clients and engage in community-centered advocacy.



Peter Hoffman, Managing Attorney for Neighborhood Advocacy: Peter is a sixth-generation St. Louisan dedicated to improving quality of life in the city’s urban core. His work focuses on addressing systemic disparities through neighborhood-centered legal strategies that stabilize communities and expand opportunity in St. Louis’s overlooked neighborhoods. As Peter explains, *“If we can do things to improve the built environment around our people, they are going to have greater opportunities for success that spreads throughout the community.”*

Abbie Leonard, Social Worker: Abbie believes that every St. Louisan deserves access to a safe and affordable home. She works with tenants to improve their housing conditions and empower their communities to fight systemic poverty and inequality across the region.

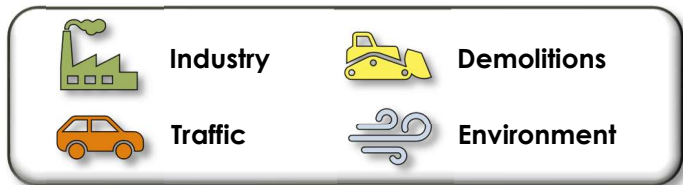


EXHIBIT C

AIR POLLUTION

Air pollution is an invisible environmental danger that contributes to premature death, heart attacks, asthma, and reduced lung function.⁶⁰ While St. Louis has achieved meaningful improvements in air quality, there are still significant racial disparities in the impacts of air pollution.

What contributes to poor air quality in St. Louis?



In the six years since our 2019 report, air pollution from industry and traffic remains roughly consistent, including their impacts on Black communities (after all, major roadways are still in place, as are many of the polluting industries that have been in the City for decades). Below, we examine how demolitions and environmental factors like particulate matter impact the air that residents breathe.

Most demolitions occur in North St. Louis

Building demolitions release particulate matter (PM_{2.5}), hazardous materials (e.g., asbestos & lead), and construction equipment emissions.⁶¹ The pollutive effects from demolitions are temporary but intense, while frequent demolitions in close proximity can have cumulative effects on workers and residents living nearby.⁶²

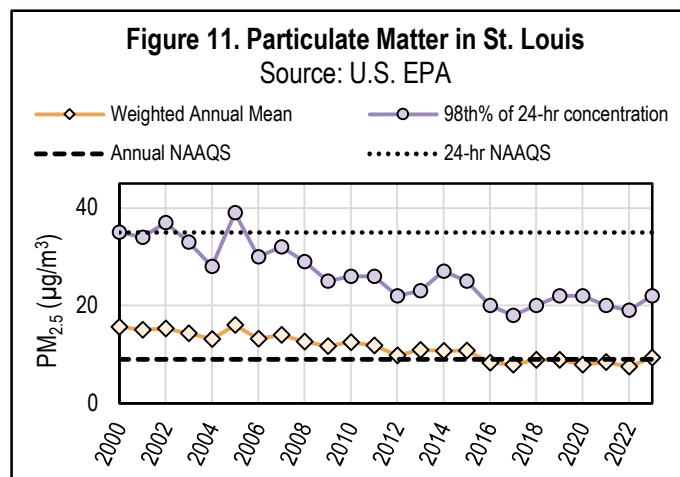
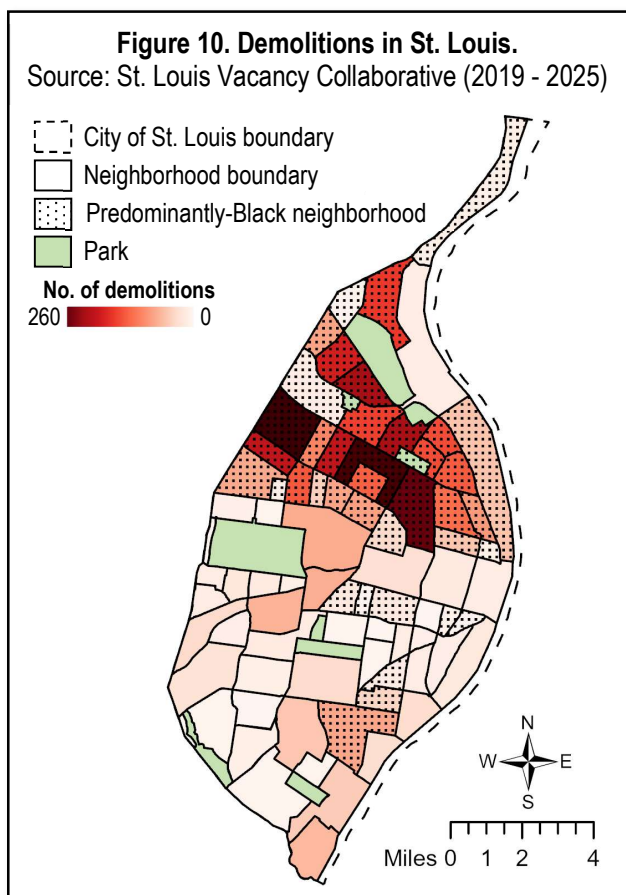
We last reported that there were 3,025 demolitions from 2014 – 2019, most of which occurred in majority-Black neighborhoods. In fact, 20% of all demolitions occurred in just 3 majority-Black neighborhoods: Wells Goodfellow, Walnut Park East, and Baden.

Over the next 6 years, there were another 3,003 demolitions, 86% of which occurred in majority-Black wards. **Figure 10** shows that the vast majority of demolitions still occur in North City. The majority-Black neighborhoods of Greater Ville, Wells Goodfellow, and Jeff Vanderlou accounted for 22% of all demolitions.

It is difficult to disentangle the exact contribution that these demolitions have on air quality and health outcomes in St. Louis. Nevertheless, we know enough about the acute and chronic health risks associated with exposure to the kinds of hazardous materials released by demolition to infer that such a high rate of demolitions are likely to have a negative effect on those living nearby.

Particulate matter concentrations are a City-wide concern

From 2000 – 2022, St. Louis decreased PM_{2.5} pollution from a high of 16 µg/m³ to a low of 7.5 µg/m³ – a 53% reduction (**Figure 11**). But there are warning signs that these positive trends are reversing: in 2023, PM_{2.5} jumped to 9.3 µg/m³. This exceeds all neighboring counties and all counties in the state.⁶³



Other measures of air quality paint a similarly concerning picture. A report by the American Lung Association concluded that St. Louisans are breathing some of the most polluted air in the country and assigned the St. Louis Metro Area an “F” grade for ozone pollution and a “D” for particulate pollution.⁶⁴ While air pollution affects all residents, risk factors that are prevalent among Black and low-income communities – like asthma and low access to healthcare – undoubtedly exacerbate its effects.

EXHIBIT C

How can we address air pollution in St. Louis?

Enforce Clean Air Act Against Coal Fired Power Plants

Ameren's Labadie Power Plant — the second deadliest coal-fired power plant in the country — never installed modern air pollution controls to limit the sulfur dioxide (SO₂) and nitrogen oxides (NO_x) pollution from its smokestacks.⁶⁵ Ameren can afford to install these controls; it earned \$7.623 billion in revenue and \$1.182 billion in net income in 2024 alone.⁶⁶ Nevertheless, the permits issued by Missouri's Department of Natural Resources do not require them to do so.⁶⁷ **WE RECOMMEND** that the Missouri Department of Natural Resources fulfill its statutory duty and properly enforce the Clean Air Act against Ameren, requiring it to install modern pollution controls on its smokestacks.

Increase Resources and Incentives for Renewable Energy Production

Missouri is highly dependent on coal for its energy production, a process that releases dangerous pollutants like SO₂ and NO_x into our air.⁶⁸ These types of air pollutants are linked to approximately 300,000 premature deaths each year nationwide, and cost Americans up to \$77 billion in health care costs.⁶⁹ Meanwhile, climate- and public health-friendly alternatives like solar are experiencing historically unprecedented growth.⁷⁰ Missouri has an opportunity to be a leader in these rapidly growing industries — if it is willing to take initiative. **WE RECOMMEND** that the State use resources and incentives to encourage utilities and homeowners to invest in renewables like solar and wind. This initial investment will modernize our energy production methods, making the state healthier and more sustainable.

Repeal or Revise Limitations on Missouri Department of Natural Resources

The Missouri legislature enacted laws that prevent state and local officials from crafting environmental laws that are stricter than those implemented by the federal Environmental Protection Agency.⁷¹ This statute prevents the State from properly responding to matters that affect Missourians' health and safety. **WE RECOMMEND** the State remove this provision — which strips the State of Missouri of its own sovereignty — and give the Department of Natural Resources the authority to make critical environmental decisions for Missouri residents.

Enforce Demolition Safety Laws

Demolition safety laws require contractors to identify and abate certain environmental toxins before demolishing a structure, to limit the spread of dust and debris during demolition, and to properly dispose of waste after demolition.⁷² Unfortunately, those laws are insufficiently enforced, exposing neighboring

residents to harmful airborne substances like asbestos, lead, and mold.⁷³ **WE RECOMMEND** that the City prioritize funding and staffing of the Building Division, giving it the resources necessary to effectively enforce the law.

