

2020 - 2021



Green & Healthy Homes Initiative®

MISSISSIPPI

Healthy Housing Policy Project

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Introduction

About the Green & Healthy Homes Initiative

The Green & Healthy Homes Initiative (GHHI) is a non-profit organization dedicated to addressing the social determinants of health and the advancement of racial and health equity through the creation of healthy, safe and energy efficient homes. By delivering a standard of excellence in its work, GHHI aims to eradicate the negative health impacts of unhealthy housing and unjust policies for children, seniors and families to ensure better health, economic and social outcomes for low-income communities of color.

Explanation of the Mississippi Healthy Housing Policy Project

GHHI has worked with the Mississippi State Department of Health and additional local and statewide partners to administer the 2020-2021 Healthy Housing Policy Project. This project was designed to support development of coalitions comprised of healthcare providers, city officials, families of lead poisoned children, and faith-based and community-based organizations who can collaboratively raise awareness about lead poisoning risk and environmental home health hazards and develop strategies to address these issues at the local level. During the project year organizers and supporting organizations committed to advancing this work to expand community-based capacity for creating and enforcing lead safety and healthy housing standards by building awareness of the health impacts of housing quality and determining and implementing

targeted capacity building efforts for community engagement and education, code services, workforce training, and fundraising for housing interventions in existing affordable housing stock.

As project lead GHHI worked to ensure completion of the following objectives: 1) establishment of partnerships in at least 6 communities with demonstrated interest in lead poisoning prevention and healthy homes programming; 2) Identification of health impacts created by substandard housing conditions and any lack of regulation of housing conditions; 3) identification of collective strategies for capacity building, and technical support to achieve organizing, education, workforce training, or policy goals to address environmental health in housing; and, 4) engagement at the local and state level to increase awareness of policy and public administration strategies to support property maintenance enforcement in diverse types of jurisdictions.

The activities in the project year built on programming completed in previous programming years, which included:

- Development of the Lead Free Mississippi website, which serves as an online resource hub for Mississippi residents, agencies and other stakeholders to join the Screen Birth to 6 Campaign (educational campaign about lead screening recommendations) and access information about lead poisoning prevention, materials to increase public awareness of lead hazard control practices, and link access to additional state lead poisoning prevention resources.
- Engagement of individuals who participated in Pathways to Lead Poisoning Prevention and Healthy Housing 101 training webinars and subsequent focus group sessions who expressed interest in:

- o Raising awareness of lead hazards in environments of those at risk for lead poisoning,
- o Building local efforts to increase blood lead testing for children at risk of exposure, and
- o Increasing capacity to implement effective strategies for lead hazard control in Mississippi communities.
- Capacity building in local jurisdictions to implement effective strategies for housing-based interventions to reduce lead risks and other health hazards through trainings and other programming.
- Distribution of public health education materials, support of public awareness campaigns, and dissemination of research findings and policy recommendations to support local strategies.

GHHI led project activities from October 2020 to September 2021, including submission of this final report with community health impact assessments and delivery of community-based support activities for each participating jurisdiction. Throughout the project year GHHI and local partner agencies organized community stakeholders to review community needs for healthier housing and identify opportunities to develop policies and programs to improve environmental health in housing through the implementation of strategic plans. Due to the COVID-19 pandemic, original plans for community engagement, assessment, and participation were adjusted throughout the project period as needed.

Project Outputs

GHHI and our partners successfully established a statewide healthy homes partnership group that included communities at high risk for lead poisoning, which supported the completion of the following:

- ▶ Community assessment and screening activities including surveys, focus groups, and review network maps, to support project planning.
- ▶ Logic models with goals related to capacity building for local parent engagement, education, partnership development, fundraising, or policy.
- ▶ Local engagement with project partners for community outreach activities, political engagement, and review of assessment findings and recommendations.
- ▶ Delivery of technical assistance for policy development, community education, workforce training, and fundraising.
- ▶ Dissemination of healthy housing policy guidance and project findings to support the development of strategies to implement recommendations.

programs, and more units enrolled in lead hazard control programming funded by federal and state grant programs.

- Greater awareness of the financial and regulatory barriers Mississippi residents face when they need to address environmental health hazards in housing.
- Identification and adoption of effective strategies to protect renters and homeowners from unhealthy housing conditions and respond to reported cases of lead based paint and other health hazards without displacing residents.
- Increased enforcement and compliance with healthy housing standards, including housing and property maintenance codes, which will reduce childhood exposure to environmental health risks (lead paint, mold, structural defects, fire hazards, etc.) in unsubsidized/market rate housing.

This paper presents a detailed summary of project activities and findings to support dissemination of results of this work, which can be used to further advance lead poisoning prevention and environmental health improvements by improving housing conditions throughout the state.

Anticipated Project Outcomes

Through this project the Mississippi State Department of Health, GHHI, and our partners anticipated the following potential outcomes:

- Increased engagement in public health campaigns from parents, early childcare providers, healthcare providers, and other community partners that will lead to increased lead testing rates for children at risk for lead poisoning.
- Increased community-based workforce and administrative capacity in targeted communities for lead hazard reduction and healthy homes

A key finding of this research is that over 300,000 households in Mississippi are cost burdened by housing expenses and are more likely to experience exposure to unhealthy housing conditions. The medical impact of unhealthy housing creates over \$1.1 billion in annual medical costs for the state.

Executive Summary

This report provides information about opportunities in the state of Mississippi to increase health equity and reduce disparities in outcomes because of the quality of housing they occupy. In partnership with residents and local and state agencies, the Green & Healthy Homes Initiative (GHHI) led the Healthy Housing Project and developed this report to disseminate:

- 1 Statewide and community assessments of need and capacity for addressing housing health, safety and efficiency.
- 2 Proposals and alternatives to mitigate adverse health effects of substandard housing in targeted areas.
- 3 Summaries of successful implementation actions for programming designed to address healthy housing needs.
- 4 Recommendations for statewide housing policy development opportunities to reduce health disparities and cost burdens.
- 5 Opportunities to access funding, build workforce capacity, and advance community education and awareness to support maintenance of healthier housing.

As GHHI advanced implementation of the Healthy Housing Policy Project, lead staff members realized a need to develop communication materials to enable cross-sector collaboration of community members and organizations with stakeholders from housing, healthcare, and environmental service sectors. As the largest national healthy housing organization, GHHI has over 30 years of experience designing such materials to facilitate cross-sector partnerships and deliver strategies and services for the advancement of



health equity through housing interventions. Therefore, this report and its supporting resources are designed to provide context and reference materials to fully describe the key concepts presented and share lessons learned from local implementation of policy, education, training, and other capacity building strategies.

The first section of this report is focused on **Housing Policies in Mississippi**. The summary provides a brief history of key policy trends impacting housing development and quality standards in the state, current housing stock management practices, currently adopted national standards for healthy housing, and current housing health and safety regulations and enforcement entities. GHHI has provided this context to the policy project report because it was used in the policy assessment activities performed during the project period. A key finding of this research is that over 300,000 households in Mississippi are cost burdened by housing expenses and are more likely to experience exposure to unhealthy housing conditions. The medical impact of unhealthy housing creates over \$1.1 billion in annual medical costs for the state.¹ Data analysis demonstrates disparities in health and housing conditions are measurable by race, income level, and other socio-economic factors.

The second section of this report is **Systemic Approach to Creating Healthier Housing**. The section begins with detailed summaries of state and community-level healthy housing data indicators, which were used to identify jurisdictions that participated in the health impact assessments (HIAs). The rest of the section details the HIA process followed in each community and aggregated findings from community surveys, focus groups, and interviews. The section concludes with a detailed listing of the most common barriers to healthier housing identified through assessment efforts, and HIA project outcomes in participating communities.

The third and final narrative section of the report shares **Statewide Opportunities for Healthier Housing**. Based on project findings and input from

participants, GHHI developed a list of State and Local Policy Development Opportunities to support healthy housing development and preservation. The section concludes with potential funding resources, workforce development opportunities, and ideas for public engagement and education to support the efforts of state housing, health, and environmental agencies.

The appendix includes reference materials such as community-level data tables on housing and health assessments, a copy of the survey and focus group questions disseminated for the project, and links to reference materials.

Acknowledgments

GHHI is grateful for the residents and organizational partners in the state of Mississippi that contributed to the creation of this report and its findings and recommendations. Community leaders and organizations from Biloxi, Greenwood, Hattiesburg, Jackson, Laurel, Meridian, the Mississippi Band of Choctaw Indians, and many other places actively participated in and supported the activities described in this document. GHHI would also like to recognize the agencies that continue to support the ongoing review and dissemination of this report including the Mississippi State Department of Health, Mississippi Home Corporation, Institute for the Advancement of Minority Health, Mississippi State University, University of Mississippi, and Jackson State University. Finally, we thank the Mississippi Department of Archives and History for supporting this research.

Frequently used Abbreviations

CDBG Community Development Block Grant

CDC Centers for Disease Control and Prevention

DOE Department of Energy

EPA Environmental Protection Agency

FEMA Federal Emergency Management Agency

FHA Federal Housing Administration

FHLB Federal Home Loan Bank

GHHI Green & Healthy Homes Initiative

HIA Health Impact Assessment

HOLC Home Owner Loan Corporation

HOME HOME Investment Partnership Program

HUD Department of Housing and Urban Development

MDEQ Mississippi Department of Environmental Quality

MHC Mississippi Home Corporation

MSDH Mississippi State Department of Health

PHAs Public Housing Authorities

SDOH Social Determinants of Health

USDA United States Department of Agriculture



I. Housing Policies in Mississippi

History of Housing Development and Quality Standards

The four issues that have been central to housing policy decisions in the United States since the early 20th century have been 1) the quantity of housing to produce, 2) the quality of the housing, 3) the cost of housing programs, and 4) equity, meaning the fairness of and access to programs for various groups.ⁱⁱ This section of the report will provide a brief overview of how housing policies in Mississippi have developed during this time, including housing needs assessments and the policies adopted in response to their findings and recommendations, to highlight how the issues of housing quality and equity have been central to decisionmakers at local and state agencies. This history also provides context for how housing policies and financing programs have become so broadly dispersed across federal, state and local programs, creating wide variances in housing quality standards for the state's current housing stock.

In the 1930s the federal government passed significant legislation in response to needs for housing investments shaped by the Great Depression and a rapidly growing and urbanizing population. During this era, most states in the country experienced significant population growth, migration of residents from farms and rural areas to cities, as well as extreme economic hardships and inadequate financing resources for housing development. In 1933 Congress created the Home Owner Loan Corporation (HOLC) to provide emergency loans to homeowners facing imminent threat of foreclosure. The National Housing Act of

The maps continued to influence housing financing practices of the FHA and subsequent public and private housing financing agencies for decades to come.

1934 introduced federal regulation and support of the housing credit system through Federal Housing Administration mortgage insurance. Though this federal action did enable an increase in housing construction and homebuying for many families, the racial and ethnic segregation of housing and lending practices prevented most Black Americans and non-white immigrants (particularly with lower incomes and greater needs for housing improvements) from directly benefiting from FHA programs. In response the Roosevelt administration worked with Congress to pass the Housing Act of 1937 and created the first public housing program and funding in the nation's history.ⁱⁱⁱ

The HOLC completed one of the first assessments of housing conditions in the state of Mississippi (beyond questions about housing characteristics included in the decennial U.S. Census) in 1934 as part of their efforts to finance mortgages in over 250 cities nationwide. The agency mapped neighborhoods in Jackson and rated the housing units from A “best” to D “hazardous” based on the physical condition of the housing, occupations of householders, and racial characteristics of residents (see Figure 1). These maps created the practice now known as redlining, defined as denial of credit and other financial resources in particular areas based on the race of the residents. The maps continued to influence

housing financing practices of the FHA and subsequent public and private housing financing agencies for decades to come.^{iv}

To access housing financing resources through the FHA, the state of Mississippi had to assess conditions of its existing housing stock statewide and adopt property standards for newly constructed and existing housing. In 1936 The Property Standards for the State of Mississippi included requirements for residential dwellings including minimum lot sizes, window areas, room sizes, and installation of ventilation, plumbing, and sanitation systems.^v These standards guided construction practices as well as many of the first local zoning ordinances adopted by municipalities in the state. They reflected building science developed in earlier decades in larger urban cities to support the health and safety of occupants by ensuring dwellings had adequate light and ventilation, safe levels of density, indoor plumbing, connectivity to available utilities and infrastructure, and minimized fire hazards.^{vi}

Two additional housing conditions and needs assessments completed in the 1940s significantly shaped the location and structural condition of

housing in Mississippi moving forward. In 1940 the Mississippi State Planning Commission completed a statewide housing assessment that analyzed housing needs created by the limited financial capacity of most residents, migration, population growth, and other socioeconomic trends, as well as opportunities to develop housing and communities to support the prosperity of both rural and urban areas. Based on results of the 1940 U.S. Census, they reported estimates of percentages of housing units with need for major repair to address structural deficiencies by type of location, with 23.5% of urban housing, 31.6% of rural non-farm housing, and 37.9% of rural farm housing all needing significant repairs.

Among their findings the Commission states:

“Considering the scarcity of homes in Mississippi which results in serious overcrowding, considering the inferior condition of many thousand urban and rural dwellings in the state, considering the lack of adequate home conveniences throughout the state, considering the downward trend of home ownership in the state, and considering the relative unfavorable position occupied by Mississippi in each of the above as compared to other states, there is one inevitable conclusion; housing conditions in Mississippi present a most serious problem, one that is inimical to health, morals and general well-being of the people, and one which must attract and command the attention of those in the state who are interested in its development and who are conscious of the welfare of its people.”^{vii}

The Mississippi State Planning Commission primarily used their assessment to work with the state legislature and municipal leaders to track housing policy and financing resources, including allocations through the Department of Agriculture, Federal Works Agency, and Federal Loan Agency, and facilitate efforts to secure federal funding at the local level, through much of the late 1930s and 1940s. They supported development of enabling state legislation to establish

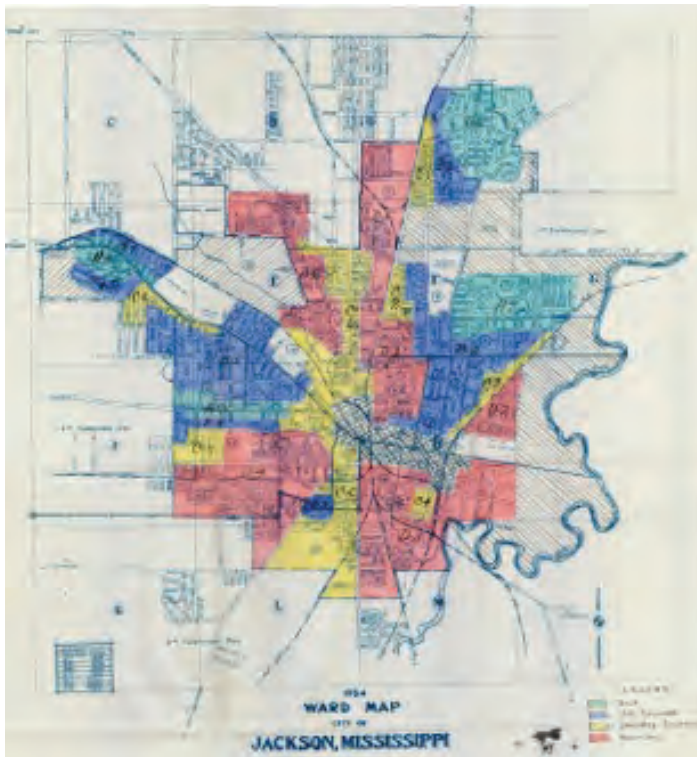


Figure 1 HOLC Map of Jackson, MS (1934)






















FACILITY	RURAL FARM	RURAL NON-FARM	URBAN
RUNNING WATER	 3.2%	 32.4%	 66.4%
FLUSH TOILET	 2.3%	 22.3%	 46.3%
PRIVATE BATH	 2.3%	 22.1%	 41.3%
MECHANICAL REFRIGERATION	 5.0%	 24.1%	 33.2%
RADIO	 28.4%	 50.9%	 61.5%
ELECTRIC LIGHTS	 8.5%	 45.3%	 68.1%
CENTRAL HEATING	 0.8%	 1.8%	 4.6%

Figure 2: Mississippi Housing Facilities—1940 (from *Housing for Mississippians* (1947)).

a state public housing authority in 1938 and assisted in the establishment of the first municipal housing authority in McComb in that year, and one of the first rural housing authorities in the nation in Lee County in 1939. By the early 1940s they had assisted with the organization of 27 public housing authorities, financing the development of 7,000 homes in the state.