Increase the Number of Air Monitors

The Missouri Department of Natural Resources (MDNR) is tasked with tracking air quality in the City of St. Louis. However, it tracks air quality at only a few locations concentrated near Forest Park and the Fairground Neighborhood (**Figure 12**).⁷⁴ This is insufficient for one of the most polluted cities in America.⁷⁵ **WE RECOMMEND** that St. Louis install a more expansive network of active air quality monitors so it can accurately monitor the air its residents breathe.

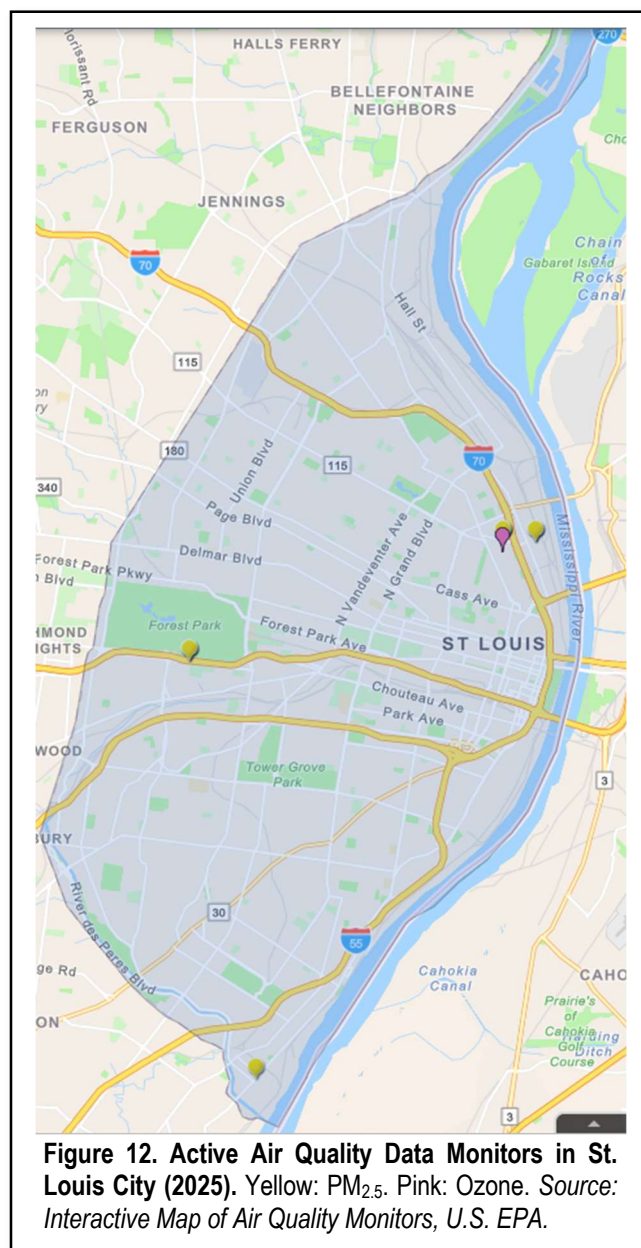


EXHIBIT C

Community Spotlight: Sierra Club

	<h1>SIERRA CLUB</h1> <p>MISSOURI CHAPTER</p>	<p><u>How to Get Involved:</u></p> <p>Eastern Missouri branch: www.sierraclub.org/missouri/eastern-missouri</p> <p>Sierra Club National: www.sierraclub.org</p>
---	--	--

Mission:

Sierra Club is a national grassroots organization working to protect communities and tackle climate change by pushing for clean energy, an end to coal fired power, and clean water and air for all.



Mahala Prueitt-Pittman, St. Louis Chapter Field Organizer: Mahala understands how harmful high energy costs can be for marginalized families. Growing up, her family sometimes resorted to leaving the oven on overnight to keep their home at livable temperature. Experiences like this taught Mahala the importance of advocating for herself and

those around her. Today, she works on behalf of marginalized communities, particularly with respect to the harms of the coal power plant industry. She also teaches communities how they can be their own best advocates.

Challenges Addressed: Sierra Club focuses much of its work on moving the region towards clean, safe, and affordable energy. Utilities, which operate as state sanctioned monopolies, place a high energy burden on St. Louisans. In addition, regional coal fired power plants refuse to install the pollution controls necessary to control their air and water pollution, which causes significant harm to human health and the environment. Utilities retain their profits while residents absorb the costs.

Policies & Goals: Sierra Club strongly believes that community solar programs can and will alleviate the energy burdens created by Ameren. Because many communities lack the funds and ability to create such programs, Sierra Club pushes the government to enact policies that make these programs more accessible. Sierra Club also advocates for proper enforcement

of federal and state environmental laws against power plants, requiring them to mitigate their air and water pollution and reduce energy costs.

Helping Individuals: Sierra Club prepares informational materials to promote awareness of the harms caused by coal fired power plants around St. Louis and the burdens those plants impose on City residents, particularly those in marginalized communities. By facilitating discussions within the community, Sierra Club helps its neighbors recognize and understand the negative effects this industry has on their lives, and collaborates with them to bring about meaningful change.

Helping Communities: Sierra Club works tirelessly to make St. Louis a healthier, safer place for all. Sierra Club worked with federal prosecutors and other community advocates to help close the Rush Island Coal Plant, which released hundreds of thousands of tons of pollutants into the St. Louis region. Sierra Club also organized community members to prevent electricity rate hikes and continues to bring awareness to energy burden issues.

Organizational Hurdles: Despite such widespread negative sentiment against Ameren, its rate hikes, and its pollution, meaningful change is difficult to achieve. Ameren's lobbying efforts and influence within the Public Service Commission — the agency responsible for regulating Missouri utilities — creates a feeling of powerlessness in the community, which fuels a cycle of apathy.

EXHIBIT C

FOOD APARTHEID

In St. Louis, Black residents are almost twice as likely to have limited access to healthy foods compared to White residents.⁷⁶ While this problem is rooted in racist practices — including discriminatory zoning, restrictive real estate covenants, and racial disparities in lending — it is worsened by the financial realities faced by grocery stores.⁷⁷ Supermarkets run on low profits, often 1 to 3 percent.⁷⁸ Given these small margins, supermarket chains invest more in areas with higher income and population rates, abandoning areas with lower incomes and high vacancy rates.⁷⁹ This gap is often filled with small grocers, convenience stores, and dollar stores. At small and medium-sized grocery stores, fruits and vegetables provide the lowest profit margin (3% for fruits and vegetables vs. 51% for alcohol and tobacco).⁸⁰ Altogether, these realities conspire to reduce Black St. Louisans' access to healthy foods.

Similar to our 2019 report, we measure people's access to food using three variables: income, distance from the nearest grocery store, and vehicle access. Using the criteria outlined in **Box 3**, we label census tracts as low-income ("LI"), low-access ("LA"), and no vehicle ("NV"). An LI-LA-NV census tract is one in which a significant portion of the population is low-income, lives beyond a half-mile from a grocery store, and does not have a vehicle. Using the LI-LA-NV framework and data from the U.S. Department of Agriculture's (USDA) Food Research Atlas,⁸¹ we assessed food apartheid by asking two complementary questions.

HOW MANY BLACK ST. LOUIS RESIDENTS LIVE IN LI-LA-NV CENSUS TRACTS?

St. Louis is divided into 106 census tracts, 41 of which are flagged as LI-LA-NV by the USDA. **54% of the City's Black population** live in these LI-LA-NV census tracts, compared to **20% of White St. Louis residents**.

Key variables for measuring food access in census tracts

LI ("low-income")

Poverty rate $\geq 20\%$, median family income $\leq 80\%$ of state-wide median, or (in a metro area) a median family income $\leq 80\%$ of metro area's median

LA ("low-access")

Share of individuals or households in a census tract that are over $\frac{1}{2}$ mile from supermarket

NV ("no vehicle")

Number or share of homes without a vehicle. If ≥ 100 homes in a tract do not have a vehicle, that is considered a "significant portion"

*Adapted from the Food Access Research Atlas
United States Department of Agriculture*

Box 3

HOW MANY PREDOMINANTLY-BLACK CENSUS TRACTS ARE LI-LA-NV?

Figure 13 shows that, of the city's 41 LI-LA-NV census tracts, 32 are predominantly-Black, with the other 9 being predominantly-White. Given that there are 57 predominantly-Black tracts and 49 predominantly-White tracts across St. Louis, this means that **56% of all predominantly-Black tracts are LI-LA-NV**, compared to just **18% of majority-White tracts**.