A second assessment, *Housing for Mississippians*, published by the University of Mississippi in 1947, similarly found significant deficiencies in the quality of Mississippi’s housing stock. The preface states, “Among the problems which will confront the Mississippi Legislature in its next session, few are more acute

in the state today than housing.” The report notes similar demographic trends identified in the Planning Commission’s report with additional context on trends of homeownership, overcrowding, and housing quality by race, but also presents detailed information about the lack of access to electrical infrastructure, indoor plumbing facilities, and heating and cooling systems in rural and urban housing compared to other states (see Figure 2). The report concludes that much of the state’s existing housing, especially in rural areas, can be characterized as having “slum” conditions, but also notes that participation in public housing programs including slum clearance remains controversial in the state.^{viii}

Investments in Mississippi housing and infrastructure in the late 1940s and 1950s were primarily made possible through federal actions to support urban and rural development, including the Housing Act of 1949, Serviceman’s Readjustment Act of 1944 (the GI Bill), the Rural Electrification Act of 1936 and subsequent amendments, and the Federal Highway Act of 1956. These resources made homeownership more accessible, especially to middle class White households, and supported a national residential construction boom.^{ix} Compared to national trends, housing construction in Mississippi lagged in the mid-century. The rate of increase in housing units statewide from 1950-1960 was a modest 3% (one of the lowest rates in the country) but increased to 11% from 1960 to 1970.^x Housing policies during this period also advanced Urban Renewal projects in which authorized local authorities could exercise eminent domain powers to take ownership of land for either “slum clearance” or housing and economic development deemed beneficial for the public good. Urban Renewal projects greatly reorganized land use and residential development in Mississippi, but diversely impacted residents. A HUD analysis of national assessments of eminent domain practices in 1966 found that the program had cleared over 400,000 housing units, forcing the relocation of over 300,000 families, over half of whom were non-white. The long-term results of urban renewal policies on housing quality are considered to be negligible by most evaluators, but they did perpetuate housing financing practices that differed by race and income level.^{xi}

While funding support for the federal homeownership financing programs has remained popular in Mississippi and nationally since this era, funding for public housing became increasingly politically contentious. Beginning in the 1960s, “local controversies dampened congressional support,” and a lack of resources for maintenance of existing public housing, often constructed at lower quality than market rate housing, limited the capacity local housing authorities had to maintain housing quality for tenants.^{xii} Public perceptions of the value of project based public housing were largely influenced by local disputes of where it would be located, real and perceived substandard conditions, and correlations to poor public safety associated with the properties. These issues combined with the social unrest many cities experienced during the Civil Rights Movement and Anti-Vietnam War Movement of the era heavily influenced trends of lawmakers to reduce investments in urban development. Though the 1968 Report of the National Advisory Commission on Civil Disorders (also known as the Kerner Commission Report) found that institutionalized racial discrimination, including inadequate, expensive, overcrowded and substandard housing for Black households, was a primary driver of the decade’s social unrest, Congress did not act at the scale recommended in the report to support investments in programs designed to end residential segregation and discriminatory practices in housing that created unequal living conditions.^{xiii} By the 1970 Census, Mississippi had wide disparities in homeownership rates

and housing value by race. In the Jackson metropolitan area median value of Black single-family owner-occupied housing was \$10,100, compared to \$13,700 for all single-family owner-occupied housing.^{xiv}

Some of the key federal actions in the 1960s, 70s and 80s related to housing and housing quality were to increase funding for homeownership programs, reduce funding for project based public housing and transition low-income renters to programs providing rent subsidies to income-qualified households, create new tax incentives for low-income housing developments, and shift housing policy decision making from federal to state and local programs through block grant programs. Additional legislation that impacted the housing market in this era included adoption of civil rights protections designed to eliminate housing discrimination. The federal government also significantly expanded environmental regulations in the 1970s and 80s, creating new standards for housing and neighborhood quality based on regulations of air quality, water quality, and toxic substance control. The table below highlights some of the most significant pieces of housing and environmental legislation in the latter half of the 20th century, the implications for housing availability and quality standards, and the leading agency in Mississippi responsible for program management or statutory enforcement.

Year	Legislation	Impact on Housing	Lead Agency
1964	Civil Rights Act	Outlawed discrimination based on race, color, religion, sex, or national origin	Department of Housing and Urban Development
1968	Fair Housing Act	Expanded on Civil Rights Act to prohibit discrimination concerning the sale, rental and financing of housing based on race, religion, national origin, sex, disability and family status	Department of Housing and Urban Development
1968	National Flood Insurance Act	Launched the National Flood Insurance Program	Federal Emergency Management Agency

Year	Legislation	Impact on Housing	Lead Agency
1974	United States Housing Act	Section 8 of the legislation created the Housing Choice Voucher Program so local public housing authorities can administer rent subsidies for low-income renters to use in private market housing	HUD and local Public Housing Authorities (PHAs)
1974	Housing and Community Development Act	Established the requirements for communities receiving Community Development Block Grant funds to address housing and economic development needs in low and moderate income areas and households	Entitlement communities and Mississippi Home Corporation*
1977	Community Reinvestment Act	Requires the Federal Reserve and banking regulators to encourage financial institutions to meet credit needs of low and moderate income neighborhoods where they do business	Federal Reserve
1978	Toxic Substances Control Act	Amendment of the law to ban use of lead based paint in housing	Mississippi Department of Environmental Quality
1986	Safe Drinking Water Act	Amendment of the law to ban use of lead pipes and solder or flux in public water systems	Mississippi State Department of Health
1986	Tax Reform Act	Created the Low Income Housing Tax Credit Program, which issues tax credits to developers of rental housing for lower-income households	Mississippi Home Corporation
1989	Toxic Substances Control Act	Amendment of the law for the partial ban on the manufacture and distribution of many asbestos containing products	Mississippi Department of Environmental Quality
1990	Clean Air Act	Amendment of the law to specify technology based standards for major sources of hazardous air pollutants including lead and asbestos	Mississippi Department of Environmental Quality
1990	National Affordable Housing Act	Created the HOME Investment Partnership Program	Entitlement communities and Mississippi Home Corporation*
1992	Residential Lead Based Paint Hazard Reduction Act	Regulated lead paint disclosures in real estate transactions	HUD
1995	Housing for Older Persons Act	Created designated funding for housing to accommodate persons 55 and older with disabilities	HUD/PHAs

**Jurisdictions that currently directly receive CDBG and/or HOME funds allocations due to economic need (entitlement communities) are Biloxi, Gulfport, Hattiesburg, Jackson, Moss Point and Pascagoula. The State of Mississippi is a non-entitlement recipient of CDBG and HOME funds, which it uses to serve areas outside of entitlement jurisdictions.*

In recent decades many housing assessments for quality and health have become specialized relative to program and funding sources as well as oversight requirements for regulatory statutes. Information on housing needs is typically a component of land use plans as well as the plans and assessments required for HUD funds. Additionally, housing assessments are a component of land use plans generated by city and regional planning agencies. The state formed the Mississippi Research and Development Center in 1965 and created 10 planning and development districts (PDD) in the state.^{xv} These PDDs support a wide variety of community planning and human services, many of which impact housing development patterns. Larger municipalities have their own planning departments with housing and community development offices that complete housing assessments. The U.S. Census continues to collect data on housing quality and other characteristics through the Decennial Census, American Community Survey, and U.S. Housing Survey programs. Public health information and healthcare cost data can also help illustrate needs for housing improvements. As was the case with early 20th century urban and regional planning efforts in the United States, agencies charged with housing and land use management have a continuous responsibility to identify health hazards and address public health and safety in their work.^{xvi} The following sections will detail how that work happens currently and opportunities for stronger cross-sector partnerships to address social determinants of health related to housing in Mississippi.

The lack of maintenance of housing quality standards has resulted in exposure to health hazards in housing, including lead based paint and contaminated water infrastructure, asthma triggers, extreme temperatures, and poor structural conditions that cause trips and falls.

Current Housing Stock Occupancy and Management

The management of health and safety in Mississippi's existing housing stock, through both assessments and regulatory practices, can vary based on its location, financing, and type of occupancy primarily divided by owner or renter status. This section of the report maps state level trends of occupied housing stock and describes the key agencies currently managing housing financing as well as those establishing and enforcing health and safety standards for both owner occupied and renter occupied units. While current housing stock management practices support the health, safety, and affordability of many Mississippi residents, over 300,000 households are cost burdened by housing and are more likely to experience exposure to unhealthy housing conditions they are unable to address for both financial and regulatory reasons.^{xvii} The lack of maintenance of housing quality standards has resulted in exposure to health hazards in housing, including lead based paint and contaminated water infrastructure, asthma triggers, extreme temperatures, and poor structural conditions that cause trips and falls, creates over \$1.1 billion in state medical costs each year.^{xviii} Data analysis demonstrates disparities in health and housing conditions are measurable by race, income level, and other socio-economic factors.

The American Community Survey conducted by the U.S. Census provides useful data for comparing socio-economic characteristics of owner and renter occupied units.^{xix} The statewide population and housing characteristics from the ACS shared below provide context for the trends identified among homeowners and renters.

- ▶ The state has a total population of about 2.9 million people and 1.1 million occupied housing units.
- ▶ Most occupied housing units in the state, about 68%, are owner occupied. 32% are renter occupied.

- ▶ Most occupied housing units, 70.6%, are single family detached homes. 6.5% of occupied units are 1-to-4 unit buildings, 8.6% are multifamily building units (5 or more apartment units), and 14.3% are mobile homes or another type of housing.
- ▶ Racial characteristics of the total population of the state show that White residents account for 58.4% of the population, Black residents 37.7% of the total population, 0.5% are American Indian and Alaska Natives, about 1% are Asian, and about 2.4% are other races or two or more races.
- ▶ 91,202 residents of the state, or 3% of the total population, are of Hispanic origin.
- ▶ Median household income for occupied housing units is \$45,081.
- ▶ The federal government defines housing affordability as spending 30% or less of a household's monthly income on housing costs. About 288,097 households, or 26% all households in the state, pay 30% or more of their income on housing costs.
- ▶ Because lead based paint was used in residential buildings until 1978, the year a housing unit was built can be an indicator of a household's potential risk for living in unhealthy housing conditions. About 453,357, or 41% of all occupied units were built before 1978.
- ▶ The USDA estimates that as of 2019 about 53% of the population is classified as rural, and 43% is classified as urban.^{xx}
- ▶ About 226,000 residents, or 7.5%, of the population is under the age of 6. This cohort is at increased risk of lead poisoning compared to residents of other ages.
- ▶ 461,022 residents, or 15.4%, of the population is 65 years of age or older. This cohort is at increased risk of injuries and accidents due to unsafe housing conditions.

Homeowners are more likely to live in higher quality housing and have the financial capacity to address needs to improve housing quality or recover from emergencies like flooding, pest infestations, and other hazardous conditions.

Most Federal Housing Expenditures Benefit Homeowners

Federal housing expenditures in billions, 2015

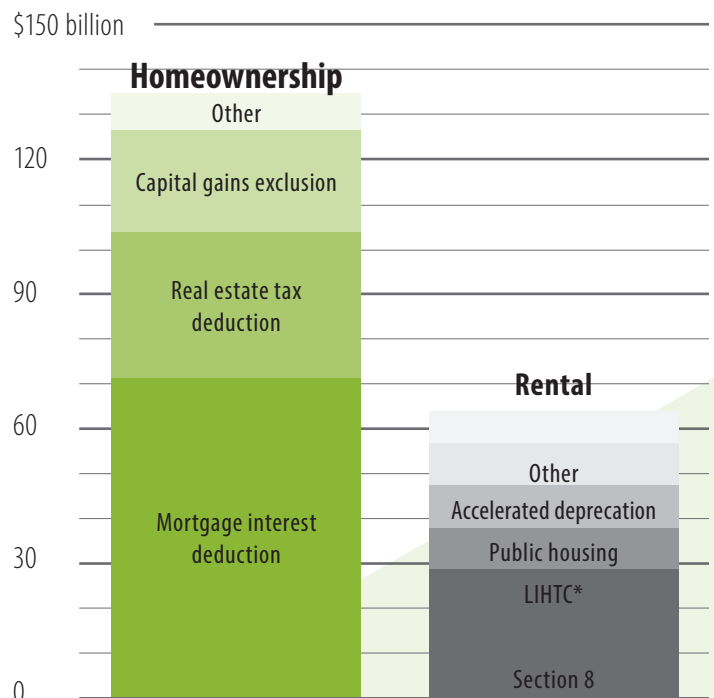


Figure 3: Federal Housing Expenditures (2015) Center on Budget and Policy Priorities^{xxii}

Characteristics of Owner Occupied Housing

The current federal system of housing assistance is divided across multiple public agencies and programs, but studies of housing finance demonstrate that the bulk of housing subsidies across all housing types and income groups is provided to middle and upper income households through tax treatment of homeownership under the federal income tax.^{xxi} Nationally, about 60 percent of federal spending on housing assistance goes to households with incomes above \$100,000 (see Figure 3). While households with incomes of \$200,000 or more received an average benefit of \$6,076, households with income below \$20,000 received average benefit of \$1,529.^{xxii} According to the National Association of Realtors, in 2016 about 188,000 Mississippi households claimed mortgage interest rate reductions at an average amount of \$6,400, and 218,700 claimed real estate taxes deductions at an average amount of \$2,050.^{xxiii} Because of these financial benefits, homeowners are more likely to live in higher quality housing and have the financial capacity to address needs to improve housing quality or recover from emergencies like flooding, pest infestations, and other hazardous conditions.

Homebuying in Mississippi is supported by private financial institutions, the state housing finance agency Mississippi Home Corporation, professional housing service agencies including the Mississippi Association of Realtors, and many other local programs including providers of homebuyer counseling, consumer credit counseling, down payment assistance and closing cost assistance programs. Additional characteristics of homeowners in Mississippi from the ACS are as follows:

- ▶ 371,672 homeowners currently have a mortgage loan and 381,219 homeowners do not have a mortgage loan. About 58% of homeowners without a mortgage loan make less than \$50,000 a year.
- ▶ Racial characteristics of owner occupied housing show that 69% of households are White, 28.5% are Black, and 2.5% are other or two or more races.
- ▶ The median household income for residents of owner-occupied units is \$55,904.
- ▶ About 142,056 of owner occupied units, or 19%, pay 30% or more of their income on housing costs.
- ▶ About 296,160 housing units, or 39.3%, of owner occupied units, were built before 1978.^{xxiv}

Rental Assistance Supports All Types of Mississippi Communities

Rental assistance helps 53,600 people in cities and suburbs, as well as 81,800 people in rural areas and small towns.