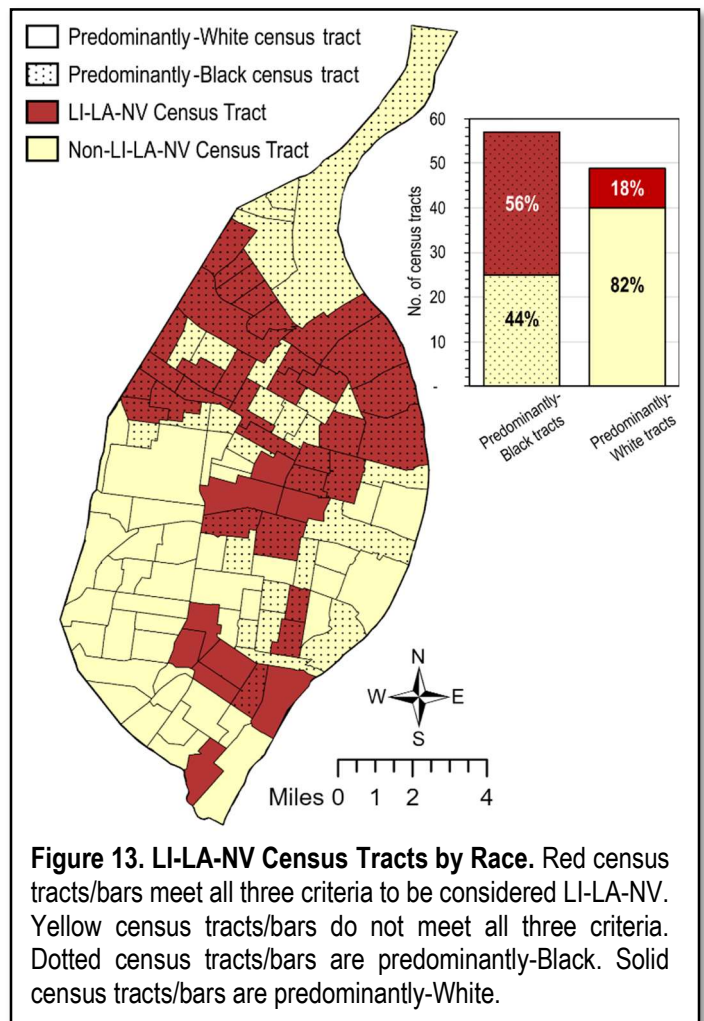


EXHIBIT C

Controlling for income does not erase inequality

The Food Research Atlas has dozens of other variables that measure food access. This lets us mix-and-match different measurements to investigate specific groups of people that face unique barriers.

For example: some people may have the financial means to purchase healthy foods, but live a considerable distance from the nearest grocery store and do not own a vehicle. As a result, these “LA-NV” individuals may still have a hard time easily accessing healthy foods. Our analysis shows that this reality affects **19%** of people living in the average predominantly-Black census tract,

compared to just **6%** of people in the average predominantly-White census tract.⁸² Thus, even in places where income is less of a constraint, Black residents face greater burdens to accessing healthy foods.

While the data within the Food Research Atlas make it possible to perform a robust, in-depth quantitative analysis of food access, that is beyond the scope of this report. Nevertheless, the data presented above make it clear: **Black and low-income St. Louisans face meaningfully greater barriers to accessing healthy foods.**

Recommendations for addressing food apartheid in St. Louis

Tax Incentives for Community-Owned Grocery Stores

Small and medium sized grocery stores are better able to thrive in low income environments.⁸³ Community Owned Grocery Stores — which are created by and for the community and usually operate as nonprofits — can provide residents access to affordable produce while creating jobs and keeping much needed money within the community.⁸⁴ However, Community-Owned Grocery Stores require significant funding to get started, and may need occasional infusions of funds to keep them afloat.⁸⁵

We believe that the potential benefits to community health and wellbeing make exploring this avenue worthwhile. **WE RECOMMEND** that the City provide community development grants and tax incentives to spur the development of Community-Owned Grocery Stores in areas that lack access to healthy food. We further suggest that regional grocery stores like Schnucks and Dierbergs help repair the communities they used to serve by offering financial assistance and expert guidance to assist Community-Owned grocers.

Subsidize Produce

Food assistance programs like SNAP and WIC provide much needed assistance to people struggling with food insecurity. Unfortunately, the funding levels have not kept pace with the rising cost of food, particularly produce, which is significantly more expensive than processed foods.⁸⁶ Recent uncertainty around federal budgets is only exacerbating these problems.

Increasing food subsidies for produce will make healthy foods more accessible to those managing food insecurity. The Double Up Food Bucks Program, which increases SNAP benefits for fresh produce, is a wonderful step in that direction.⁸⁷ However, there are currently only three Double Up Food Bucks locations in St. Louis City, none of which are in North City.⁸⁸

WE RECOMMEND expanding this program, particularly in North City, to make it accessible to more St. Louisans.

EXHIBIT C

Community Spotlight: St. Louis City Greens Market



Mission:

St. Louis City Greens Market is a nonprofit grocery store seeking to increase the accessibility and affordability of fresh food to its neighbors. It encourages local farming, free or low-cost nutritional programs, and community engagement.

Phone

(314) 833-3811
(314) 884-8460

Email

citygreensproduce@gmail.com

Donate

www.stlcitygreens.org



Lacy Cagle, Executive

Director: In her former life, Lacy was a sustainability educator who used her knowledge, passion, and communication skills to promote environmentally friendly principles. Now, she relies on her experience, along with guidance from the

Midtown Mamas — a group of women who formed City Greens in a church basement — to promote food justice for all.

Challenges Addressed: Many St. Louisans live in food deserts, lacking access to healthy food options. Large grocery stores are a significant contributor to this problem, as they eliminate smaller grocers by undercutting their prices and creating regional monopolies. When grocery stores close and sell their land, they often insert restrictions into deeds that prevent future grocery stores from building on that land. Meanwhile, local farmers who try to fill nutritional gaps struggle to compete with big box store prices.

Policies & Goals: City Greens believes that access to healthy food is a human right. They wish to make SNAP and WIC benefits more accessible and to reduce or eliminate the sales taxes on groceries. To reduce costs for farmers, they want the

government to create more subsidies for specialty crops, which includes most produce. City Greens also works to reduce food waste.

Helping Individuals: City Greens sells food at cost to its members, volunteers, and anyone purchasing with government benefits. These incentives promote food equity and create a vibrant community. This sense of community is further strengthened by City Greens' programming, including free community meals and nutrition education.

Helping Communities: While the store is a useful resource for those who can access it, there are still many St. Louisans who are out of reach. To fill in the gaps, City Greens collaborates with similar organizations across the region, including Operation Food Search and A Red Circle. Their overlapping efforts create a safety net for more St. Louisans, creating a healthier, more unified community.

Organizational Hurdles: City Greens struggles with funding since it sells its produce at cost and relies on federal grants, which can be inconsistent. Budgetary issues limit their ability to compete with big box stores, which aggressively advertise their low prices. In addition, recent gentrification around its current location in The Grove has limited its ability to sell produce to those in need.

EXHIBIT C

HOUSING AND LANDLORD-TENANT RELATIONS

Many environmental justice ills — including those discussed throughout this report — are linked to the quality of housing. Rental properties introduce additional complexities owing to the landlord-tenant relationship. Improving laws, policies, and procedures that affect housing quality and tenants' rights will go far to reduce environmental disparities. Below, we offer recommendations centered on housing and landlord-tenant relations across a handful of environmental justice issues.

Tenants' Rights: Adopt Statewide Statutory Warranty of Habitability

The laws of almost every state — including Missouri — impose an “Implied Warranty of Habitability” on residential leases. This means that landlords must keep their property safe and fit for human habitation.⁸⁹ Unlike many other states, Missouri law was not enacted by the legislature, but instead was created by the courts.⁹⁰ As a result, there is a significant amount of uncertainty and vagueness as to when the implied warranty is violated and the procedures that one must follow to invoke it. **WE RECOMMEND** that the State legislature enact a statutory warranty of habitability, creating uniform standards and procedures governing tenants' right to safe and fit housing.⁹¹

Tenants' Rights: Fund Eviction Court Attorney Program

Landlord-tenant laws are notoriously landlord friendly. As a result, some landlords attempt to evict tenants who complain of poor housing conditions or who withhold rent to force a landlord to make repairs. In July 2023, the City enacted a law that provided attorneys for tenants facing eviction.⁹² Unfortunately, at the time of drafting this report, the funding and processes have not been put in place to put this law into effect. Tenants without sufficient financial resources still lack access to eviction attorneys.⁹³ **WE RECOMMEND** that the Mayor's office take the necessary steps and allocate funding to put this law into action.

Energy Costs: Require Disclosures Prior To Rental

High energy costs are often due to improperly sealed homes and old, inefficient HVAC systems.⁹⁴ Tenants often do not learn of these problems before entering into a lease and lack the ability to remedy these problems thereafter. As a result, many tenants find themselves trapped in housing with unreasonably high energy bills. **WE RECOMMEND** that the State enact legislation requiring landlords to disclose 12-months of prior energy bills before a tenant signs a lease. This will give tenants information they need to make informed decisions about their housing.

Energy Costs: Collect and Release Data on Energy Costs and Disconnects

Ameren and Spire, which have monopoly power over electric and gas in the City of St. Louis, have access to data on energy costs and disconnects by address. City officials should harness energy data (energy use, cost per kWh, etc.) from private utility companies to identify areas with high energy burdens or a large

number of disconnects. **WE RECOMMEND** that anonymized data be released biennially to help the City and nonprofit organizations provide targeted relief.

Energy Costs: Expand the Low-Income Weatherization Assistance Program

Weatherizing housing is a comparatively inexpensive way to reduce a household's energy burden, with long-term financial benefits outweighing the initial costs.⁹⁵ But these initial costs are out of reach for many residents. The Low-Income Weatherization Assistance Program (“LIWAP”) helps low-income residents weatherize their homes.⁹⁶ But LIWAP funding was only provided for 1,230 Missouri households in 2024, down from 2,915 in 2022.⁹⁷ That number is expected to drop even further.⁹⁸ There is no evidence that this decrease is due to a decrease in demand; thus, assistance is not making it to those who need it. **WE RECOMMEND** that Missouri increase funding and logistical support (e.g., outreach) for LIWAP to provide more weatherization assistance to a larger number of low-income families.