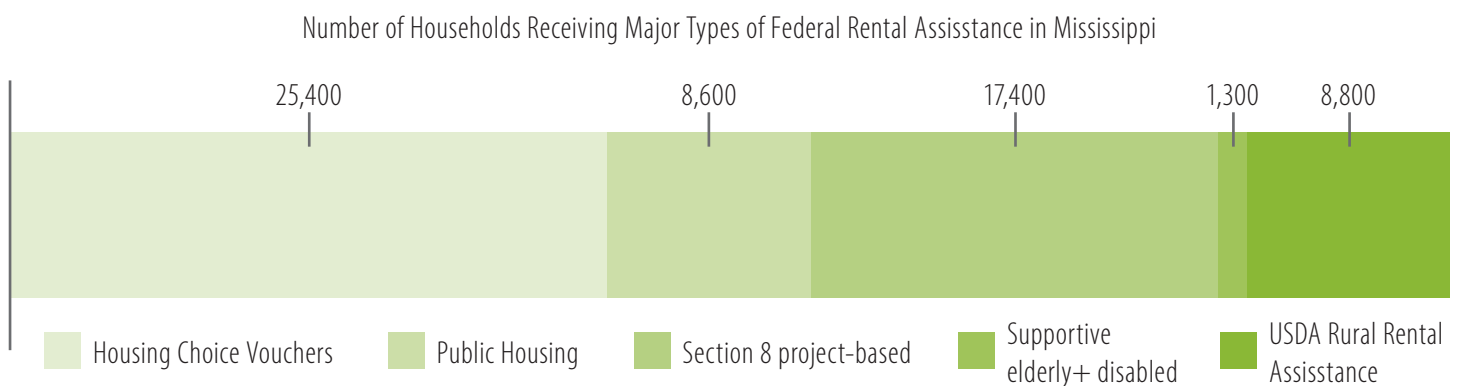


Figure 4: Rental Assistance Allocations for Mississippians from CBPP^{xxv}

Characteristics of Renter Occupied Housing

Rental housing in Mississippi serves a diverse population of the state's residents in both rural and urban communities. The majority of rental units are occupied by residents who do not receive any financial assistance. The Center on Budget and Policy Priorities estimates 4 in 10 low income people in Mississippi financially qualify for assistance but do not receive it because of program funding gaps. About 62,000 households, or 18% of renter households, receive one of the major types of federal rental assistance (see Figure 4), a total federal funding allocation of \$412 million in 2018. Sixty-seven percent (67%) of households receiving assistance are seniors, families with children, or people with disabilities. Additionally, about 21,000 rental units are estimated to be occupied by low and moderate income households that were developed through the Low Income Housing Tax Credit Program.

Median rent in Mississippi in 2018 was \$780 per month, a 10 percent increase since 2001, but median income for renters dropped by 8 percent during the same time period. These trends have created a rental affordability crisis for most low income renter households in the state.^{xxv} Rent burdened households are more likely to experience poor health conditions and outcomes compared to higher income households; reasons for this correlation include, 1) Households with fewer rental property options are more likely to occupy units with hazardous conditions (such as lead paint, pests, water leaks, and poor ventilation), units with poor thermal control, and more likely to be overcrowded; 2) Renters who are cost burdened are less likely to be able to afford access to healthcare, healthy foods, recreation infrastructure and other resources for long-term health; and, 3) People experiencing eviction and chronic homelessness have higher rates of morbidity and mortality because of impacts to physical and mental health.^{xxvi} Additional characteristics of renters in Mississippi from the ACS further illustrate the social determinants of health explored in this research:

- ▶ Data on racial characteristics of renter occupied housing show that 43.3% are White, 53% are Black, and 3.7% are other or two or more races.
- ▶ The median household income for residents of renter-occupied units is \$27,460.
- ▶ About 157,197 housing units, or 44.7% of renter occupied units, were built before 1978.
- ▶ About 146,041 renter occupied units, or 41.5%, pay 30% or more of their income on housing costs.^{xxvii}

Housing stock management is also a component of land use maintenance of Native American Tribes in the state of Mississippi. The state's only federally recognized Native American Tribe, the Mississippi Band of Choctaw Indians, maintains 35,000 acres of trust land located in east central Mississippi. The reservation is home to about 10,000 residents in eight communities. The Tribe manages several housing development, repair, and rental assistance programs to support residents of the reservation. Services include rental assistance programs managed by the Choctaw Housing Authority, as well as a housing improvement program, housing and land mortgage program, and Tribal Housing Rental Program for the rental of mobile homes.^{xxviii} The most recent American Community Survey of the Mississippi Choctaw Reservation shows a total of 2,087 households, about 87% of which are single family homes and 13% are mobile homes; 73% of units are owner occupied and 27% are renter occupied.^{xxix}

Households with fewer rental property options are more likely to occupy units with hazardous conditions (such as lead paint, pests, water leaks, and poor ventilation), units with poor thermal control, and more likely to be overcrowded.

Defining Healthy Housing Standards

GHHI recommends that all state agencies engaged in housing financing, development, and management refer to HUD standards for housing health and safety to evaluate needs of particular units as well as community and program level management of housing stock. To define the conditions of a healthy housing unit, agencies can use the 8 Elements of Green and Healthy Homes.^{xxx}

Element	Description
Dry	Plumbing in good condition and without leaks, roof is not leaking, stormwater is not entering house and flowing easily away from house, spills are cleaned right away, humidity is in a safe range
Clean	No excessive clutter, hard surfaces cleaned with wet cloths and soft surfaces are vacuumed regularly, trash is stored in airtight containers and emptied regularly, dirty laundry kept off of floors
Contaminant Free	Lead paint hazards reduced from homes built before 1978 and plumbing installed before 1986, home is tested for radon, wet cleaning methods used to keep hard floors and windows clean
Pest Free	Use Integrated Pest Management practices to reduce pest access to homes (sealing cracks and openings, addressing plumbing leaks), store food in pest-resistant containers, and use sticky traps and baits if needed
Safe	Install smoke and carbon monoxide detectors, keep fire extinguishers on hand, address any potential causes of trips and falls (secure loose rugs), keep children's play areas free from hard or sharp surfaces, install safety devices and stabilize appliances for child safety, properly store chemicals, medications, and firearms
Energy Efficient	Seal heating and cooling ducts, caulk windows and door frames, change filters for central air and heating systems, install a programmable thermostat, upgrade insulation and appliances as possible to efficient products, use LED bulbs and smart power strips
Well Maintained	Take care of minor repair needs as soon as possible by inspecting, cleaning and repairing home routinely
Well Ventilated	Ventilate bathrooms and kitchens with exhaust fans connected to outdoors, keep air moving in home with fans or by opening windows

HUD developed the Healthy Home Rating System identifying the 29 most common and significant health hazards of housing, which is shared in the table below for reference. The list of hazards is a valuable guide to use for assessment of health hazards in housing as well as prioritization practices for hazard reduction based on the vulnerability of occupants. ^{xxxi}

Hazard	Description	Most Vulnerable Populations
Damp and Mold Growth	Caused by dust mites, mold or fungal growth caused by dampness and/or high humidity	14 years or less
Excess Cold	Excessively cold indoor temperatures caused by poor structural conditions and/or malfunctioning/absent air-cooling systems	65 years or older
Excess Heat	Excessively hot indoor temperatures caused by poor structural conditions and/or malfunctioning/absent air-heating systems	65 years or older
Asbestos, silica and other MMF	Excessive levels of silica, asbestos and man-made mineral fibers in indoor air caused by deterioration of materials	No specific group
Biocides	Threats to health from chemicals used to treat timber and mold growth in dwelling	No specific group
Carbon monoxide and fuel combustion products	Excessive levels of carbon monoxide, nitrogen dioxide, sulfur dioxide and smoke in the indoor air	For CO – 65 years or older For NO2, SO2 and smoke – no specific group
Lead	Ingestion or inhalation of lead from paint dust, debris, or leaded water pipes or fixtures	Children under age 6 and pregnant women
Radiation	Threats to health from radon gas and decaying products in indoor air or water	All persons aged 60-64 with lifelong exposure
Uncombusted fuel gas	Fuel gas escaping into the atmosphere within a dwelling	No specific group
Volatile Organic Compounds	A diverse group of organic chemicals, including formaldehyde, that are gaseous at room temperature	No specific group
Crowding and Space	Hazards associated with lack of space within the dwelling unit for living, sleeping and household life	No specific group
Entry by Intruders	Difficulties in keeping a dwelling secure against unauthorized entry and maintenance of defensible space	No specific group
Lighting	Threats to physical and mental health associated with inadequate natural and/or artificial light	No specific group

Hazard	Description	Most Vulnerable Populations
Noise	Covers threats to physical and mental health resulting from exposure to noise inside the dwelling or within immediate area	No specific group
Domestic Hygiene, Pests, and Refuse	Covers hazard which can result from poor design, layout and construction such that the dwelling cannot be readily kept clean and hygienic, creating harborage for pests or inadequate storage space for household waste	No specific group
Food Safety	Threats of infection or illness resulting from inadequate and unsafe food storage, refrigeration, or preparation	No specific group
Personal Hygiene, Sanitation and Drainage	Threats of infection or illness and threats to mental health associated with personal hygiene, including personal washing and clothes washing facilities, sanitation and drainage	Children under 5 years of age and Adults 65 and older
Water Supply	Quality and adequacy of the supply of water within the dwelling for drinking and domestic purposes (cooking, washing, cleaning and sanitation)	No specific group
Falls associated with Baths	Unsafe physical conditions that have potential to cause or result in falls associated with using a bathtub or shower	60 years or older
Falling on Level Surfaces	Unsafe physical conditions that have potential to cause or result in falls on a level surface such as floors, thresholds, doorways, yards, or pathways	60 years or older
Falling on Stairs	Unsafe physical conditions that have potential to cause or result in falls on stairs, steps, and ramps where change in level is greater than 12 inches	60 years or older
Falling between Levels	Unsafe physical conditions that have potential to cause or result in falls from one level to another, such as out of windows, from balconies or roofs	5 years or younger
Electrical hazards	Hazards from shock and burns resulting from exposure to electricity, including from lightning	5 years or younger
Fire	Threats from exposure to uncontrolled fire and associated smoke	60 years and older

Hazard	Description	Most Vulnerable Populations
Flames and Hot Surfaces	Threats of burns and injuries caused by contact with a hot flame or fire, and contact with hot objects or hot non-water based liquids, and scalds, injuries caused by contact with hot liquids and vapors	5 years or younger
Collison and Entrapment	Risks of physical injury from trapping body parts in architectural features, such as trapping limbs or fingers in doors or windows and colliding with objects such as windows, doors, low ceilings and walls	5 years or younger
Explosions	Threats from the blast of a potential explosion, from debris generated or the collapse of a building resulting from an explosion	No specific group
Position and Operability of Amenities	Threats of physical strain associated with functional space and other features at dwellings	60 years or older
Structural Collapse and Falling Elements	Threat of dwelling collapse due to inadequate fixing or structural disrepair, or as a result of adverse weather conditions	No specific group

Housing Health and Safety Regulations and Enforcement Entities

Statewide, health and safety standards for owner occupied housing are defined through existing building codes as well as standards and practices for real estate transaction and procurement of homeowners insurance. Nationally, the most common source of building code regulations is the International Code Council, which produces codes that set minimum standards for building construction and maintenance to ensure health and safety of occupants. In 2019 The Mississippi Building Code Council adopted the 2018 International Existing Building Code.^{xxxii} Additionally, over 13 municipalities have adopted existing building or property maintenance codes to set and enforce local standards for existing homes. While most municipalities do not proactively enforce property maintenance codes for owner or renter occupied housing, jurisdictions do have authority to take enforcement actions, which may be deemed necessary if enforcement agencies suspect violations related to health and safety. A few

Enforcement of health and safety standards for renter occupied properties vary widely based on the requirements of the jurisdiction in which they are located, the type of financing for rent paid, and the status of and adherence to lease agreements executed.

municipalities in the state do operate rental housing registration and inspection programs, which typically require landlords to register rental units with a municipal authority prior to renting the housing unit. These programs require inspections annually or at times of tenant turnover to ensure code compliance.

Real estate transactions and procurement of homeowners insurance policies are much more common opportunities for owner occupied housing units to be subject to inspections and assessment of health and safety.

▶ **Realtor Services:** Homebuyers in Mississippi often seek services from realtors who are licensed by the Mississippi Real Estate Commission. Licensed realtors complete training and real estate regulations and are responsible for meeting legal and ethical standards related to their profession, including procurement of inspection and appraisal services and reporting of certain health and safety issues to buyers.

▷ One such legal obligation is to ensure sales of existing homes built before 1978 following rules set by the Residential Lead-Based Paint Hazard Reduction Act (also known as Federal Title X). This law sets requirements for the notification, evaluation, and reduction of lead-based paint hazards in federally owned resident property and housing receiving federal assistance.^{xxxiii}

▶ **Mortgage Loans:** Property standards for owner occupied units at the time of purchase can vary based on the type of mortgage loan secured by the buyer. Loans insured by the Federal Housing Administration account for the primary sources of financing of about 25% of home purchases and have higher inspection standards than convention loans. When a homebuyer receiving an FHA loan makes an offer of purchase, they are required to have the property inspected by a certified home inspector who will identify health and safety concerns based on FHA program standards.^{xxxiv} Conditions that do not meet minimum standards must be repaired prior to purchase. Conventional loans are more commonly used by buyers and have less strict health and safety standards for purchase. The recent increase in home purchasing rates nationally has caused a significant increase in homebuyers waiving home inspections. According to the National Association of Realtors, in May of 2021 about 25% of buyers waived home inspection contingencies.^{xxxv}

▶ **Homeowners Insurance:** Most mortgage lenders require homebuyers to obtain a homeowners insurance policy to receive a loan and be in good standing throughout a mortgage period. The Mississippi Insurance Department estimates about 67% of homes in the state are insured.^{xxxvi} Policies for coverage of the dwelling typically provide reimbursement costs for repairs if the home is damaged by a fire, falling object, certain disasters, and major systems failures. Insurance providers require homebuyers to submit home inspection and appraisal reports in order to determine the cost of the insurance policy. If homeowners file a claim of damages an adjuster from the provider inspects the property to assess damages. Such inspections are usually not comprehensive unless the damage is to the total structures.^{xxxvii}

Enforcement of health and safety standards for renter occupied properties vary widely based on the requirements of the jurisdiction in which they are located, the type of financing for rent paid, and the status of and adherence to lease agreements executed. The most common avenues for property maintenance inspections and enforcement mechanisms for health and safety standards are as follows:

▶ **Residential Leases:** Most property owners use lease agreements to set terms with tenants, including property maintenance practices for health and safety. Leases often outline regular maintenance and repair activities, frequency of inspections, procedures for notifying landlords of repair needs, and responsibilities related to landscaping, waste management, and pest control.