Mold: Collect and Release Data on Mold Complaints

The City does not store comprehensive data on indoor mold complaints. Instead Building Division, Department of Health, and Citizen Service Bureau all receive mold complaints separately, but make no effort to track or analyze them. As a result, it is impossible to determine the extent of the problem or craft targeted remedies. **WE RECOMMEND** that the Department of Health arrange for inter-agency reporting and sharing of mold complaint data, so that the City can identify problem areas and aid where it is needed most.

Mold: Educate Homeowners and Renters About Water Infiltration and Mold

Mold thrives in dark, damp spaces. This makes leaky plumbing, improperly sealed windows, or clogged gutters ideal reservoirs for harmful mold growth. If at-risk areas like this are caught before mold gets a chance to take hold, they can usually be fixed at a low cost. However, if left unchecked and mold develops, remediation becomes much more costly. **WE RECOMMEND** that nonprofit organizations and city agencies provide education to homeowners, landlords, and tenants about the dangers of unchecked moisture, and provide information on how to identify and remedy mold contamination

EXHIBIT C

CONCLUSION

In 2019, we assessed how St. Louis City's history of racial discrimination and segregation manifests today across 8 environmental justice issues: Lead, Asthma, Mold, Air Pollution, Home Energy Costs, Food Apartheid, Vacancy, and Illegal Trash Dumping. In this follow-up report, we revisited many of those topics, with two exceptions: **mold** and **home energy costs**.

We were unable to conduct updated quantitative analyses on mold complaints due to a lack of data. Still, we believe it is safe to assume that the disparate impacts of mold that we identified in 2019 continue to hold true today. After all, many of the underlying causes (e.g., poor housing stock) and effects (e.g., asthma) of mold exposure persist in Black and low-income communities. In lieu of an updated analysis, we offer recommendations around data collection, reporting, and community outreach (see pg. 26).

Home energy costs also continue to burden Black and low-income St. Louisans. The Sierra Club tackled this topic in their "St. Louis Energy Burden Report" released in January 2025.⁹⁹ We strongly encourage readers to refer to this report for analysis and recommendations to address energy costs from an environmental justice perspective.

Developing resilience through environmental justice

Working toward environmental equity not only rights historical wrongs; it also addresses real-world problems St. Louisans face each and every day. When we neglect this work, we needlessly leave St. Louisans vulnerable in the face of disaster.

Recent events make this abundantly clear. For instance, the 2020 COVID-19 pandemic hit Black and low-income St. Louis residents exceedingly hard. While the reasons behind this are multi-faceted and complex, unequal access to healthcare undoubtedly played a significant role.¹⁰⁰

Additionally, the catastrophic EF3 tornado that ripped through the Greater St. Louis region in May 2025 – and hit North St. Louis particularly hard (see below) – has given way to a worryingly uneven recovery. Central parts of the City – where average home values near \$700,000 – have seen relatively quick and effective cleanup compared to neighborhoods north of Delmar, where average home values are less than \$50,000. As efforts to repair North City move along at a snail's pace, residents are concerned that the region may never fully recover.¹⁰¹

Failure to rectify decades of injustice will leave large swaths of the City vulnerable to events like these. Alternatively, we can address the issues outlined in this report and ensure that all St. Louisans are equipped to face whatever the future holds.

Big problems mean big opportunities

While the size and scope of environmental racism in St. Louis may seem daunting, the highly interconnected nature of the issues presents opportunities to make impactful changes with effects that reverberate throughout the City.

For instance, development initiatives that revitalize vacant parcels in North City can include plans for establishing community grocery stores, thus reducing vacancy while improving food access. At the same time, revitalization will curb the illegal dumping and associated crime that nuisance properties encourage, all while raising morale across the community. The list of potential rewards goes on.

This kind of high-impact action requires buy-in from a wide range of stakeholders. State and local representatives, neighborhood associations, healthcare providers, business leaders, and individual residents all have roles to play. To that end, we hope that this report empowers those working to achieve environmental justice in St. Louis.

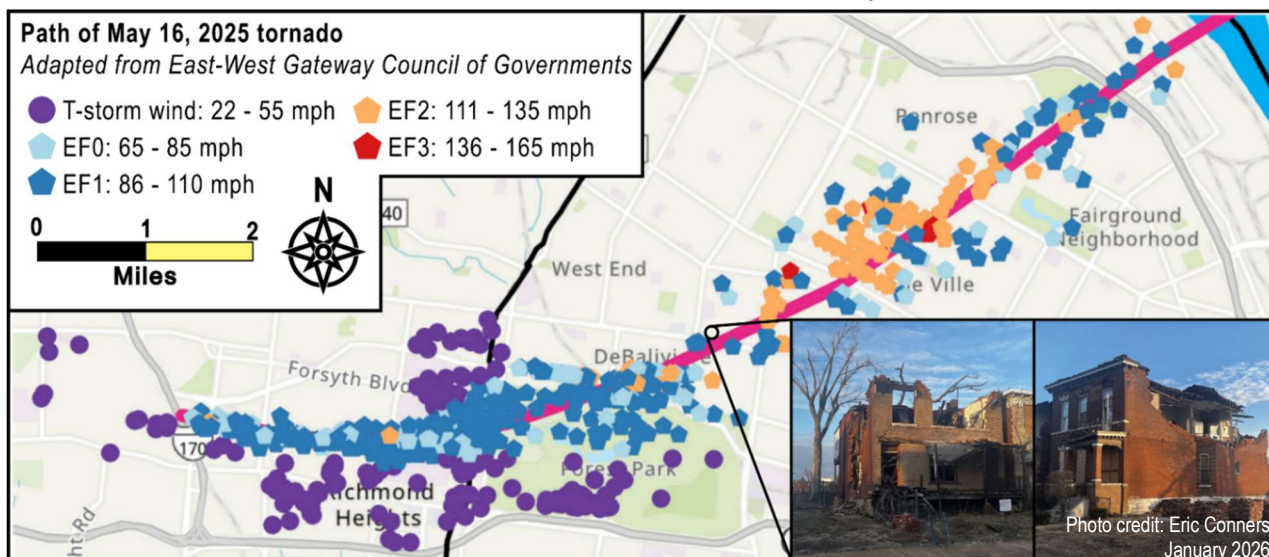


EXHIBIT C

ACKNOWLEDGEMENTS

The Interdisciplinary Environmental Clinic would like to thank the following organizations and individuals. Without their support, this report would not have been possible.

Our community partners – **Metropolitan Congregations United, Tenants Transforming Greater St. Louis, and Sierra Club** – for their active engagement on this project over the past several years. Individuals from each of these organizations were instrumental in shaping this report, thanks in large part to their real-world experience tackling environmental justice issues in St. Louis. We are extremely grateful for their willingness to collaborate on this report, on top of their tireless efforts advocating for residents across the City.

Other community organizations – **Legal Services of Eastern Missouri** and **St. Louis City Greens Market** – for their willingness to share their experiences working within the St. Louis community.

The Interdisciplinary Environmental Clinic’s community advisory board, for their thoughtful feedback throughout the writing process and ongoing support of the IEC’s mission.

Dr. Angela Hobson, Associate Dean for Education and Professor of Teaching at Washington University’s School of Public Health, for her guidance in understanding lead poisoning data and the surrounding context.

Dr. Kelly M. Harris, Assistant Professor of Occupational Therapy and Surgery at Washington University’s Program in Occupational Therapy, for her insight into asthma data and how asthma is being addressed in St. Louis.

The **Office of Public Scholarship** and **Center for the Environment** at Washington University, for offering logistical support throughout the publication process, including generous gifts that funded printing of this report. Specifically, we would like to thank **Alex Morales-Heil, Dr. Christopher Schaberg, Jessica Guldner, Dr. Liz Wolfson, and Kelly Smits** for their active involvement in getting this report in the hands of our readers.

Interdisciplinary Environmental Clinic faculty past and present: **Liz Hubertz, Eric Conners, Laura Robb, Peter Goode, Tara Rocque, and Max Pernick**, all of whom contributed to the research, community outreach, data analysis, and writing that went into this report.

Undergraduate and law students at Washington University who contributed to the research, community outreach, data analysis, and writing at various stages throughout the development of the report:

Ian Gomez
Tessa Quade
Jade Zhang
Madison Kennedy
Kade Carnes
Anna-Kathryn Hass

Callie Sharp
Zack Kalinowski
Ugbaad Ali
Sasha Bassett
Ashley Walsh
Maya Frazier

Micah Prior
Charlotte Udipi
Allie Jobe
Erica Jones
Jewel Evans

EXHIBIT C

GLOSSARY

- AAFA:** **Asthma and Allergy Foundation of America.** A national nonprofit organization dedicated to improving the quality of life for people with asthma and allergic diseases through education, advocacy, and research.
- ANSI:** **American National Standards Institute.** A private non-profit organization that oversees the development of voluntary consensus standards for products, services, processes, and systems in the United States.
- BLL:** **Blood Lead Level.** A measurement of the amount of lead present in a person's blood, typically expressed in micrograms per deciliter ($\mu\text{g}/\text{dL}$). Blood lead levels are used to assess lead exposure and potential health risks.
- BLRV:** **Blood Lead Reference Value.** A threshold established by the CDC to identify children with blood lead levels that are higher than most children's levels and require public health action. Currently set at $3.5 \mu\text{g}/\text{dL}$.
- CDC :** **Centers for Disease Control and Prevention.** The national public health agency of the United States responsible for protecting public health and safety through disease control, prevention, and health promotion.
- CSB:** **Citizens' Service Bureau.** An office within the St. Louis Neighborhood Stabilization Division whose purpose is to effectively and efficiently register and route city service requests, answer citizen requests for information, and provide City departments with statistics.
- EIU:** **Environmental Investigation Unit.** A division within the St. Louis Metropolitan Police that investigates environmental health hazards and conditions to protect public health and safety.
- Environmental justice community:** According to the State Climate Policy Dashboard, “[a]n environmental justice (EJ) community, also known as a disadvantaged, underserved, or overburdened community, is a group within a certain geographic location that experiences disproportionate environmental harms and risks and may share certain socioeconomic conditions.” States establish specific, quantifiable measures to identify EJ communities, which typically fall within a census tract, neighborhood, or some other established geography. For example, Minnesota defines environmental justice areas as “census tracts where at least 40% of the population is nonwhite, 40% have limited English proficiency, 35% of households have an income of less than 200% of the federal poverty level, or those located within ‘Indian Country’.” Missouri has not established a definition for EJ communities through any mechanism, policy or otherwise.
- EPHT:** **Environmental Public Health Tracking.** A CDC program that tracks environmental hazards, exposures, and health effects to inform public health decision-making and protect communities.
- IEC:** **Interdisciplinary Environmental Clinic.** A legal clinic at Washington University School of Law that provides students with hands-on experience in environmental law while offering legal services to communities and organizations on environmental justice and policy issues.
- LI-LA-NV** **Low income, low access, and no vehicle** measures for food access. See Box 3 on page 24 for details.
- LSEM:** **Legal Services of Eastern Missouri.** A nonprofit organization that provides free civil legal assistance to low-income individuals and families in eastern Missouri
- Majority-Black/White and Predominantly-Black/White** Throughout this report, we refer to majority-Black/White and predominantly-Black/White neighborhoods/census tracts/zip codes. We use the word “majority” when the population share of a given race is greater than 50% of the total population in the region of interest. When no racial group exceeds 50%, we use the word “predominantly” to describe the predominant race (i.e., that which makes up a plurality of the population in the region of interest).
- MCU:** **Metropolitan Congregations United.** A faith-based community organization that brings together congregations to address social justice issues and advocate for systemic change in the St. Louis metropolitan area.
- MDHSS:** **Missouri Department of Health and Senior Services.** The state agency responsible for public health programs, health care regulation, and services for senior citizens in Missouri.

EXHIBIT C

MDNR: Missouri Department of Natural Resources. The state agency responsible for protecting Missouri's natural, cultural, and energy resources, including air and water quality, parks, and historic preservation.

MOPHIMS: Missouri Public Health Information Management System. Missouri's integrated information system for managing public health data and supporting disease surveillance, case management, and public health reporting.

NO_x, CO, SO₂, and PM_{2.5}: **Nitrogen Oxides, Carbon Monoxide, Sulfur Dioxide, and Particulate Matter at 2.5 micrometers (µm).** These are common air pollutants monitored by environmental agencies. NO_x and SO₂ contribute to acid rain and respiratory issues; CO is a toxic gas from incomplete combustion; PM_{2.5} refers to fine particulate matter smaller than 2.5 µm that can penetrate the lungs.

PLACES: Population Level Analysis and Community Estimates. A CDC project that provides local data on chronic disease risk factors, health outcomes, and preventive services for cities and census tracts across the United States.

EXHIBIT C

Resources

Navigating environmental justice issues can be daunting. Thankfully, help is available. Below are resources for those in need. Please visit our website for more information about the organizations below, including additional links to other helpful resources.



www.environmentalracismstl.com/resources

GENERAL INFORMATION

Citizen's Service Bureau (314) 622-4800	United Way St. Louis 211 or (800) 427-4626 https://helpingpeople.org/	Mission St. Louis https://www.missionstl.org/resources
---	---	---

LEGAL RESOURCES

Legal Services of Eastern Missouri (314) 534-4200 https://sem.org/	Arch City Defenders (314) 361-8834 https://www.archcitydefenders.org/	St. Francis Community Services (314) 977-3993 sfcs@ccstl.org https://sfcsstl.org/services/legal-aid/
New Covenant Legal Services (314) 726-6489 https://newcovenantlegalservices.org/	Kaufman Fund Veterans Legal Referral Program (314) 632-6462 https://www.thekaufmanfund.org/Get-Help/Legal-Referral-Program	Missouri Attorney General's Office Military Legal Assistance Team https://ago.mo.gov/get-help/defenders/ https://ago.mo.gov/get-help/defenders/submit-an-inquiry/

ASTHMA

St. Louis Children's Hospital Healthy Kids Express (314) 330-6576 healthykidsexpress@bjc.org	American Lung Associations (800) 586-4872 https://www.lung.org/lung-health-diseases/lung-disease-lookup/asthma	Missouri Department of Health and Senior Services https://health.mo.gov/living/healthcondiseases/chronic/asthma/
St. Louis Department of Health - Child Asthma Services (314) 657-1475		Asthma & Allergy Foundation of America https://aafamidstates.org/resources/

FOOD INSECURITY

Community Action Agency of St. Louis County (314) 863-0015 www.caastlc.org	STL Food Bank https://stlfoodbank.org/find-food/	Food Outreach (314) 652-3663 https://foodoutreach.org/
--	---	---

LEAD CONTAMINATION

CSB Lead Inspection and Hazard Control Division (314) 622-4800	University of Missouri Soil Testing https://extension.missouri.edu/programs/s-oil-and-plant-testing-laboratory/spl-soil-analysis/spl-garden-landscape-lawn-soil-test	Environmental Protection Agency https://www.epa.gov/lead/lead-safe-renovations-diylers
STL Department of Health (314) 657-1515		

EXHIBIT C

MOLD CONTAMINATION

CSB Residential Indoor Property Inspections
(314) 622-4800

Environmental Protection Agency
<https://www.epa.gov/mold/mold-cleanup-your-home>

HOME ENERGY COSTS & UTILITIES

Low Income Home Energy Assistance Program (LIHEAP)
(855) 373-5636
<https://mydss.mo.gov/utility-assistance/liheap>

Heat Up / Cool Down St. Louis
(314) 241-0001
<https://heatupstlouis.org/>

Low Income Weatherization Assistance Program (LIWAP)
(855) 522-2796
<https://dnr.mo.gov/energy/weatherization/residential-assistance>

Ameren's Community Savers Program
<https://www.ameren.com/missouri/residential/energy-efficiency/communitysavers>

Community Action Agency of St. Louis County
(314) 863-0015
www.caastlc.org

U.S. Department of Energy
<https://www.energy.gov/energysaver/do-it-yourself-energy-savers-projects>

Missouri Energy Burden Explorer
<https://app.powerd.city/dashboard/missouri>

Mercy Neighborhood Ministry
<https://www.mercy.net/content/dam/mercy/en/pdf/mnm-resources/utility-and-rent-assistance-st-louis-city-and-county.pdf>

City of St. Louis
<https://www.stlouis-mo.gov/government/departments/human-services/energy-utility-assistance.cfm>

RENTAL ASSISTANCE & TENANTS' RIGHTS

Mercy Neighborhood Ministry
(314) 251-2850

Community Action Agency of St. Louis County
(314) 863-0015
www.caastlc.org

ArchCity Defenders
(314) 361-8834
<https://www.prosestl.org/the-guides>

Legal Services of Eastern Missouri
(314) 534-4200
<https://lsem.org/housing-law/>

HOME REPAIRS

Citizens' Healthy Homes Repair Program
(314) 657-3888
<https://apply.healthyhomeremedy.com/>

VACANCY

Legal Services of Eastern Missouri
(314) 256-8778
neighborhoods@lsem.org
<https://lsem.org/neighborhood-advocacy/>

St. Louis Neighborhood Improvement Specialists
<https://www.stlouis-mo.gov/government/departments/public-safety/neighborhood-stabilization-office/find-nis.cfm>

Citizen's Service Bureau (CSB)
(314) 622-4800

ILLEGAL DUMPING & OTHER NUISANCES

St. Louis Neighborhood Improvement Specialists
<https://www.stlouis-mo.gov/government/departments/public-safety/neighborhood-stabilization-office/find-nis.cfm>

Citizen's Service Bureau (CSB)
(314) 622-4800

St. Louis City Police Department
(314) 231-1212

EXHIBIT C

AIR QUALITY

Metropolitan Congregations United (MCU)
<https://airwatchstl.mcustlouis.org/>

EPA Air Now
<https://www.airnow.gov/>
<https://gispub.epa.gov/airnow>

NEIGHBORHOOD GREENING

Missouri Department of Conservation Seedlings Program
<https://mdc.mo.gov/trees-plants/tree-seedlings/order-seedlings>