▷ **Lead Based Paint Disclosure Requirements:** Owners of rental units built before 1978 are required to comply with the Residential Lead Based Paint Hazard Reduction Act (also known as Federal Title X). This law sets requirements for landlords to notify tenants of any known information concerning the presence of lead based paint hazards and share disclosures and

education materials related to lead hazards. The law also gives tenants the right to request a lead inspection prior to executing a lease.^{xxxviii}

- ▶ **Landlord Tenant Act:** When lease agreements are not in place to regulate rental units, or landlords do not comply with leases, the Mississippi Landlord Tenant Act regulates the process landlords and tenants must follow to address property repair needs and to bring a property into compliance with local housing codes. The law includes information about how tenants can make minor repairs and request reimbursement through rent offset. The law also states that if conditions of the rental unit affect the health and safety of the tenant they can terminate the lease without notice.^{xxxix}
- ▶ **Project Based Public Housing:** HUD requires PHAs to complete regular inspections of project based rental housing units they manage to ensure they meet the program's specified Housing Quality Standards. Inspectors complete initial inspections of units using a standard checklist for a visual inspection designed to capture health and safety characteristics in each room of the dwelling and determining if the unit passes or fails. After the initial inspections, the PHA is not required to re-inspect each unit annually, but can inspect a representative sample of units each year.
- ▶ **Housing Choice Voucher Program:** PHAs administering Housing Choice Vouchers complete both new contract inspections and regularly scheduled inspections for each household enrolled in the program. Inspectors complete initial inspections of units using a standard checklist for a visual inspection designed to capture health and safety characteristics in each room of the dwelling and determining if the unit passes or fails. If a unit does not initially pass the landlord is instructed to correct issues within the unit, and the unit is re-inspected until it passes. Special Inspections are scheduled and conducted if the PHA suspects owners or voucher recipients are not in compliance with program requirements.^{xl}

- ▶ **Low Income Housing Tax Credit Properties:** Rental units developed through the MHC LIHTC Program are subject to monitoring and inspections during their affordability period, when the developer is receiving a tax credit for offering rent controlled housing to low-income renters. As minimum MHC is required to inspect physical conditions in 20% of the rental units of each development once every three years, and units are inspected to local housing code standards or the HUD Uniform Physical Condition Standards.^{xli}

Additional assessments of environmental conditions of existing housing may also occur for public health purposes or for the regulation of housing repair activities. The Mississippi State Department of Health Office of Lead Poisoning Prevention and Healthy Homes administers the childhood lead poisoning prevention program for the state of Mississippi. They receive reports of blood lead level tests from labs, clinics, and hospitals and if results of tests show a child has more than 5 micrograms per deciliter (mc/dL) of lead, they administer case management protocols in response. If a child's blood lead level is 15 mcg/dL MSDH can administer a home environmental assessment to identify lead exposure risks in the child's environment.^{xlii} The Mississippi Department of Environmental Quality Air Division administers enforcement programs for compliance with regulated activities for the repair and removal of asbestos and lead based paint. MDEQ implements regulations of asbestos affecting building demolition and renovation operations and through the accreditation and certification of training providers who engage in asbestos abatement activities. Any activity that disturbs painted surfaces in residential structures and child-occupied facilities built before 1978 is subject to regulations, including requirements for repair service providers to be trained and certified by MDEQ and notify the agency of the performance of lead paint hazard control and abatement services.^{xliii}

II. Systemic Approach to Creating Healthier Housing

GHHI has included components of the historic development of housing policies, current housing program practices, housing quality standards, and data on the health impacts of housing in Mississippi to provide context for the organization's recent efforts to assess emerging opportunities to shape local and statewide initiatives for the improvement of housing quality for all residents, but especially those that are most vulnerable to experiencing health disparities related to housing and community conditions. A cohesive statewide approach to healthy housing programming will require adoption of a framework for defining and assessing what elements are essential to the health of residents; coordination of data surveillance that supports tracking of housing quality improvements; and support of community-based solutions to housing interventions, policies that enable this work, and evaluation of the outcomes. The remaining sections of this document will detail guidance for this approach to healthy housing policy development and implementation and examples of application through the Healthy Housing Policy Project.

Tracking Needs for Housing Affordability, Health and Safety

The definitions of standard and substandard housing have changed significantly over time as building systems have become more sophisticated. For purposes of national housing assessments, HUD defines severely inadequate housing as units having one or more physical problems related to heating, plumbing, and electrical systems or maintenance, or a severe rental cost burden defined as more than half of the household's income on gross rent. A 2017 national housing assessment found that over 8 million households had worst case housing needs, an upward trend from previous years. HUD in partnership with the U.S. Census tracks characteristics related to housing quality and affordability to characterize needs for housing assistance and affordable housing production. The data table below includes some of their findings for communities in Mississippi;

A cohesive statewide approach to healthy housing programming will require adoption of a framework for defining and assessing what elements are essential to the health of residents; coordination of data surveillance that supports tracking of housing quality improvements; and support of community-based solutions to housing interventions, policies that enable this work, and evaluation of the outcomes.

these data are used by local agencies receiving funds through HUD Community Planning and Development Programs for housing and economic development projects serving low and moderate income residents.^{xiv}

Jurisdiction	Total Households	Percent Non-White Population	% Families with <80% Area Median Income	% Paying >30% for Housing	Total Units lacking plumbing or kitchen facilities, Overcrowded or Severely Overcrowded Housing Units (renters and owners)
Biloxi	17,640	39.61%	39.8%	35.76%	774 (4.4%)
Gulfport	28,375	46.81%	45.4%	40.68%	1,290 (4.5%)
Hattiesburg	17,690	59.49%	51.7%	41.46%	740 (4.1%)
Jackson	62,895	83.63%	56.5%	39.63%	2,785 (4.4%)
Moss Point	5,145	76.78%	48.8%	31.68%	120 (2.3%)
Pascagoula	8,405	47.7%	50%	35.31%	117 (1.3%)
State of Mississippi	1,103,514	43%	42.5%	27.49%	41,475 (3.7%)

Housing as a Social Determinant of Health in Mississippi

Health surveillance data of health conditions related to housing and medical services utilized to treat patients with housing-related health conditions can support the state’s efforts to develop and evaluate healthy housing policies, including those that enable direct investments in housing units occupied by residents with lead poisoning, asthma, and a history of trip and fall injuries. GHHI recommends tracking data indicators related to housing as a social determinant of health. The CDC defines Social Determinants of Health as conditions in the places where people live, learn, work and play that affect a wide range of health risks and outcomes. Conditions of neighborhoods and the built environment are widely recognized as leading SDOH factors because of the average amount of time most

Americans spend in their homes and local communities. To reduce disparities of the health impacts of unhealthy housing, the CDC recommends the following priorities in the Healthy People 2030 Plan:

- ▶ Increase proportion of people whose water supply meets Safe Drinking Water Act regulations.
- ▶ Reduce blood lead levels in children aged 1 to 5 years through lead hazard reduction.
- ▶ Reduce the proportion of families that spend more than 30 percent of income on housing.
- ▶ Reduce asthma emergency department visits, hospitalizations, and deaths through environmental controls of asthma triggers.

- ▶ Increase proportion of homes that have an entrance without steps and other Aging in Place retrofits.^{xlvi}

Based on these recommendations GHHI has identified the following data trends to track in healthy housing surveillance reporting in future work with the Mississippi State Department of Health, Mississippi Home Corporation, Mississippi Department of Environmental Quality, and other collaborating partners. These data indicators should be reported by total population, population rates, by racial characteristics, and other factors related to SDOH as needed. While not all data sets are currently available for public use, GHHI has collected all available data measurements and included them in a table in the Appendix.

- ▶ Children under the age of 6 and families with children under the age of 18.
- ▶ Adults age 65 and older.
- ▶ Households accommodating families of more than two generations.
- ▶ Households that include at least one person with a disability.
- ▶ Number of individuals diagnosed with asthma and COPD.
- ▶ Surveillance data on asthma and COPD related to emergency department visits, hospitalizations, and medical care spending.
- ▶ Surveillance data on injuries and accidents caused by trips and falls related to emergency department visits, hospitalizations, and medical care spending.
- ▶ Estimated number of households exposed to violations of the Safe Drinking Water Act.
- ▶ Household characteristics for those who are cost burdened by housing and utilities.
- ▶ Rates of households with energy cost burdens (defined as households spending more than 6 percent of income on energy bills).^{xlvii}

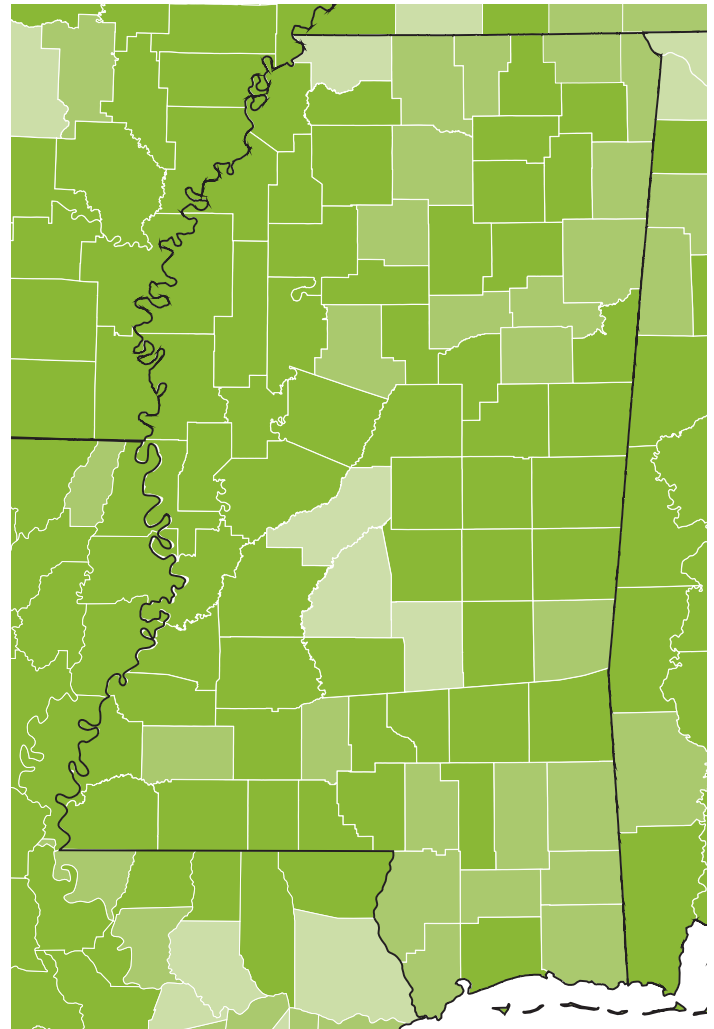


Figure 5: CDC Social Vulnerability Index by County (2021) (Darker colors indicate a higher rate of vulnerability.)^{xlix}

- ▶ Racial disparities in housing and healthcare access, including populations of healthcare deserts, health insurance coverage rates, and housing occupancy rates.
- ▶ Lead poisoning surveillance data, including lead testing rates and the number of cases of confirmed elevated blood lead levels statewide and in counties determined to have elevated risk.
- ▶ Estimated percent of children exposed to lead and who have lead levels above 2 micrograms per deciliter and the associated economic burden.^{xlviii}
- ▶ Social Vulnerability by County: Calculation of

social vulnerability on a scale of 0-to-1 based on 15 U.S. Census variables used to identify communities that may be in greater need of support before, during, or after disasters. Mississippi has a high concentration of counties with high social vulnerability compared to other states (see Figure 5).^{xlix}

An additional indicator of housing affordability and quality is the statewide rate of households with energy cost burdens. The Department of Energy estimates the state's low income energy burden to be 14%, the highest

rate in the nation. The five states with the highest burdens use 36% more electricity than the national average for low income households.^l The Department of Energy reports energy burdens by county through its Low-Income Energy Affordability Data (LEAD) Tool.^{li}

GHHI reviewed community level data on housing health and affordability needs with the project planning team and identified communities to target for participation in the Healthy Housing Policy Project based on need and previous engagement in healthy housing assessment and training programming.

Mississippi Community Healthy Housing Assessments

GHHI followed guidance from Pew Charitable Trusts on practices for health impact assessments (HIA) of housing for the implementation of the Healthy Housing Policy Project and applied recommended methods for community based organizing, assessments, communications, trainings and related engagement practices. Pew defines HIAs as assessments that “help decision makers make better choices by bringing together scientific data, health expertise, and public input to identify the potential and often overlooked public health effects, both positive and negative, of proposed laws, regulations, projects, policies, and programs. HIAs broadly consider environmental, social, and economic factors related to health and evaluate the possible impacts of a proposed project, plan, program, or policy on the health and well-being of the community”.^{lii} The table below identifies the processes

followed for community assessments and the activities and outputs based on the project quarter.

For tracking and evaluation, each community worked with GHHI to develop a project logic model. Logic models are graphic depictions of a process flow from inputs to anticipated and outcomes, with details on project resources, activities, outputs, and short and long term outcomes. Each logic model developed during the project highlights priority health concerns related to housing for the participating communities and the resource needs, policy adoption opportunities, and evaluation metrics to use as programming progresses.^{liii} Components of the logic models are described in this section and the complete logic models for each community are included in the Appendix.

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
	October-December	January-March	April-June	July-September
Screen	Map lead and healthy housing policies and programs (initial surveys of stakeholders, focus group sessions, and network maps)			
Define scope	Identify assessment goals through planning meetings			
Assess	Develop logic models to guide planning of activities to achieve assessment goal	Complete data, stakeholder, and policy analysis for each community)		
Recommend			Identify proposals and alternatives to mitigate adverse health effects of substandard housing for each community	Present final assessment findings and recommendations to local and state partners for comment presentations to local governments
Local Engagement	Support local National Lead Poisoning Prevention Week activities (proclamations, outreach events or activities)	Screen Birth to 6 Campaign pledge drive	Trainings to support implementation of recommendations (each community will select curriculum)	Complete funding scan and statements of need for grants
Report				Communicate recommendations to decisionmakers and other stakeholders (disseminate final report electronically)

Healthy Housing Impact Assessments (2020-2021)

In the first quarter of the project period, GHHI identified leaders and residents in local jurisdictions to participate in the project and met with them virtually to complete the screening process by outlining the local partnership landscape for the project and assessing needs for housing codes adoption, code enforcement, lead screening and testing practices, and capacity for healthy housing intervention services. While GHHI asked key local agency leads to coordinate organization of these groups, we monitored group dynamics to ensure participants reflected the characteristics of the jurisdiction and communities most impacted by lead risks. Based on screening results GHHI worked with local partners to identify the HIA goals and developed logic models to guide the assessment and capacity building processes. The eight communities who participated in all project phases were: Biloxi, Greenwood, Hattiesburg, Jackson, Laurel, Meridian, and the Mississippi Band of Choctaw Indians.

In the second quarter GHHI completed data, stakeholder, and policy analysis related to the healthy housing and lead hazard control needs established by each community. Common priorities for assessments included data scans of indicators of health risks related to housing and housing stock conditions, reviews of applicable local codes and enforcement practices for property maintenance, and capacity building needs to reach the policy and programming goals in each community. After completion of draft logic models, GHHI reviewed findings with local groups and collected feedback to initiate development of policy and programmatic recommendations.

In the third quarter GHHI reviewed preliminary statewide project findings with local groups and collected input from them to finalize recommendations for policies and program practices designed to mitigate adverse health effects of substandard housing. The

local groups also guided prioritization of the report dissemination process. GHHI led training and partnership development sessions for participating communities focused on implementation of strategies for lead poisoning prevention and healthy housing programming.

In the final project quarter GHHI disseminated the assessment results with local partners and completed research on funding opportunities to support local goals for increasing capacity to complete housing interventions for lead hazard reduction through publicly and privately funded repairs. GHHI also finalized this comprehensive project summary for dissemination to state and local agencies engaged in services related to housing, community development, public health, and related fields.

Throughout the project period GHHI supported local engagement through events like National Lead Poisoning Prevention Week, National Healthy Homes Month, and other community-based initiatives to increase awareness of lead poisoning risks and the value of healthy housing. These events helped build local engagement for capacity building strategies identified in the assessment. GHHI provided sub-grants to organizations in the target counties as needed. These investments supported staff time for partners engaging in community organizing, education, and policy development to support housing code enforcement and do population-based health activities to include lead prevention, safety prevention (safe sleep, environmental hazards, smoke, mold/mildew, asthma, gun safety, falls and fire), home assessments and support policy development.

Community Survey Results

GHHI administered a survey to collect direct feedback from individuals in Mississippi on housing, neighborhood, and community service characteristics and experiences. The Mississippi State Department of Health worked with GHHI to finalize the survey questions and format and had it translated into Spanish and Vietnamese languages. GHHI shared the electronic and print versions of the survey with partnering organizations, participants in training activities, and on the Lead Free Mississippi website and received a total of 108 responses. (The complete survey form is included in the Appendix.)

Key findings from the survey results include characteristics of owner and renter households, information about the most prevalent housing and neighborhood quality concerns for the participants, perceptions of the housing repair and community services available in their communities, and potential interest in engaging in healthy housing and efficiency improvement programs. Results from selected survey questions are shared below.