St. Louis Bike Works
<https://www.bworks.org/>

EXHIBIT C

ENDNOTES

- ¹ *Childhood Lead Poisoning in St. Louis City* (2018). City of St. Louis Department of Health. Available at: <https://www.stlouis-mo.gov/government/departments/health/documents/lead/upload/2018-Lead-Poisoning-Report-8-15-18-1-2.pdf>
- ² *Environmental Racism in St. Louis* (2019). Washington Univ. Interdisciplinary Env'tl Clinic. Available at: <https://www.environmentalracismstl.com>.
- ³ **A previous version of this report erroneously included incorrect lead testing data. These figures were revised on March 06, 2026 with correct data.** Blood lead testing data were downloaded from the Missouri Environmental Public Health Tracking database on March 06, 2026, using the following query builder parameters:
- | | |
|--|---------------------------------------|
| Query type: test year | Years: Single years, 2021, 2022, 2023 |
| Geography: Zip/ZCTA | Client Type: 0 – 5 years (<72 months) |
| Age: Basic (All selected (6)) | Sex: All selected (2) |
| Race: Basic (All selected (2)) | Ethnicity: all selected (2) |
| Test outcome: 3_5 ug per dL Test Level, Elevated | Confirmed test: All selected (2) |
- ⁴ "Get the Lead out of School Drinking Water" Act, Revised Statutes of Missouri 160.077. More information available at: <https://health.mo.gov/living/environment/get-the-lead-out-of-school/>
- ⁵ Saint Louis Public Schools, School Lead Water Testing Results. Available at: <https://www.slps.org/Page/81449>
- ⁶ Missouri HB 402. Full bill text available at: https://www.senate.mo.gov/23info/bts_web/bill.aspx?SessionType=R&BillID=6060330
- ⁷ Lead Reports, City of St. Louis Department of Health. Available at: <https://www.stlouis-mo.gov/government/departments/health/documents/lead/index.cfm>
- ⁸ *Basic Information about Lead in Drinking Water* (May 2025). U.S. EPA. Available at: <https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>.
- ⁹ *A Consumer Tool for Identifying Point of Use (POU) Drinking Water Filters Certified to reduce Lead*. U.S. EPA. Available at: https://www.epa.gov/sites/default/files/2018-12/documents/consumer_tool_for_identifying_drinking_water_filters_certified_to_reduce_lead.pdf.
- ¹⁰ *A Consumer Tool for Identifying Point of Use (POU) and pitcher filters certified to reduce lead in drinking water*. U.S. EPA. Available at: https://www.epa.gov/system/files/documents/2024-06/how-to-id-filters-certified-to-reduce-lead-in-drinking-water-epa_june-2024.pdf
- ¹¹ *A Consumer Tool for Identifying Point of Use (POU) Drinking Water Filters Certified to reduce Lead*. U.S. EPA. Available at: https://www.epa.gov/sites/default/files/2018-12/documents/consumer_tool_for_identifying_drinking_water_filters_certified_to_reduce_lead.pdf.
- ¹² *Sources of Lead Exposure*. Carol Prombo, Washington Univ. in St. Louis. Available at: <https://sites.wustl.edu/prombo/sources-of-lead-exposure/>.
- ¹³ *Garden, landscape and lawn soil testing*. Univ. of MO Extension. Available at: <https://extension.missouri.edu/programs/soil-and-plant-testing-laboratory/spl-soil-analysis/spl-garden-landscape-lawn-soil-test>; *Tests and fees*. Univ. of MO Extension. Available at: <https://extension.missouri.edu/programs/soil-and-plant-testing-laboratory/spl-submit-samples/spl-tests-fees#specialsoil>.
- ¹⁴ *Fence Replacement Project* (July 21, 2023). St. Louis Public Schools. Available at: <https://www.slps.org/Page/77026>.
- ¹⁵ *Fox Files: St. Louis School Fences Poisoned with Lead Paint* (Nov. 14, 2011). Chris Hayes. Available at: <https://fox2now.com/news/fox-files-st-louis-school-fences-poisoned-with-lead-paint/>; *Hidden lead dangers inside and out at Saint Louis Public Schools* (May 4, 2021). PJ Randhawa, et al. Available at: <https://www.ksdk.com/article/news/investigations/lead-poisoning-hidden-dangers-st-louis-public-schools/63-d52da353-4f68-4c2e-971e-ee95eacfcda8>.

EXHIBIT C

- ¹⁶ *Childhood Lead Poisoning Prevention Annual Report (2024)*. Missouri Department of Health and Senior Services. Available at: <https://health.mo.gov/living/environment/lead/pdf/annual-report-fy2024.pdf>
- ¹⁷ Leung M, Tang IW, Lin JJY, et al. Cancer Incidence and Childhood Residence Near the Coldwater Creek Radioactive Waste Site. *JAMA Netw Open*. 2025;8(7):e2521926. doi:10.1001/jamanetworkopen.2025.21926
- ¹⁸ *Environmental Racism in Robertson?* Nov. 30, 2016. Maria Chappelle-Nadal, The St. Louis American. Available at: <https://www.stlamerican.com/news/columnists/guest-columnists/environmental-racism-in-robertson/#:~:text=The%20narrative%20of%20former%20Robertson,who%20lived%20in%20Robertson%20died.%E2%80%9D>
- ¹⁹ Chronic pain can be indicative of certain cancers linked to asbestos exposure (e.g., laryngeal cancer). See <https://mesotheliomahub.com/mesothelioma/asbestos-cancer/other-cancers/laryngeal/>.
- ²⁰ St. Louis City Ordinance 71946. Available at: <https://www.stlouis-mo.gov/government/city-laws/ordinances/ordinance.cfm?ord=71946>
- ²¹ *St. Louis environmentalists to check for air pollution in communities of color*. Oct 28, 2021. Andrea Y. Henderson, STLPR. Available at: <https://www.stlpr.org/health-science-environment/2021-10-28/st-louis-environmentalists-to-check-for-air-pollution-in-communities-of-color>
- ²² Research suggests that childhood lead exposure is linked to criminal behavior in adolescence and early adulthood, adult incarceration, homelessness, and having to rely on public assistance (See “Downstream Consequences of Childhood Lead Poisoning,” available at: https://case.edu/socialwork/povertycenter/sites/default/files/2020-07/Downstream_06182020_rev07082020.pdf; “Developmental lead exposure and adult criminal behavior: a 30-year prospective birth cohort study,” available at: <https://pmc.ncbi.nlm.nih.gov/articles/PMC8582283/>). Other research suggests that decreases in lead exposure in early childhood leads to less antisocial behavior, which may contribute to drops in the crime rate (See “Decrease in lead exposure in early childhood may be responsible for drop in crime rate,” available at: <https://spia.princeton.edu/news/decrease-lead-exposure-early-childhood-may-be-responsible-drop-crime-rate>). In fact, the “lead-crime” hypothesis proposes that the sharp drop in crime rates during the 1990s can be partially attributed to reduced lead poisoning thanks to bans on lead gasoline and paint (See “The lead-crime hypothesis: a meta-analysis,” available at: <https://www.sciencedirect.com/science/article/pii/S0166046222000667>).
- ²³ *Asthma Capitals (2024)*. Asthma and Allergy Foundation of America. Available at: <https://aafa.org/wp-content/uploads/2024/09/aafa-2024-asthma-capitals-report.pdf>
- ²⁴ *Asthma Capital (2025)*. Asthma and Allergy Foundation of America. Available at: <https://aafa.org/wp-content/uploads/2025/09/aafa-2025-asthma-capitals-report.pdf>
- ²⁵ In 2015, there were 2,048 asthma-related ER visits by children in St. Louis. Black children comprised 87% of those visits, compared to just 5% for White children. See *Environmental Racism in St. Louis* (2019). Washington Univ. Interdisciplinary Env'tl Clinic. Available at: <https://www.environmentalracismstl.com>.
- ²⁶ Asthma Equity Explorer. Mitre, Allergy & Asthma Network. Available at: <https://asthmaequity.org/>
- ²⁷ *City of St. Louis Targets 11 North City Neighborhoods for Neighborhood Planning* (Feb 18, 2025). City of St. Louis. Available at: <https://www.stlouis-mo.gov/government/departments/mayor/news/north-city-neighborhood-planning.cfm#:~:text=City%20of%20St.-Louis%20Targets%2011%20North%20City%20Neighborhoods%20for%20Neighborhood%20Planning,'t%20determine%20your%20opportunity.%E2%80%9D>
- ²⁸ Figures generated using the Asthma Equity Explorer online tool created by Mitre and the Allergy & Asthma Network. “Low access to healthcare prevalence” is defined as the percent of respondents between 18 – 64 years of age who report having no current health insurance coverage (PLACES: Local Data for Better Health – CDC 2023 Release). See the “About” tab of the webpage for additional information on data sources and methods. Available at: <https://allergyasthmanetwork.shinyapps.io/asthma-dashboard-v3-main/>
- ²⁹ *Health Equity*. Asthma and Allergy Foundation of America. Available at: <https://aafa.org/programs/health-equity/>
- ³⁰ *How one St. Louis program is helping improve outcomes for older adults with asthma* (Dec 20, 2023). St. Louis Magazine. Available at: <https://www.stlmag.com/branded-content/how-one-st-louis-program-is-helping-improve-outcomes-for-older-adults-with-asthma/>