Characteristics of Participants

AGE	
Option	Response Rate
18-34	16%
35-54	48%
55-74	22%
75 or older	14%

Characteristics of Housing

HOUSING TYPE	
Category	Response Rate
Apartment with 4 units or less	8%
Apartment building	11%
House	73%
Mobile home	6%
Town home	2%
Other	0%

RACE	
Option	Response Rate
Asian or Asian American	2%
Black or African American	54%
Native American	4%
White	37%
Two or More Races	2%
Another Race	1%

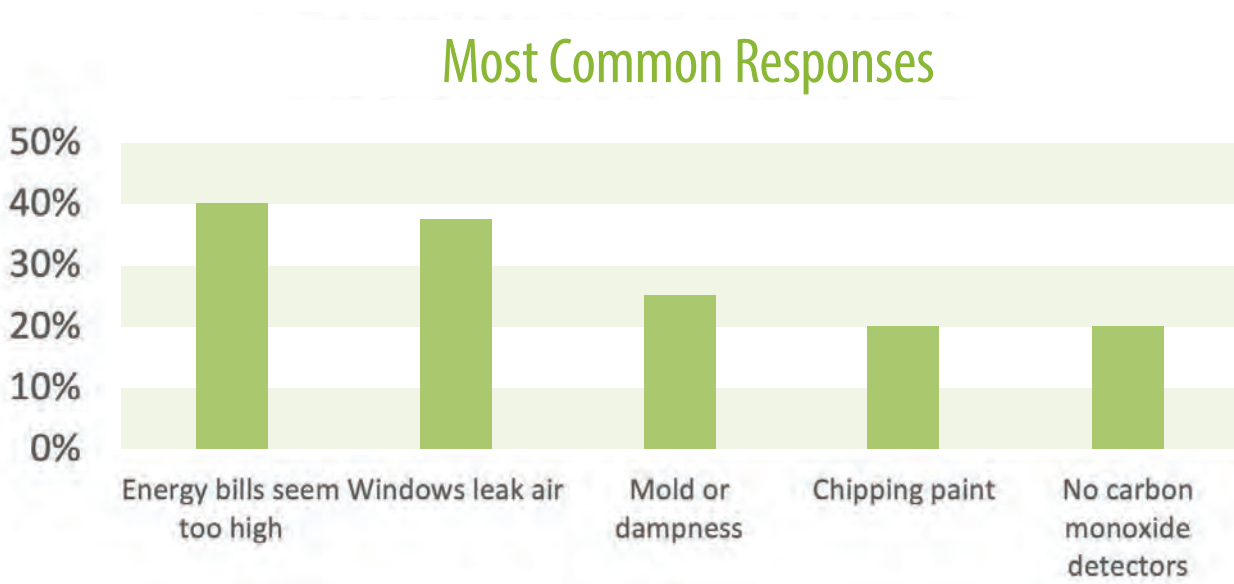
INCOME	
Option	Response Rate
\$24,999 or less	8%
\$25,000 - \$39,999	20%
\$40,000 - \$54,999	23%
\$55,000 - \$69,999	20%
\$70,000 or more	29%
Another Race	1%

OCCUPANCY TYPE	
Category	Response Rate
Owner	68%
Rent	32%

YEARS IN HOUSING	
Category	Response Rate
Less than one year	8%
1-2 Years	14%
3-4 Years	19%
5-10 Years	31%
More than 10 years	28%

Housing and Neighborhood Improvement Needs

The survey included a question that asked participants to review a list of 15 common housing issues and select the three of greatest concern in their own homes. The results show a combination of efficiency and health concerns.

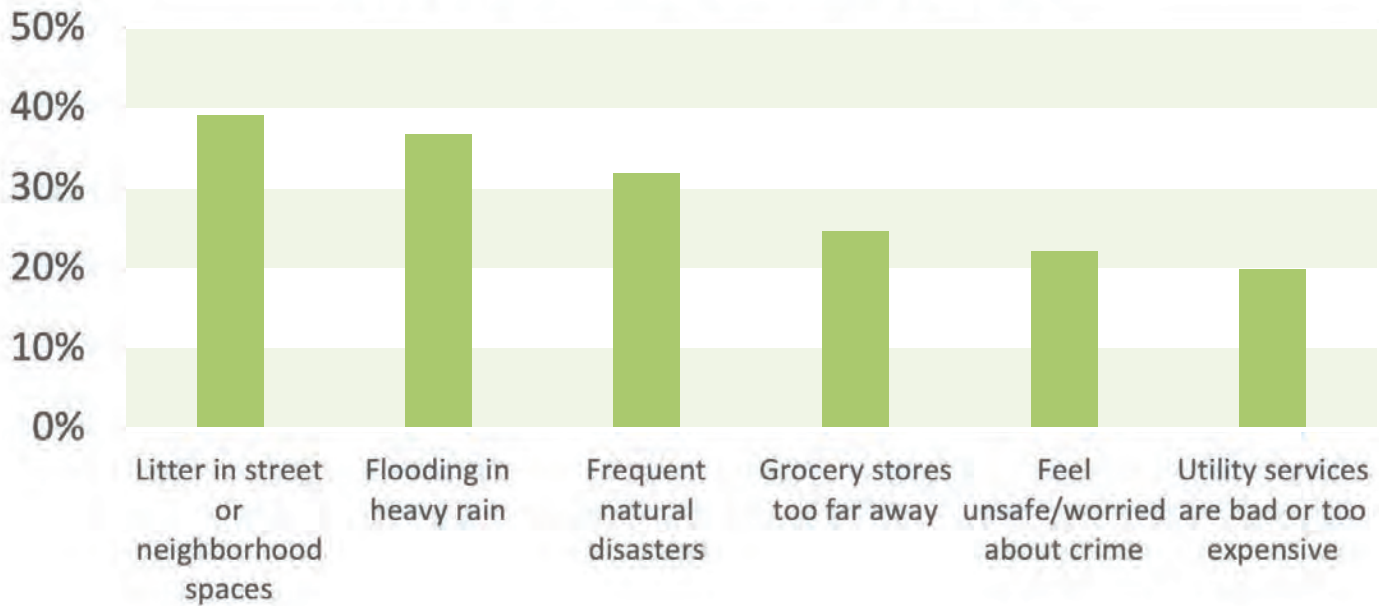


Half of respondents reported being concerned about these issues for at least two years and another 30% of respondents had been concerned about the problems for at least a year. The survey provided separate questions to homeowners and renters about how they manage repair needs for their housing units and their perceptions of previous experiences with repair activities. Renters reported a wide variety of satisfaction rates with housing repair experiences. About half of renters who responded said previous experiences were Poor or Satisfactory and the other half rated experiences as Very Good

or Excellent. While the majority of owners said they typically managed minor repair needs themselves, they indicated that they typically hire contractors for major repairs and were satisfied with previous experiences with major repair services.

The survey also included a question that asked participants to review a list of 15 common neighborhood quality issues and select the three of greatest concern in their own communities. The results show a combination of health, safety, and resilience concerns.

Most Common Responses

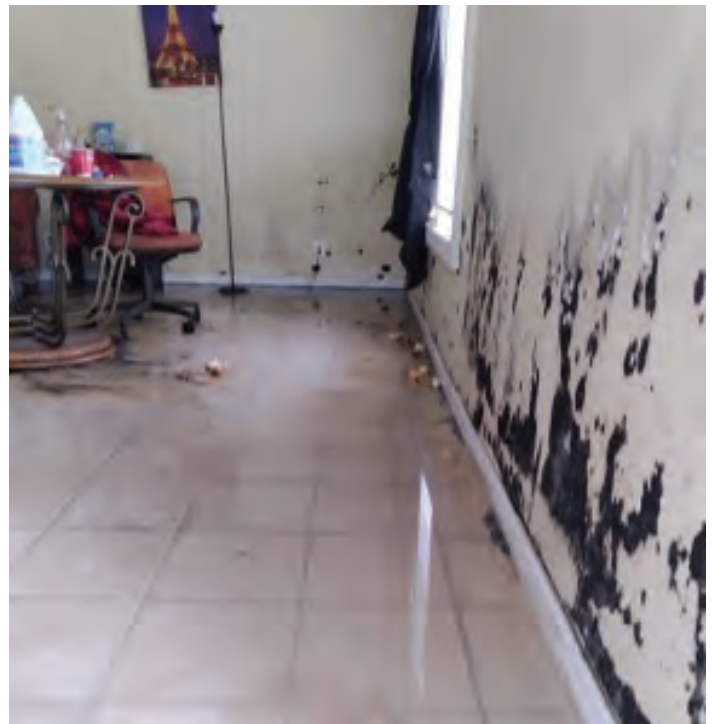


60 percent of respondents reported being concerned about these issues for at least two years. When asked how they had tried to address neighborhood quality concerns, over 40 percent said they had taken at least one engagement action, including discussions with neighbors and public officials, attendance of community meeting, or direct response (such as neighborhood cleanup projects) to address their concerns.

Focus Group Findings

GHHI and partnering organizations hosted four focus group sessions and completed 12 interview sessions with key local and state organizations to collect feedback on needs for healthy housing programming and policy development and implementation recommendations. The questions for these sessions are included in the Appendix. In addition to responses to the prepared questions, which were primarily captured in the community Logic Models, many participants shared personal anecdotes that illustrated barriers they experienced when trying to address health hazards in housing, needs for public policies to address or

guide responses housing quality concerns, or capacity building needs (including resident education, workforce development, and funding). The two case studies below illustrate some of the findings of focus and interview sessions completed during the project period.



Mold in occupied rental housing in Mississippi

Across the state, renters face significant barriers to securing adequate response actions when experiencing hazardous conditions in their housing. The story below is a paraphrased account from a health service provider responding to questions from a Mississippi resident living in the apartment pictured:

A person from the family in this apartment told me that she had requested that the landlord fix issues causing the mold and the landlord did nothing, so they stopped paying rent. Once they were late on their rent payment they were notified they had three days to pay the rent or their lease would be terminated and they would have to immediately vacate [there is no longer a 10 day waiting period for processing]. The family then contacted the city's code enforcement office and the inspector notified the property owner that the issue had to be fixed, but the situation still resulted in eviction, even though the national CDC eviction moratorium for COVID-19 was in place. We also have no way of knowing if the landlord remediated the mold or addressed the water intrusion issue adequately for the safety of the next the tenants.

When jurisdictions are funded to address environmental health hazards in housing, they are able to improve housing quality and health and economic outcomes for families. They also support local workforce development for housing repair and environmental health services.

Once repair programs are established, they can be connected to housing code enforcement services identifying hazardous conditions in homes, so property owners have access to repair programs and residents benefit from housing quality improvements.

This house in Jackson was enrolled in the Lead Safe Jackson Housing Program. A lead risk assessment identified lead paint hazards in the screen porch area and a child's outdoor play area. Local certified contractors performed the lead hazard reduction services and repair the house.



Housing unit repaired through the Lead Safe Jackson Housing Program, where lead paint hazards were identified in the screen porch and child's outdoor play area.

Lead coordinating organizations were asked to review assessment findings, including data analysis, analysis of existing policies, and results of focus group sessions, to identify the most challenging barriers to improving health conditions of housing and priority actions to address those barriers in their communities. The five most common barriers identified among all communities that participated in this project are shared below.

Common Barriers to Healthier Housing

1 The extent of the health impacts of substandard housing in Mississippi is not fully known by the public or policymakers. Researchers, including housing assessors, environmental agencies, and public health surveillance agencies need resources to study the prevalence of health hazards common in housing, expand public awareness of environmental health hazards, and increase access to public health information about the extent of health impacts of housing. Specific issues in need of further study include:

- ▶ Locations of housing units with confirmed or likely lead based paint hazards, lead service lines, and lead plumbing fixtures, and elevated risks of lead poisoning for households with young children and pregnant women.
- ▶ Prevalence of housing-based asthma triggers and correlation of environmental asthma trigger exposure with asthma exacerbation that leads to emergency medical care and hospitalizations.
- ▶ Prevalence of injuries and accidents experienced by older adults due to falls at home caused by structural conditions, and resource needs to enable safe Aging in Place for older adults.
- ▶ Health impacts of housing and energy cost burdens, including prevalence of families with low-incomes forgoing medical treatments, medications, and healthier foods due to high utility costs.

2 Public and private resources for property maintenance are limited in most communities statewide.

- ▶ Across current state and local housing finance programs for low and moderate income housing, funding for repairs of existing and occupied housing is limited in availability, addresses smaller scopes of work than needed, and is fractured across multiple service providers. Many government jurisdictions are currently not applying for competitive federal grants to address community housing repair needs, or not prioritizing housing repair programs for discretionary spending.
- ▶ Private sector financing resources for housing repairs and modification are also limited in many areas of the state, especially for low and moderate income households, due to limited availability of affordable bank financing for housing work.

3 Many community-based organizations want to coordinate efforts to respond to healthy housing issues but find it challenging to sustain work in this public policy sector.

- ▶ Residents and community organizations are often not sure what policy and funding solutions are available to address needs for environmental health of housing, and do not know how to engage property owners and policymakers because of the fractured nature of housing program implementation.
- ▶ When residents are experiencing a healthy housing crisis, such as a severe mold issue that is contributing to respiratory illness, first response agencies (landlords, healthcare providers, code enforcement officers, etc.) often do not have adequate resources or have limited capacity to intervene and coordinate across agencies to solve the health and housing issues.
- ▶ Most jurisdictions in Mississippi do not have enough property maintenance code enforcement resources to ensure occupied housing is meeting health and safety standards, and many small towns and rural areas do not have codes adopted to use as an enforcement mechanism. Renters are particularly vulnerable to living in unsafe conditions and can be threatened with eviction if they inform property owners of repair needs.

4 The State of Mississippi does not have enough credentialed workers to implement healthy housing programs.

- ▶ Mississippi needs to develop incentives to increase the number of housing repair and healthy housing service providers to implement programs to address lead hazard control, asthma control, and Aging in Place needs in current and future housing stock.

▶ Additionally, the State of Mississippi does not have enabling policies adopted to fund community health workers or other healthcare professionals to complete housing assessments and home-based education services for residents to manage home health and safety.

5 Many Mississippi communities are experiencing increasing instances of flooding and other extreme weather.

- ▶ Residents who are frequently impacted by storm damage are experiencing health and financial burdens because of housing maintenance needs.
- ▶ Many households directly impacted by storms have gaps in insurance coverage that make recovery from disasters difficult.
- ▶ Communities are facing an increasingly urgent need to coordinate plans to manage stormwater and improve resilience of existing housing through targeted interventions.

Project Results

Each participating community advanced at least one healthy housing and lead poisoning prevention policy or program objective during the project year as a result of local efforts. The results include community specific activities to advance partnership organization, policy review, planning, and outreach and education.

1 Jackson Rental Registration and Inspection Program Policies: The City of Jackson Planning Department has researched policy development opportunities for rental registration and inspection programs to reduce the prevalence of occupied rental households with conditions that violate the city's adopted property main codes. Throughout the project period GHHI and City of Jackson staff researched municipal rental housing program policies in the state of Mississippi and in comparably sized municipalities and interviewed

a variety of stakeholders to collect feedback on needs for program design. The ordinance, rental registration forms, and program phase in plan are prepared and will be reviewed by city leaders prior to the end of the year. GHHI will share project findings and offer trainings to support implementation of the new policies upon adoption.

2 Gulf Coast Healthy Housing Partnership: Gulf Coast Community Design Studio worked with GHHI to distribute and collect surveys to local residents of Biloxi and neighboring communities, review local policies related to housing health and safety, and identify partnering organizations engaged in advancing housing repair program capacity in the region. Through these efforts GHHI and GCCDS were able to convene a regional healthy housing partnership group to identify priorities for policy development, grant writing, and workforce training needs in the area. GHHI is continuing to engage non-profit organizations in fundraising discussions to advance partnership development and investments in health and resilience building needs for local communities with a focus on stormwater and mold control.

3 Greenwood Healthy Housing Capacity Building: After completing focus group convenings and distributing the project survey, Delta Design Build and GHHI identified three primary programming activities for current and future work in the Greenwood area. First, the City of Greenwood's Code Enforcement services hopes to enable distribution of housing health and safety education materials through its inspection services at times of tenant turnover. Municipal leaders anticipate that these efforts will increase capacity of residents and property owners to maintain housing in a manner that improves property maintenance practices. Second, the Greenwood Community Center completed healthy housing education projects with elementary and middle school aged children to increase awareness of the elements and benefits of healthy housing throughout the community.

Finally, GHHI will support local organizations providing housing repair and healthy housing education services to secure funding and workforce development resources to increase capacity to deliver housing intervention services.

4 Laurel Housing Authority Resident and Staff Trainings:

Laurel Housing Authority has partnered with GHHI to offer healthy housing trainings to residents and property management staff members to support the ongoing maintenance of project based housing units and the agency's housing choice voucher program. In addition to virtual trainings, the housing authority staff distributed education materials on key healthy housing topics including integrated pest management, housing safety for young children and older adults, asthma control and indoor air quality management practices, and related concepts.

5 Meridian Housing Authority Trainings: Mississippi State Department of Health Office of Preventive Health and Health Equity has engaged GHHI in programming to support a partnership with the Meridian Housing Authority and United Way of East Mississippi to offer healthy housing trainings to residents and property management staff members to support the ongoing maintenance of project based housing units and the agency's housing choice voucher program. GHHI will review additional needs for capital improvements of Meridian Housing Authority properties and identify potential funding sources to address any hazard reduction or efficiency improvement needs for the housing authority's properties.

6 Hattiesburg Lead and Healthy Housing Program

Funding: The City of Hattiesburg Office of Community Development led efforts with GHHI to engage local community based organizations in identifying capacity building opportunities to address lead paint hazard control, asthma control, and Aging in Place needs in the city's housing stock. In addition to workforce and organizational

capacity building needs for local faith based and non-profit services organizations, the City of Hattiesburg staff identified priority needs to secure additional funding for repair activities administered through municipal programs. Through this project GHHI was able to support the City of Hattiesburg in development of grant proposals submitted to HUD Lead Hazard Control and Healthy Homes Programs, including the Lead Hazard Reduction Program and Healthy Homes Production Program.

7 Mississippi Band of Choctaw Indians: The Mississippi Band of Choctaw Indians has developed plans to advance several programs related to healthy housing that GHHI supports on an ongoing basis. In addition to developing and distributing education resources about the elements of healthy housing, and identifying potential funding sources for housing repair and maintenance programs, the Tribe is planning to build out workforce training program resources so they can support credentialing of lead hazard control and healthy housing repair workers for theirs and other Tribal Nations. GHHI continues to support the work of MBCI as requested including identification of funding sources that can support their community service plans.

III. Statewide Opportunities for Healthier Housing

The Community Health Impact Assessments of housing policies yielded local strategies for addressing the most common barriers to implementing housing repair services that address priority health hazards identified at the local level, as well as recommendations for state policy makers and program administrators to consider. The list of policies in this section, identified during final project focus group discussions, were recommended by project participants for their anticipated value in efforts to address policy related barriers to healthier and safer housing for Mississippi residents most vulnerable to living in hazardous conditions, and to support continuation of statewide efforts to building capacity for lead poisoning prevention and healthy housing programming.

State and Local Policy Development Opportunities

1 Establish a state level interagency work group to coordinate state and local support of planning to improve housing health, safety, efficiency and resilience.

This group would be responsible for completing an updated statewide housing assessment to determine needs for housing stock hazard remediation and disaster mitigation. The work group would also develop guidance for state and local agencies to fund investments in affordable housing preservation and modifications and contractor workforce development, reduce healthcare costs through housing modifications, reduce energy waste and cost burdens associated with residential buildings, and mitigate risks of flooding and other natural disasters in residential areas.

2 Develop an enforcement strategy for the State of Mississippi's Existing Building Code and increase adoption and enforcement of International Property Maintenance Codes most relevant to health and safety standards. Identify funding resources for

workforce training and development for code compliance officials, model implementation procedures, and public education materials for property owners. Partner with Mississippi Association of Code Enforcement, State Fire Marshal's office, and other related organizations to support ongoing statewide trainings and resource development. Development of plans to adopt and enforce these policies must include strategies to negate potential negative impacts for renters vulnerable to eviction, dislocation, or other results of enforcement.

3 Review the Landlord Tenant Act to determine amendment needs related to health and safety. Project partners support development of amendments to the current Mississippi Landlord Tenant Act to establish that all residential leases executed in the state have an implied warranty of habitability and that the conditions of rental units must be livable and without measurable health and safety

hazards throughout the term of the lease. The law should specify that all lease agreements must meet applicable disclosure requirements for lead and other environmental hazards regulated by the Toxic Substances Control Act.

- 4** **Revise Mississippi State Department of Health and Mississippi Division of Medicaid policies to align with CDC recommendations for lead poisoning prevention.**^{liv} The Office of Lead Poisoning Prevention and Healthy Homes and Mississippi Division of Medicaid can identify locations (such as zip codes or counties) with high risk factors for elevated blood lead levels in children and require universal screening and testing in those areas for children at 12 and 24 months of age. They can also lower the threshold of EBLL for mandatory lead risk assessments to 5 micrograms per deciliter. Project partners also recommend that the state develop a centralized web-based data resources for information on estimated prevalence of elevated blood lead levels, lead poisoning surveillance data, lead in housing risk estimates, lead safe housing registries and lead service line inventories.
- 5** **Support development of local ordinances in jurisdictions with high-risk areas for lead poisoning to mandate lead risk assessments of housing units when children are determined to have elevated blood lead levels.** Such ordinances would need to address protections for families in rental properties, such as an eviction moratorium while lead risk assessment and hazard control activities are in progress, requirements to complete lead hazard remediation needs identified by a certified lead risk assessor, and requirements to cover costs of temporary relocation.
- 6** **Support development of local and state policies to reduce cases of retaliatory evictions for renter health and safety complaints.** Policy development opportunities include requiring a justifiable cause for evictions (such as failure to pay rent), requiring landlords obtain certification of compliance with housing codes to advance eviction cases, development of eviction diversion programs, and development of rent escrow programs to manage withholdings during landlord and tenant disputes.
- 7** **Establish a State Mold Standard Committee to research and recommend mold inspection standards, licensing practices for mold remediation specialists, and mold disclosure requirements for real estate transactions.** The state legislature can act to establish this committee, adopt its recommendations, and determine strategies for state agencies to support enforcement through environmental, housing, and health programs.
- 8** **Adopt accreditation standards for Community Health Workers and support incorporation of their services in healthy housing programs.** Support approval of credentialing for CHWs by the Mississippi State Board of Medical Licensure and work with state partners to develop guidance for CHW training and funding to provide services related to healthy housing programs, including coordinated case management, housing assessments, and resident education for healthy housing maintenance.
- 9** **Enable streamlined program eligibility for social service, housing repair, and energy efficiency programs based on income and related qualifications.** The State of Mississippi can improve administrative efficiency of programs that support housing health, safety and energy efficiency by streamlining eligibility criteria and application screening, developing shared case management systems, and supporting case managers who can coordinate alignment of resources for families. The State of Michigan program MI Bridges is an example of this type of streamlined service coordination.^{lv}
- 10** **Create a citizens advisory group for the Mississippi Public Service Commission.** The work group would support development of opportunities to address energy cost burdens for low income households and coordinate input on policies for energy efficiency programs, including energy waste reduction targets

and residential efficiency programs. These efforts would support more equitable access to efficiency program benefits for Mississippi residents and coordination of efficiency and healthy housing programs and leverage existing programming that aligns lead hazard remediation and weatherization to increase impact.

Current and Potential Funding Resources

Public agencies, financial institutions, and community based organizations in the State of Mississippi can apply the financial resources outlined in this section to address needs for housing repairs identified through this project. By increasing allocations of existing funding and securing additional financial resources to address hazardous housing conditions in occupied households, the state will be able to prevent medical and social service spending now committed to treat state residents who are lead poisoned, have uncontrolled asthma and other chronic respiratory conditions, experience injuries and accidents at home, and other health impacts of unsafe housing conditions.

Mississippi Division of Medicaid has opportunities under Medicaid and CHIP to better address social determinants of health (SDOH) and to designing programs, benefits, and services that can more effectively improve population health, reduce disability, and lower overall health care costs in the Medicaid and CHIP programs by addressing housing health and safety improvements. Program design and implementation can be included in amendments to the State Plan.

Grants and Loans for Income-Eligible Households

- ▶ **HUD Community Development Block Grants:** CDBG funds are automatically allocated annually by HUD to the state and entitlement communities in Mississippi, with award totals determined annually based on a formula and federal allocation totals. CDBG funds can be used for repair programs designed to meet needs identified in HUD Consolidated Plans and Annual Action Plans.
- ▶ **HUD HOME Program:** Formula based grants to states and localities that communities use - often in partnership with local nonprofit groups - to fund a wide range of activities including building, buying, and/or rehabilitating affordable housing for rent or homeownership or providing direct rental assistance to low-income people. These funds can be used for repair programs designed to meet needs identified in HUD Consolidated Plans and Annual Action Plans.
- ▶ **HUD Lead Hazard Reduction Grants:** Competitive grant program offered to maximize the number of children under the age of six years protected from lead poisoning by assisting states, cities, counties/parishes, Native American Tribes or other units of local government in undertaking comprehensive programs to identify and control lead-based paint hazards in eligible privately-owned target housing.
- ▶ **HUD Healthy Homes Production Grants:** Competitive grant program that funds activities to identify and remediate housing-related health and safety hazards in privately owned, low-income rental and/or owner-occupied housing, especially in units and/or buildings where families with children, older adults 62 years and older, or families with persons with disabilities reside.
- ▶ **HUD Healthy Homes and Weatherization Cooperation Demonstration Grants:** Competitive grant program to fund Healthy Homes and Weatherization Program Cooperation Demonstration grants in localities

that are served by both Healthy Homes and Weatherization Assistance Programs to determine whether coordination between the programs with respect to the implementation of healthy homes remediation activities and energy conservation measures achieves cost effectiveness and better outcomes in improving the safety and quality of homes.

- ▶ **HUD Section 202 Supportive Housing for the Elderly Program:** Capital Advance funding and project rental subsidies for the development and ongoing operation of supportive rental housing for very low-income persons, aged 62 years or older. This funding, leveraged with other financing sources, will expand affordable housing opportunities that are physically designed and that have a robust set of services that will allow seniors to live independently and age in community.
- ▶ **USDA Section 504 Home Repair Program:** Provides loans to very-low-income homeowners to repair, improve or modernize their homes or grants to elderly very-low-income homeowners to remove health and safety hazards. Individuals can apply directly to USDA to participate in this program.
- ▶ **DOE Weatherization Assistance Program:** Mississippi Department of Human Services manages the state WAP program funded by DOE. Annual funding allocations are formula based. MDHS contracts local community action agencies and non-profit organizations to provide cost-effective, energy-efficient measures to address health and safety concerns, and improve comfort and indoor air quality in low-income households throughout the state.
- ▶ **FHLB Affordable Housing Programs:** The Federal Home Loan Bank of Dallas provides Affordable Housing Program (AHP) funds to member financial institutions in Mississippi. FHLB Dallas members partner with local housing service providers to finance the purchase, construction and/or rehabilitation of owner-occupied, rental or

transitional housing, as well as housing for homeless individuals in their community. AHP funds can be used to benefit households with incomes at or below 80 percent of the median income for the area.

- ▶ **Non-Profit/Faith Based Organization Repair Programs:** The state is home to multiple community based organizations, including local Habitat for Humanity affiliates, leading housing repair programs that address hazardous housing conditions and enable Aging in Place retrofitting services. While many organizations are sub-grantees of the federal funding programs listed, they also lead additional fundraising efforts and utilize volunteer services for programs.
- ▶ **Utility Administered Energy Efficiency Programs:** Energy utility service providers administer efficiency programs for customers, which include energy auditing and direct install programs and HVAC tune-ups. Utilities also administer rebates to customers purchasing efficient appliances and heating and cooling equipment.

Public Housing and State Housing Finance

- ▶ **HUD Public Housing Authority Capital Improvement Funds:** The Public and Indian Housing Office of Capital Improvements administers the Capital Fund. The Capital Fund provides funds, annually, to Public Housing Agencies (PHAs) for the development, financing, and modernization of public housing developments and for management improvements. This program includes the Lead-Based Paint Capital Fund Program and the Housing-Related Hazard Capital Fund Program.
- ▶ **PHA Rental Assistance Demonstration:** RAD allows public housing agencies to leverage public and private debt and equity in order to reinvest

in the public housing stock to address capital improvement needs. AD also gives owners of three HUD "legacy" program (Rent Supplement, Rental Assistance Payment, and Section 8 Moderate Rehabilitation) the opportunity to enter into long-term contracts that facilitate the financing of improvements.

- ▶ **Low Income Housing Tax Credits:** MHC administers the state LIHTC Program, which provides awarded developers credit or tax liability reduction each year for 10 years for owners and investors in affordable rental housing based on the costs of the development and the number of qualified affordable-income units. This program includes a 9% tax credit rate for rehabilitation costs. The annual Qualified Allocation Plan provides guidance for developers planning rehabilitation projects.
- ▶ **Affordable Housing Trust Funds:** MHC administers the state AHTF to address the affordable rental housing needs for extremely low and very low-income households, while giving priority to projects that address critical housing needs with an emphasis on the prevention, reduction, and expansion of permanent housing opportunities for persons experiencing homelessness and persons with serious mental illness.
- ▶ **Disaster Recovery Funds:** MHC provides housing assistance to counties covered by an Emergency or Major Disaster Declaration issued by the Federal Emergency Management Agency (FEMA). The disaster declaration must have been issued on or after January 1, 2020. The Program uses HOME and CDBG disaster recovery funds awarded to the State by the U.S. Department of Housing and Urban Development.

Tribal Housing

- ▶ **HUD Indian Housing Block Grant:** The IHBG program allocates formula funding to tribes or tribally designated housing entities for the delivery of a range of affordable housing opportunities and housing-related activities to low and moderate income members of Federally recognized Indian tribes, Alaska Native villages, and native Hawaiians.
- ▶ **HUD Indian Community Development Block Grant:** The ICDBG Program provides eligible grantees with direct grants for use in developing viable Indian and Alaska Native Communities, including decent housing, a suitable living environment, and economic opportunities, primarily for low and moderate income persons.
- ▶ **HUD Lead Hazard Reduction Grants for Tribal Housing:** Competitive grant program offered to maximize the number of children under the age of six years protected from lead poisoning by assisting states, cities, counties/parishes, Native American Tribes or other units of local government in undertaking comprehensive programs to identify and control lead-based paint hazards in eligible privately-owned target housing.
- ▶ **HUD Healthy Homes Production Grants for Tribal Housing:** Competitive grant program that funds activities to identify and remediate housing-related health and safety hazards in privately owned, low-income rental and/or owner-occupied housing, especially in units and/or buildings where families with children, older adults 62 years and older, or families with persons with disabilities reside.

Other Potential Resources

► **Medicaid & Children’s Health Insurance Program:**

Mississippi Division of Medicaid has opportunities under Medicaid and CHIP to better address social determinants of health (SDOH) and to designing programs, benefits, and services that can more effectively improve population health, reduce disability, and lower overall health care costs in the Medicaid and CHIP programs by addressing housing health and safety improvements. Program design and implementation can be included in amendments to the State Plan.^{lvi}

► **Value Based Care for Managed Care Organizations:**

Medicaid managed care regulations allow states to require or enable MCOs to develop alternative payment models such as value-based purchasing (VBP) arrangements that pay for outcomes rather than the volume of services delivered. These outcomes may be generated from services that directly address the root causes of many of the costliest medical conditions, such as in-home asthma interventions or fall prevention measures. MCOs and providers can enter into value-based purchasing arrangements in which the provider is reimbursed based on a reduction in a patients’ total cost of care.