EXHIBIT C

-
- ³¹ *Asthma and Allergy Foundation of America Awards HEAL Funding to St. Louis* (Jun 23, 2022). Connie Mitchell, Ladue News. Available at: https://www.laduenews.com/health-and-wellness/asthma-and-allergy-foundation-of-america-awards-heal-funding-to-st-louis/article_2fc39582-8151-50f0-a4e2-7c6602924024.html
- ³² *Managing Asthma: A Guide for Schools* at 4 (2014). U.S. Department of Health & Human Services. Available at: https://www.nhlbi.nih.gov/files/docs/resources/lung/NACI_ManagingAsthma-508%20FINAL.pdf.
- ³³ *Managing Asthma: A Guide for Schools* at 23, 28 (2014). U.S. Department of Health & Human Services. Available at: https://www.nhlbi.nih.gov/files/docs/resources/lung/NACI_ManagingAsthma-508%20FINAL.pdf.
- ³⁴ See, e.g., Ind. State Dep't of Health, *Fly a Flag for Clean Air Program*. Available at: https://www.in.gov/health/files/Fly_a_Flag_for_Clean_Air_Program.pdf.
- ³⁵ *Air quality and outdoor activity guidance for schools*. EPA AirNow. Available at: <https://document.airnow.gov/air-quality-and-outdoor-guidance-for-schools.pdf>
- ³⁶ *The Air Quality Flag Program*. EPA AirNow. Available at: https://gispub.epa.gov/OAR_OAQPS/FlagProgram/.
- ³⁷ Program Providing Access to Legal Representation for Tenants Facing Eviction or Equivalent Proceedings, St. Louis City Ordinance No. 71694; Mandatory Registration Process for Residential Rental Units, St. Louis City Ordinance No. 71835; Safe Temperatures in Rentals, St. Louis City Ordinance No. 71839; and Prevent and Remediate Mold, St. Louis City Ordinance No. 71946.
- ³⁸ *Environmental Racism in St. Louis* (2019). Washington Univ. Interdisciplinary Env'tl Clinic. Available at: <https://www.environmentalracismstl.com>.
- ³⁹ *St. Louis senior charged with trying to run over church maintenance worker in dumping dispute* (Mar 9, 2025). Pat Pratt, First Alert 4. Available at: <https://www.firstalert4.com/2025/03/09/st-louis-senior-charged-with-trying-run-over-church-maintenance-worker-dumping-dispute/>
- ⁴⁰ *City of St. Louis Environmental Investigation Unit Issues Record Number of Citations for Illegal Dumping, Strengthens Camera System with American Rescue Plan Funds* (Mar 29, 2023). City of St. Louis. Available at: <https://www.stlouis-mo.gov/government/departments/mayor/news/illegal-dumping.cfm>
- ⁴¹ As per the pre-2021 redistricting. Today, these areas represent a contiguous stretch of land that crosses the 13th and 12th wards.
- ⁴² *Environmental Racism in St. Louis* (2019). Washington Univ. Interdisciplinary Env'tl Clinic. Available at: <https://www.environmentalracismstl.com>.
- ⁴³ *Zero Waste Litter Cabinet Action Plan* (2017). City of Philadelphia. Available at: <https://www.phila.gov/media/20190821131753/Zero-Waste-Litter-Action-Plan-2017.pdf>; NJ Clean Communities: Program Overview, <https://njclean.org/program-overview/>.
- ⁴⁴ Zero Waste Litter Cabinet. City of Philadelphia. Available at: <https://www.phila.gov/media/20190821131753/Zero-Waste-Litter-Action-Plan-2017.pdf>
- ⁴⁵ 10-Year Solid Waste Management Plan (February 2024). Baltimore City Department of Public Works. Available at: <https://publicworks.baltimorecity.gov/pw-bureaus/solid-waste/plan>
- ⁴⁶ St. Louis Vacancy Collaborative, Vacancy to Vibrancy Small Grants Program, <https://www.stlvacancy.com/grantsforgreening.html>.
- ⁴⁷ <https://www.pocketparksstl.com/>
- ⁴⁸ Residential Refuse Drop Off. City of St. Louis. Available at: <https://www.stlouis-mo.gov/government/departments/street/refuse/resident-dumping/refuse-dropoff.cfm>
- ⁴⁹ *Id.*
- ⁵⁰ <https://www.stlouis-mo.gov/government/departments/mayor/news/illegal-dumping.cfm>

EXHIBIT C

-
- ⁵¹ *City of St. Louis Environmental Investigation Unit Issues Record Number of Citations for Illegal Dumping, Strengthens Camera System with American Rescue Plan Funds* (Mar 29, 2023). City of St. Louis. Available at: <https://www.stlouis-mo.gov/government/recovery/covid-19/arpa/projects/project.cfm?id=281>
- ⁵² *St. Louis police issue record number of summonses for illegal dumping, but the problem remains* (Mar 30, 2023). Jeremy D. Goodwin, STPR. Available at: <https://www.stlpr.org/health-science-environment/2023-03-30/st-louis-police-issue-record-number-of-summonses-for-illegal-dumping-but-problem-remains>
- ⁵³ *Environmental Racism in St. Louis* (2019). Washington Univ. Interdisciplinary Env'tl Clinic. Available at: <https://www.environmentalracismstl.com>; Conversations with St. Louis Trash Task Force, Refuse Division, and Forestry Division.
- ⁵⁴ St. Louis Vacancy Collaborative, *Statistics for St. Louis Vacant Properties* (May 2025), <https://www.stlvacancytools.com/stats.html>.
- ⁵⁵ Mayor Lyda Krewson, *A Plan to Reduce Vacant Lots and Buildings*, <https://www.stlouis-mo.gov/archives/mayor-krewson/initiatives/vacancy.cfm>.
- ⁵⁶ St. Louis Vacancy Collaborative Work Plan 2022-2023, <https://www.stlvacancy.com/uploads/1/2/7/4/127463804/workplan2223-web.pdf>.
- ⁵⁷ St. Louis Vacancy Collaborative, *Summit Summary Report at 12* (2018), https://www.stlvacancy.com/uploads/1/2/7/4/127463804/vacancy_collaborative_launch_summary_report.pdf.
- ⁵⁸ St. Louis Vacancy Collaborative, *Summit Summary Report at 5* (2018), https://www.stlvacancy.com/uploads/1/2/7/4/127463804/vacancy_collaborative_launch_summary_report.pdf.
- ⁵⁹ Mo. Rev. Stat. § 461.025.
- ⁶⁰ *Environmental Racism in St. Louis* (2019). Washington Univ. Interdisciplinary Env'tl Clinic. Available at: <https://www.environmentalracismstl.com>.
- ⁶¹ *Dust from Demolition Projects is Air Pollution* (Feb 4, 2021). Haley Lewis, Gasp Group. Available at: <https://gaspgroup.org/dust-from-demolition-projects-is-air-pollution/#:~:text=Demolition%20of%20buildings%2C%20and%20construction,minimized%2C%20I%20have%20good%20news!>
- ⁶² *Air pollution from construction: analysing the environmental impact of construction sites* (Apr 8, 2025). Kunak Air. Available at: <https://kunakair.com/air-pollution-from-construction-sites/>
- ⁶³ Based on data retrieved from the Asthma Equity Explorer. Available at: <https://asthmaequity.org/>
- ⁶⁴ *Id.*
- ⁶⁵ *Out of Control: The Deadly Impact of Coal Pollution*, at 2 & 10 (Feb. 2023). Sierra Club. Available at: <https://coal.sierraclub.org/sites/nat-coal/files/Out%20of%20Control%20coal%20mortality%20report%20FINAL.pdf>.
- ⁶⁶ Ameren 2024 Annual Report at 2, https://s21.q4cdn.com/448935352/files/doc_financials/2024/ar/2024-Annual-Report-2.pdf.
- ⁶⁷ Operating Permit for Ameren Missouri Labadie Energy Center, No. OP2017-048. Available at: <https://dnr.mo.gov/air/business-industry/air-permits/ameren-missouri-labadie-op2017-048>
- ⁶⁸ Missouri Electricity Data Browser, U.S. energy Information Administration (2024). Available at: <https://www.eia.gov/electricity/data/browser/#/topic/0?agg=2,0,1&fuel=vvvvu&geo=000002&sec=q&linechart=ELEC.GEN.ALL-MO-99.A&columnchart=ELEC.GEN.ALL-MO-99.A&map=ELEC.GEN.ALL-MO-99.A&freq=A&start=2001&end=2024&ctype=linechart<ype=pin&rtype=s&pin=&rse=0&mapttype=0>
- ⁶⁹ Department of Energy, Health, Safety & Environmental Impacts, <https://www.energy.gov/eere/health-safety-and-environmental-impacts>
- ⁷⁰ *The Outlook for Global Solar Energy Continues to Be Bright* (Aug 7, 2025). Goldman Sachs. Available at: <https://www.goldmansachs.com/insights/articles/the-outlook-for-global-solar-energy-continues-to-be-bright>