► **Elderly & Disabled Waiver Programs:** Through this program Mississippi Division of Medicaid administers and operates Case Management services through Planning and Development Districts. The case management team is composed of a registered nurse and a licensed social worker who are responsible for identifying, screening and completing an assessment on individuals in need of at-home services. This program can be amended to address certain home modification services for older adults and persons with disabilities.

► **Hospital Community Benefit Funds:** Tax-exempt hospitals are required to provide and report on community benefit activities as part of annual

submissions to the Internal Revenue Service (Form 990). Community housing improvement needs identified through community health needs assessments are eligible expenses through these programs.^{lviii}

► **Community Reinvestment Act Funds:** Banks and federal savings associations implementing CRA programming are able to invest in the revitalization or stabilization of low and moderate income geographies; designated disaster areas; or distressed or underserved non-metropolitan middle-income geographies designated by the Office of the Comptroller of the Currency (OCC), the Board of Governors of the Federal Reserve System, and the Federal Deposit Insurance Corporation. These activities can include support for affordable housing for low or moderate income (LMI) individuals, including multifamily rental housing and funding for community service organizations serving these individuals and communities.^{lix}

► **On-Bill Financing for Energy Retrofitting:** On-bill financing refers to a financial product that is serviced by, or in partnership with, a utility company for energy efficiency improvements in a building and repaid by the building owner incrementally on utility bills. Some utilities offer this service to address upfront costs of retrofits so lower income households can access cost-effective efficiency improvements.^{lx}

In addition to the policy and programming recommendations made in this report, project leaders recommend a continuation of support for public health education programs that expand awareness of the elements of healthy housing, common health hazards in housing environments, and strategies to support lead poisoning prevention and other environmental health priorities in the state.

Workforce Development Opportunities

The State of Mississippi has opportunities to support workforce training that will expand capacity for local communities to address health and safety hazards and advance economic development in currently under-resourced areas. The project leaders will continue to support initiatives that build career pathways for workers seeking the following credentials:

- ▶ **Community Health Workers:** Frontline public health workers who are also trusted members of and/or have close understanding of the community served. This trusting relationship enables the worker to serve as a liaison/link/intermediary between health/social services and the community to facilitate access to services and improve the quality and cultural competence of service delivery.^{lxi}
- ▶ **Property Inspectors and Maintenance Workers:** Individuals performing property management and maintenance services for residential property owners, including multifamily buildings or owners of multiple renter-occupied properties and Public Housing Authorities.
- ▶ **Certified Home Inspectors:** Inspectors licensed by the Mississippi Home Inspector Board who complete housing inspections for real estate transactions.
- ▶ **Housing Code Inspectors:** Inspectors representing local authorities that check to ensure dwellings comply with certain laws and safety requirements for their local jurisdiction.
- ▶ **Lead Repair Renovation and Painting (RRP) Service Providers:** MDEQ Licensed home improvement contractors and building maintenance professionals who perform work for compensation that disturbs lead-based paint or presumed lead-based paint in homes or child-occupied facilities built before 1978.
- ▶ **Lead Inspectors:** Certified service providers performing lead inspection and post-abatement clearance activities.
- ▶ **Lead Risk Assessors:** Certified service providers performing inspection, post-abatement clearance, lead hazard screen, and risk assessment activities.
- ▶ **Lead Supervisors:** Certified service providers who supervise abatement projects and prepare occupant protection plans and abatement reports. Supervisors may also perform all of the abatement activities that may be performed by abatement workers.
- ▶ **Lead Project Designers:** Certified service providers who prepare occupant protection plans and abatement reports for abatement projects.
- ▶ **Lead Abatement Workers:** Certified service providers who prepare occupant protection plans and abatement reports for conduct abatement activities under the direction of certified abatement supervisors.^{lxii}
- ▶ **Mold Assessors and Remediation Specialists:** Service providers who record observations, take measurements, collect samples, plan and conduct surveys, prepare reports, and develop, implement and evaluate mold remediation and management plans.

- ▶ **Energy Auditors:** Certified assessors who complete comprehensive analyses of energy consumption in homes based on room-by-room inspections and review of utility usage and produce scopes of work for retrofitting activities to reduce energy use.
- ▶ **Home Energy Retrofit Installer Technicians:** Certified service providers who perform upgrades to improve the safety, comfort, durability, air quality and energy efficiency of homes.
- ▶ **Healthy Homes Evaluators:** Healthy Home Evaluators assess home-based environmental health and safety hazards and provides a prioritized list of recommendations to address those hazards.^{lxiii}

Public Engagement and Education

Public engagement and education about the health impact of housing continues to be a priority for multiple state and local agencies. In addition to the policy and programming recommendations made in this report, project leaders recommend a continuation of support for public health education programs that expand awareness of the elements of healthy housing, common health hazards in housing environments, and strategies to support lead poisoning prevention and other environmental health priorities in the state. The Mississippi State Department of Health's Lead Poisoning Prevention and Healthy Homes Program, along with partnering divisions serving special needs populations and address social determinants of health, will continue to lead public engagement and education efforts in partnership with community based partners. GHHI and these partners are planning to use the Lead Free Mississippi network and website to broaden access to education materials and develop support for the Screen Birth to 6 Campaign, inform repair workers of lead and healthy housing service credentialing requirements, and develop local housing program engagement on lead safe repair practices.

Appendix

Data Tables

MS Health Impact Assessments of Housing Policies Data Tables by Place (Mississippi)

Demographics	Estimates
Total Population	2,984,418 (100%)
Race	
White	1,743,217 (58.4%)
Black or African American	1,125,623 (37.7%)
American Indian and Alaska Native	14,269 (0.5%)
Asian	29,605 (1%)
Native Hawaiian and Other Pacific Islander	680 (0.1%)
Some Other Race Alone	30,728 (1%)
Two or More Races	40,296 (1.3%)
Language Spoken at Home (population 5 years and older)	2,797,771 (100%)
Speak only English	2,686,763 (96%)
Speak language other than English	111,008 (4%)
Spanish language	67,792 (61%)
Other languages	43,216 (39%)
Educational Attainment (population 25 years and older)	1,975,670 (100%)
12th grade or less (no diploma or equivalent)	306,105 (15.5%)

Demographics	Estimates
High school graduate	601,355 (30.4%)
Some college, no degree	440,191 (22.3%)
Higher education degree (associates, bachelors, graduate or professional)	628,019 (31.8%)

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables S0101, S1501, S1601, B02001)

Economic Characteristics	Estimates
Population 16 years and over with earnings	2,354,101
Median earnings for full-time, year-round workers	\$39,178
Median household income	\$45,081
Mean household income	\$62,835
Persons below poverty level	585,786 (20.3%)
Labor force participation rate (population 16 years and over)	57.2%
Unemployment rate	7.5%
Percent of non-institutionalized population without health insurance	12.3%
Percent of non-institutionalized population with health insurance that is publicly funded	40%

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables DP03, S1701, S2001, S2301, S2701, S2703, S2704)

Characteristics of Lead Risk Population	Estimates
Total Persons under 18	713,493
Total Persons under 5	186,647
Children in households below poverty	(28.7%)
Children living in households with SSI, SNAP or other public assistance	33.8%
Children under 6 with public health insurance	127,567 (57.1%)

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables S0101, S2704, S0901)

Characteristics of Aging Population	Estimates
Total Persons 65 and older	461,022
Age 65 and older enrolled in Medicaid	84,420
Number of housing units occupied by residents 65 and older	294,308
In same housing for more than 10 years	235,547 (80%)

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables S0101, S2704, B25128)

Housing Characteristics	Estimate
Total Housing Units	1,322,808 (100%)
Occupancy Characteristics	
Vacant Units	218,414 (16.5%)
Occupied Units	1,104,394 (83.5%)
Owner Occupied	752,841 (68.2%)
Renter Occupied	351,553 (31.8%)
Unit Type	
1-unit detached	913,400 (69.1%)
1-unit attached	15,475 (1.2%)
2 units	31,946 (2.4%)
3 or 4 units	40,081 (3.0%)
5 or more units	120,434 (9.1%)
Mobile home	199,746 (15.1%)
Year Constructed	
Median Year Structure Built	1983
Estimated Pre-1978 Units	548,454 (41.4%)

Housing Characteristics	Estimate
Pre-1950 Units	103,885 (7.8%)
Affordable Housing	
Renters paying 35% or more of income on housing	119,692 (40.4%)
Owners with a mortgage paying 35% or more of income on housing	109,319 (29.6%)

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables DP04, B25035)

House Heating Fuel	Estimate
Utility Gas	330,912
Electricity	626,633
Other fuels (kerosene, coal, wood, solar)	143,109
No fuel used	3,740

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables DP04)

Data Tables by Place (Biloxi)

Demographics	Estimates
Total Population	45,568 (100%)
Race	
White	30,826 (68%)
Black or African American	9,774 (21%)
American Indian and Alaska Native	124 (0.2%)
Asian	2,105 (5%)
Native Hawaiian and Other Pacific Islander	31 (0.1%)
Some Other Race Alone	789 (1.7%)
Two or More Races	1,919 (2%)

Demographics	Estimates
Language Spoken at Home (population 5 years and older)	42,026 (100%)
Speak only English	37,326 (89%)
Speak language other than English	4,700 (11%)
Spanish language	2,435 (52%)
Asian and Pacific Island languages	1,523 (32%)

Educational Attainment (population 25 years and older)	29,673 (100%)
12th grade or less (no diploma or equivalent)	3,859 (13%)
High school graduate	8,106 (27%)
Some college, no degree	6,735 (23%)
Higher education degree (associates, bachelors, graduate or professional)	10,973 (37%)

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables S0101, S1501, S1601, B02001)

Economic Characteristics	Estimates
Population 16 years and over with earnings	23,766
Median earnings for full-time, year-round workers	\$35,959
Median household income	\$44,972
Mean household income	\$61,084
Persons below poverty level	8,507 (20%)
Labor force participation rate (population 16 years and over)	65.3%
Unemployment rate	9.1%
Percent of non-institutionalized population without health insurance	15.8%
Percent of non-institutionalized population with health insurance that is publicly funded	40%

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables S1701, S2001, S2301, S2703, S2704)

Characteristics of Lead Risk Population	Estimates
Total Persons under 18	10,254
Total Persons under 5	3,542
Children in households below poverty	31.5%
Children living in households with SSI, SNAP or other public assistance	36.5%
Children under 6 with public health insurance	1,978 (47.5%)

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables S0101, S2704, S0901)

Characteristics of Aging Population	Estimates
Total Persons 65 and older	9,886
Age 65 and older enrolled in Medicaid	973
Number of housing units occupied by residents 65 and older	3,986
In same housing for more than 10 years	2,954 (74%)

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables S0101, S2704)
(2016: ACS 5-Year Estimate Subject Table B25128)

Housing Characteristics	Estimate
Total Housing Units	21,608
Occupancy Characteristics	
Vacant Units	3,654 (17%)
Occupied Units	17,954 (83%)
Owner Occupied	7,595 (42%)
Renter Occupied	10,359 (58%)
Households with one or more people under 18 years	5,390 (30.39%)
Households with one or more people 60 years and over	5,783 (32.61%)

Housing Characteristics	Estimate
Unit Type	
1-unit detached	10,288 (48%)
1-unit attached	958 (4%)
2 units	784 (4%)
3 or 4 units	1,140 (5%)
5 or more units	6,956 (32%)
Mobile home	1,482 (7%)
Year Constructed	
Median Year Structure Built	1987
Estimated Pre-1978 Units	8,783 (41%)
Pre-1950 Units	1,413 (7%)
Affordable Housing	
Renters paying 35% or more of income on housing	3,773 (38%)
Owners with a mortgage paying 35% or more of income on housing	740 (21.7%)

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables DP04, B25035); HUD CPD Maps <https://egis.hud.gov/cpdmaps/> (Consolidated Plan and Continuum of Care Planning Tool)

House Heating Fuel	Estimate
Utility Gas	3,890
Electricity	13,560
Other fuels (kerosene, coal, wood, solar)	406
No fuel used	98

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables DP04)

Housing Characteristics	Estimate
Unit Type	
1-unit detached	10,288 (48%)
1-unit attached	958 (4%)
2 units	784 (4%)
3 or 4 units	1,140 (5%)
5 or more units	6,956 (32%)
Mobile home	1,482 (7%)
Year Constructed	
Median Year Structure Built	1987
Estimated Pre-1978 Units	8,783 (41%)
Pre-1950 Units	1,413 (7%)
Affordable Housing	
Renters paying 35% or more of income on housing	3,773 (38%)
Owners with a mortgage paying 35% or more of income on housing	740 (21.7%)

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables DP04, B25035)

House Heating Fuel	Estimate
Utility Gas	3,611
Electricity	1,410
Other fuels (kerosene, coal, wood, solar)	79
No fuel used	28

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables DP04)

Data Tables by Place (Hattiesburg)

Demographics	Estimates
Total Population	46,251 (100%)
Race	
White	19,950 (43%)
Black or African American	24,267 (52%)
American Indian and Alaska Native	102 (0.27%)
Asian	540 (1.3%)
Native Hawaiian and Other Pacific Islander	31 (0.06%)
Some Other Race Alone	152 (0.37%)
Two or More Races	1,209 (3%)
Language Spoken at Home (population 5 years and older)	
Language Spoken at Home (population 5 years and older)	43,179 (100%)
Speak only English	41,144 (95%)
Speak language other than English	2,035 (5%)
Spanish language	965 (47%)
Other Indo-European languages	487 (24%)
Asian and Pacific Island languages	441 (22%)
Educational Attainment (population 25 years and older)	
Educational Attainment (population 25 years and older)	27,351 (100%)
12th grade or less (no diploma or equivalent)	3,441 (12.5%)
High school graduate	6,142 (22.5%)
Some college, no degree	6,492 (24%)
Higher education degree (associates, bachelors, graduate or professional)	11,276 (41%)

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables S0101, S1501, S1601, B02001)

Economic Characteristics	Estimates
Population 16 years and over with earnings	24,878
Median earnings for full-time, year-round workers	\$32,963
Median household income	\$34,735
Mean household income	\$52,047
Persons below poverty level	13,899 (32.5%)
Labor force participation rate (population 16 years and over)	63.2%
Unemployment rate	10.5%
Percent of non-institutionalized population without health insurance	7.5%
Percent of non-institutionalized population with health insurance that is publicly funded	36.6%

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables S1701, S2001, S2301, S2703, S2704)

Characteristics of Lead Risk Population	Estimates
Total Persons under 18	9,152
Total Persons under 5	3,072
Children in households below poverty	40.2%
Children living in households with SSI, SNAP or other public assistance	44.2%
Children under 6 with public health insurance	2,461 (72.5%)

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables S0101, S2704, S0901)

Characteristics of Aging Population	Estimates
Total Persons 65 and older	5,210
Age 65 and older enrolled in Medicaid	1,458
Number of housing units occupied by residents 65 and older	3,403
In same housing for more than 10 years	2,418

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables S0101, S2704, B25128)

Housing Characteristics	Estimate
Total Housing Units	21,210
Occupancy Characteristics	
Vacant Units	3,432 (16%)
Occupied Units	17,778 (84%)
Owner Occupied	6,452 (%)
Renter Occupied	11,326 (%)
Unit Type	
1-unit detached	10,888 (%)
1-unit attached	122 (%)
2 units	945 (%)
3 or 4 units	1,823 (%)
5 or more units	7,152 (%)
Mobile home	273 (%)
Year Constructed	
Median Year Structure Built	1976
Estimated Pre-1978 Units	11,722 (%)
Pre-1950 Units	3,366 (%)
Affordable Housing	
Renters paying 35% or more of income on housing	4,748 (45.8%)
Owners with a mortgage paying 35% or more of income on housing	586 (17.4%)

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables DP04, B25035)