EXHIBIT C

- ⁷¹ See Mo. Rev. Stat. §§ 260.373, 643.055.
- ⁷² See generally, St. Louis Dept. of Pub. Safety, *City of St. Louis Demolition Handbook* (Oct. 2018). Available at: <https://www.stlouis-mo.gov/government/departments/public-safety/building/documents/upload/Demo-Handbook-2018.pdf>.
- ⁷³ See, e.g., Ayesha Khan, St. Louis alderman's video of demolition raises safety questions, Fox 2 Now (Sep. 20, 2018). Available at: <https://fox2now.com/news/st-louis-aldermans-video-of-demolition-raises-safety-questions/>; St. Louis County Public Health, *St. Louis Demolitions: Impacts on Env. Justice and Health Equity*, at 7-10 (2020). Available at: https://www.4cleanair.org/wp-content/uploads/Documents/2020_PE_Rogus.pdf.
- ⁷⁴ *Air Facilities & Air Quality Monitoring Sites*. Missouri Department of Natural Resources. <https://modnr.maps.arcgis.com/apps/webappviewer/index.html?id=d5ce711960744f74abe421312915d075>. (There are four active air monitors, two of which are less than ¼ mile apart).
- ⁷⁵ *State of the Air Report Cards: Most Polluted Cities* (2025). American Lung Association. Available at: <https://www.lung.org/research/sota/city-rankings/most-polluted-cities>
- ⁷⁶ *Environmental Racism in St. Louis* (2019). Washington Univ. Interdisciplinary Env'tl Clinic. Available at: <https://www.environmentalracismstl.com>.
- ⁷⁷ *Food Deserts, Racism, and Antitrust Law*, 110 Cal. Law. Rev. 1717 (Dec. 2022). Christopher R. Leslie. Available at: <https://www.californialawreview.org/print/food-deserts-racism-and-antitrust-law>; *The Roots of Food Deserts*, Ryan Jones. Available at: https://www.memphis.edu/law/about/ml14_rootsoffooddeserts.php#.
- ⁷⁸ *Grocery Store Chains Net Profit*. The Food Industry Association. Available at: <https://www.fmi.org/our-research/food-industry-facts/grocery-store-chains-net-profit>.
- ⁷⁹ *The Roots of Food Deserts*, Ryan Jones. Available at: https://www.memphis.edu/law/about/ml14_rootsoffooddeserts.php#; *Spatial Supermarket Redlining and Neighborhood Vulnerability: A Case Study of Hartford, Connecticut* at 13 (Mar. 2016), Mengyao Zhang & Ghosh Debarchana. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4810442/>.
- ⁸⁰ *The Rationale behind Small Food Store Interventions in Low Income Urban Areas: Insights from New Orleans*, 140 Journal of Nutrition 1185, 1187 (Jun. 2010), J. Nicholas Bodor, et al. Available at: <https://pmc.ncbi.nlm.nih.gov/articles/PMC2869503/>.
- ⁸¹ "Food Access Research Atlas Data Download 2019." Economic Research Service, U.S. Department of Agriculture. Last updated April 27, 2021. Available at: <https://www.ers.usda.gov/data-products/food-access-research-atlas/download-the-data>
- LI was assessed using the "LowIncomeTracts" variable. LA was assessed using the "LATracts_half" variable. NV was assessed using the "HUNVFlag" variable.
- ⁸² Measured using the "lahunvhalfshare" variable. This variable measures the share of tract housing units that are without a vehicle and beyond ½ mile from supermarket.
- ⁸³ *Spatial Supermarket Redlining and Neighborhood Vulnerability: A Case Study of Hartford, Connecticut* at 13 (Mar. 2016), Mengyao Zhang & Ghosh Debarchana. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4810442/>.
- ⁸⁴ *Community Wins: In the Face of Consolidation, Communities are Opening Their Own Grocery Stores* (Aug. 2, 2023), Institute for Local Self Reliance. Available at: <https://ilsr.org/articles/community-wins-in-the-face-of-food-deserts-local-governments-and-communities-are-opening-their-own-grocery-stores/>; *Toward fair and sustainable food systems: The role of food cooperatives and solidarity grocery stores* (Mar. 28, 2024), Food Secure Canada. Available at: <https://foodsecurecanada.org/2024/03/28/toward-fair-and-sustainable-food-systems-the-role-of-food-cooperatives-and-solidarity-grocery-stores/>.
- ⁸⁵ See generally, Leah Halliday & Michele Foster, *A tale of two co-ops in two cities*, 9:2 Journal of Agriculture, Food Systems, and Community Development 239 (Winter 2019-2010), <https://doi.org/10.5304/jafscd.2020.092.005>; Institute for Local Self Reliance, *Community Wins: In the Face of Consolidation, Communities are Opening Their Own Grocery Stores* (Aug. 2, 2023), <https://ilsr.org/articles/community-wins-in-the-face-of-food-deserts-local-governments-and-communities-are-opening-their-own-grocery-stores/>.

EXHIBIT C

- ⁸⁶ *How Far Did SNAP Benefits Fall Short of Covering the Cost of a Meal in 2020?* at 6-7 (July 2021), Urban Institute. Available at: <https://www.urban.org/sites/default/files/publication/104581/how-far-did-snap-benefits-fall-short-of-covering-the-cost-of-a-meal-in-2020.pdf>; Roberto Pancrazi et al., *How distorted food prices discourage a healthy diet*. *Sci. Adv.* 8, eabi8807(2022). DOI: [10.1126/sciadv.abi8807](https://doi.org/10.1126/sciadv.abi8807)
- ⁸⁷ Double Up Food Bucks: Kansas & Missouri. Available at: <https://doubleupheartland.org/>.
- ⁸⁸ Double Up Food Bucks, *Locations*. Available at: <https://doubleupheartland.org/locations/>.
- ⁸⁹ *Detling v. Edelbrock*, 671 S.W.2d 265, 270 (Mo. 1984). Legal Information Institute, *Implied warranty of habitability*. Available at: https://www.law.cornell.edu/wex/IMPLIED_WARRANTY_OF_HABITABILITY
- ⁹⁰ *King v. Moorehead*, 495 S.W.2d 65 (Mo. Ct. App. 1973).
- ⁹¹ Jana Ault-Phillips, et al., *Missouri's Implied Warranty of Habitability: It's Time for Meaningful Clarification*, 75 J. Mo. Bar 232, 259 (Sept. 2019).
- ⁹² St. Louis Board Bill 59 (2023). Available at: <https://www.stlouis-mo.gov/government/city-laws/board-bills/boardbill.cfm?BBId=15271>
- ⁹³ See Caleb Aguirre, *Ambitions for St. Louis' Right to Counsel program meet a scaled-back reality for tenants*, St. Louis Pub. Radio, <https://www.stlpr.org/government-politics-issues/2024-12-02/ambitions-for-st-louis-right-to-counsel-program-meet-a-scaled-back-reality-for-tenants>.
- ⁹⁴ *Why Energy Efficiency Matters*, U.S. Department of Energy. Available at: <https://www.energy.gov/energysaver/why-energy-efficiency-matters>.
- ⁹⁵ *Getting it Right: Weatherization and Energy Efficiency Are Good Investments* (Aug. 2015), U.S. Department of Energy. Available at: <https://www.energy.gov/eere/articles/getting-it-right-weatherization-and-energy-efficiency-are-good-investments>; *Residential Assistance*, Missouri Department of Natural Resources. Available at: <https://dnr.mo.gov/energy/weatherization/residential-assistance>.
- ⁹⁶ *Residential Assistance*, Missouri Department of Natural Resources. Available at: <https://dnr.mo.gov/energy/weatherization/residential-assistance>.
- ⁹⁷ *Budget Basics: Family & Economic Security* at 4 (2022), Mo. Budget Project. Available at: <https://www.mobudget.org/wp-content/uploads/2022/03/Family-and-Economic-Supports-2022-Budget-Primer.pdf?form=MG0AV3>; *Mo. Weatherization Assistance Plan Annual File* at 2 (2024), Missouri Department of Natural Resources. Available at: <https://dnr.mo.gov/document-search/missouri-weatherization-assistance-program-weatherization-annual-file-worksheet-program-year-2024>.
- ⁹⁸ *Mo. Draft Weatherization Assistance Plan Annual File* at 5 (2025), Missouri Department of Natural Resources. Available at: <https://dnr.mo.gov/document-search/missouri-weatherization-assistance-program-weatherization-annual-file-worksheet-program-year-2025>.
- ⁹⁹ *St. Louis Energy Burden Report* (Jan 2025). Sierra Club. Available at: https://www.sierraclub.org/sites/default/files/2025-01/stlouisenergyburdenreportjan2025_0.pdf
- ¹⁰⁰ "THE DISPROPORTIONATE IMPACT OF COVID-19 ON BLACK AND AFRICAN AMERICAN COMMUNITIES IN THE ST. LOUIS REGION." (2020). Available at: <https://www.mhanet.com/mhaimages/COVID-19/COVIDDIsparitiesSTL.pdf>
- ¹⁰¹ *Walking the tornado's path 100 days later reveals a divided St. Louis* (Aug 25, 2025). Kavahn Mansouri, STLPR. Available at: <https://www.stlpr.org/economy-business/2025-08-25/st-louis-tornado-100-days-later-walking>