House Heating Fuel	Estimate
Utility Gas	4,316
Electricity	13,117
Other fuels (kerosene, coal, wood, solar)	284
No fuel used	61

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables DP04)

Data Tables by Place (Jackson)

Demographics	Estimates
Total Population	166,383 (100%)
Race	
White	27,520 (16.5%)
Black or African American	136,728 (82.2%)
American Indian and Alaska Native	168 (0.2%)
Asian	535 (0.3%)
Native Hawaiian and Other Pacific Islander	74 (0.1%)
Some Other Race Alone	487 (0.2%)
Two or More Races	871 (0.5%)
Language Spoken at Home (population 5 years and older)	
154,541 (100%)	
Speak only English	150,952 (97.6%)
Speak language other than English	3,589 (2.4%)
Spanish language	2,326 (65%)
Other languages	1,263 (35%)

Demographics	Estimates
Educational Attainment (population 25 years and older)	104,587 (100%)
12th grade or less (no diploma or equivalent)	14,230 (13.7%)
High school graduate	27,447 (26.2%)
Some college, no degree	26,279 (25.1%)
Higher education degree (associates, bachelors, graduate or professional)	36,631 (35%)
Higher education degree (associates, bachelors, graduate or professional)	11,276 (41%)

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables S0101, S1501, S1601, B02001)

Economic Characteristics	Estimates
Population 16 years and over with earnings	45,626
Median earnings for full-time, year-round workers	\$35,185
Median household income	\$38,972
Mean household income	\$55,940
Persons below poverty level	35,336 (23%)
Labor force participation rate (population 16 years and over)	60.6%
Unemployment rate	9.3%
Percent of non-institutionalized population without health insurance	15.3%
Percent of non-institutionalized population with health insurance that is publicly funded	44.4%

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables DP03, S1701, S2001, S2301, S2701, S2703, S2704)

Characteristics of Lead Risk Population	Estimates
Total Persons under 18	41,740
Total Persons under 5	11,842
Children in households below poverty	16,226 (39.9%)
Children living in households with SSI, SNAP or other public assistance	51.8%
Children under 6 with public health insurance	10,758 (77.8%)

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables S0101, S2704, S0901)

Characteristics of Aging Population	Estimates
Total Persons 65 and older	22,751
Age 65 and older enrolled in Medicaid	4,753
Number of housing units occupied by residents 65 and older	13,661
In same housing for more than 10 years	10,785 (79%)

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables S0101, S2704 (2016: ACS 5-Year Estimate Subject Table B25128))

Housing Characteristics	Estimate
Total Housing Units	74,594 (100%)
Occupancy Characteristics	
Vacant Units	12,486 (16.7%)
Occupied Units	62,108 (83.3%)
Owner Occupied	31,043 (50%)
Renter Occupied	31,065 (50%)

Housing Characteristics	Estimate
Unit Type	
1-unit detached	50,822 (68.1%)
1-unit attached	1,476 (2.0%)
2 units	2,416 (3.2%)
3 or 4 units	3,370 (4.5%)
5 or more units	15,806 (21.2%)
Mobile home	692 (1%)

Year Constructed	
Median Year Structure Built	
Estimated Pre-1978 Units	54,606 (73.2%)
Pre-1950 Units	8,163 (11%)

Affordable Housing	
Renters paying 35% or more of income on housing	12,735 (44.7%)
Owners with a mortgage paying 35% or more of income on housing	4,035 (22.4%)

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables DP04, B25035)

House Heating Fuel	Estimate
Utility Gas	31,873
Electricity	29,196
Other fuels (kerosene, coal, wood, solar)	773
No fuel used	266

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables DP04)

Data Tables by Place (Laurel)

Demographics	Estimates
Total Population	18,508 (100%)
Race	
White	6,152 (33.2%)
Black or African American	11,868 (64.2%)
American Indian and Alaska Native	0 (0%)
Asian	44 (0.2%)
Native Hawaiian and Other Pacific Islander	0 (0%)
Some Other Race Alone	246 (1.3%)
Two or More Races	198 (1.1%)
Language Spoken at Home (population 5 years and older)	
17,251 (100%)	
Speak only English	16,304 (94.5%)
Speak language other than English	947 (5.5%)
Spanish language	855 (90%)
Other Indo-European languages	80 (10%)
Asian and Pacific Island languages	0 (0%)
Educational Attainment (population 25 years and older)	
12,348 (100%)	
12th grade or less (no diploma or equivalent)	2,513 (20.3%)
High school graduate	3,506 (28.5%)
Some college, no degree	2,580 (20.9%)
Higher education degree (associates, bachelors, graduate or professional)	3,749 (30.3%)

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables S0101, S1501, S1601, B02001)

Economic Characteristics	Estimates
Population 16 years and over with earnings	18,141
Median earnings for full-time, year-round workers	\$31,140
Median household income	\$31,968
Mean household income	\$51,821
Persons below poverty level	5,674 (31.3%)
Labor force participation rate (population 16 years and over)	57.2%
Unemployment rate	8.1%
Percent of non-institutionalized population without health insurance	12.2%
Percent of non-institutionalized population with health insurance that is publicly funded	47.6%

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables S1701, S2001, S2301, S2703, S2704)

Characteristics of Lead Risk Population	Estimates
Total Persons under 18	4,550
Total Persons under 5	1,257
Children in households below poverty	44.4%
Children living in households with SSI, SNAP or other public assistance	31%
Children under 6 with public health insurance	3,525 (72.9%)

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables S0101, S2704, S0901)

Characteristics of Aging Population	Estimates
Total Persons 65 and older	3,068
Age 65 and older enrolled in Medicaid	527 (19.2%)

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables S0101, S2704)

Housing Characteristics	Estimate
Total Housing Units	8,046
Occupancy Characteristics	
Vacant Units	1,221 (15.2%)
Occupied Units	6,825 (84.8%)
Owner Occupied	4,125 (60.4%)
Renter Occupied	2,700 (39.6%)
Unit Type	
1-unit detached	6,007 (74.7%)
1-unit attached	197 (2.4%)
2 units	336 (4.2%)
3 or 4 units	550 (6.8%)
5 or more units	703 (8.8%)
Mobile home	253 (3.1%)
Year Constructed	
Median Year Structure Built	1969
Estimated Pre-1978 Units	5,414 (67%)
Pre-1950 Units	1,782 (22%)
Affordable Housing	
Renters paying 35% or more of income on housing	1,341 (51.2%)
Owners with a mortgage paying 35% or more of income on housing	538 (32.7%)

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables DP04, B25035)

House Heating Fuel	Estimate
Utility Gas	3,421
Electricity	3,268
Other fuels (kerosene, coal, wood, solar)	136
No fuel used	0

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables DP04)

Data Tables by Place (Meridian)

Demographics	Estimates
Total Population	37,848 (100%)
Race	
White	13,259 (35%)
Black or African American	23,798 (62.9%)
American Indian and Alaska Native	37 (0.1%)
Asian	320 (0.8%)
Native Hawaiian and Other Pacific Islander	0 (0%)
Some Other Race Alone	183 (0.5%)
Two or More Races	251 (0.7%)
Language Spoken at Home (population 5 years and older)	35,214 (100%)
Speak only English	34,107 (96.9%)
Speak language other than English	1,107 (3.1%)
Spanish language	668 (61%)
Other languages	439 (39%)

Demographics	Estimates
Educational Attainment (population 25 years and older)	25,330 (100%)
12th grade or less (no diploma or equivalent)	4,602 (18.2%)
High school graduate	6,387 (25.2%)
Some college, no degree	6,232 (22.3%)
Higher education degree (associates, bachelors, graduate or professional)	8,109 (32%)
Higher education degree (associates, bachelors, graduate or professional)	3,749 (30.3%)

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables S0101, S1501, S1601, B02001)

Economic Characteristics	Estimates
Population 16 years and over with earnings	14,967
Median earnings for full-time, year-round workers	\$34,257
Median household income	\$32,422
Mean household income	\$52,527
Persons below poverty level	(27.1%)
Labor force participation rate (population 16 years and over)	56.1%
Unemployment rate	4%
Percent of non-institutionalized population without health insurance	12.2%
Percent of non-institutionalized population with health insurance that is publicly funded	47.1%

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables DP03, S1701, S2001, S2301, S2701, S2703, S2704)

Characteristics of Lead Risk Population	Estimates
Total Persons under 18	9,163
Total Persons under 5	2,634
Children in households below poverty	3,710 (41.1%)
Children living in households with SSI, SNAP or other public assistance	48.5%
Children under 6 with public health insurance	2,263 (73.3%)
Higher education degree (associates, bachelors, graduate or professional)	3,749 (30.3%)

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables S0101, S2704, S0901)

Characteristics of Aging Population	Estimates
Total Persons 65 and older	6,150
Age 65 and older enrolled in Medicaid	1,060
Number of housing units occupied by residents 65 and older	4,308
In same housing for more than 10 years	3,535 (82%)

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables S0101, S2704, B25128)

Housing Characteristics	Estimate
Total Housing Units	19,130 (100%)
Occupancy Characteristics	
Vacant Units	3,183 (16.6%)
Occupied Units	15,947 (83.4%)
Owner Occupied	7,878 (49.4%)
Renter Occupied	8,069 (50.6%)

Housing Characteristics	Estimate
Unit Type	6,007 (74.7%)
1-unit detached	12,360 (64.6%)
1-unit attached	207 (1.1%)
2 units	1,004 (5.2%)
3 or 4 units	1,852 (9.7%)
5 or more units	3,396 (27.4%)
Mobile home	311 (1.6%)
Year Constructed	1969
Median Year Structure Built	1969
Estimated Pre-1978 Units	12,860 (%)
Pre-1950 Units	3,720 (%)
Affordable Housing	1,341 (51.2%)
Renters paying 35% or more of income on housing	2,909 (38.8%)
Owners with a mortgage paying 35% or more of income on housing	799 (23.4%)

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables DP04, B25035)

House Heating Fuel	Estimate
Utility Gas	6,528
Electricity	9,141
Other fuels (kerosene, coal, wood, solar)	241
No fuel used	37

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables DP04)

Data Tables by Place (Mississippi Choctaw Reservation)

Demographics	Estimates
Total Population	8,013 (100%)
Race	
White	182 (2.2%)
Black or African American	153 (1.9%)
American Indian and Alaska Native	7,398 (92.3%)
Asian	73 (0.9%)
Native Hawaiian and Other Pacific Islander	8 (0.1%)
Some Other Race Alone	55 (0.2%)
Two or More Races	144 (1.8%)
Language Spoken at Home (population 5 years and older)	
7,294 (100%)	
Speak only English	4,128 (56.6%)
Speak language other than English	3,166 (43.4%)
Other (Indigenous) language	2,988 (94%)
Spanish and Asian and Pacific Island languages	178 (6%)
Education (population 25 years and older)	
4,074 (100%)	
Educational attainment 12th grade or less (no diploma or equivalent)	1,117 (24.7%)
Educational attainment high school graduate	1,167 (28.6%)
Some college, no degree	1,030 (25.3%)
Higher education degree (associates, bachelors, graduate or professional)	760 (18.6%)

Source: data.census.gov (2019: ACS 5-Year Estimate Subject Tables S0101, S1501, S1601, B02001)

Economic Characteristics	Estimates
Population 16 years and over with earnings	3,418
Median earnings for full-time, year-round workers	\$26,882
Median household income	\$32,742
Mean household income	\$43,313
Persons below poverty level	3,227 (40.8%)
Labor force participation rate (population 16 years and over)	63.2%
Unemployment rate	13.6%
Percent of non-institutionalized population without health insurance	28.1%
Percent of non-institutionalized population with health insurance that is publicly funded	44.1%

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables DP03, S1701, S2001, S2301, S2701, S2703, S2704)

Characteristics of Lead Risk Population	Estimates
Total Persons under 18	2,972
Total Persons under 5	719
Children in households below poverty	50.3%
Children living in households with SSI, SNAP or other public assistance	30.6%

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables S0101, S2704, S0901)

Characteristics of Aging Population	Estimates
Total Persons 65 and older	309
Age 65 and older enrolled in Medicaid	127

Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables S0101, S2704)

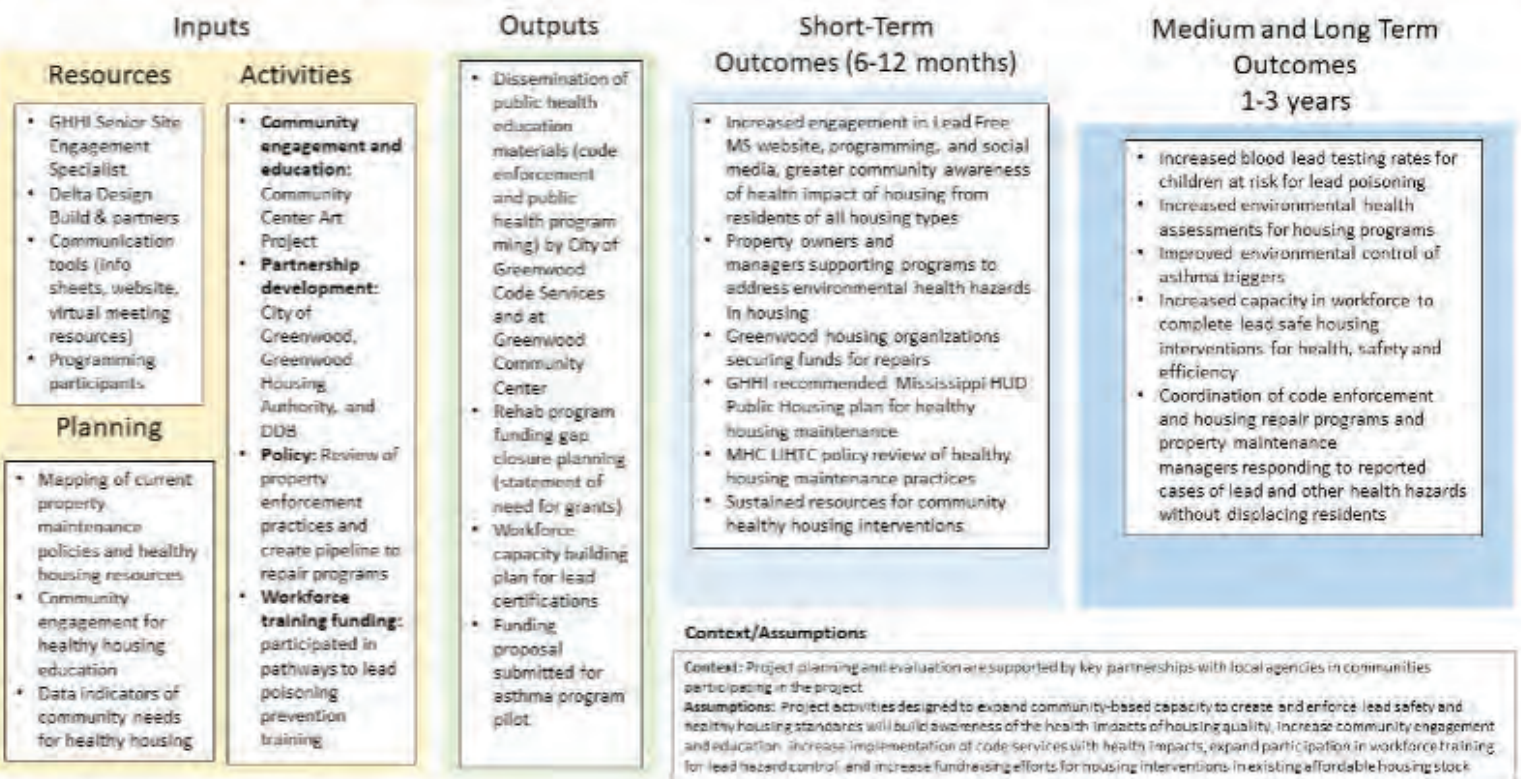
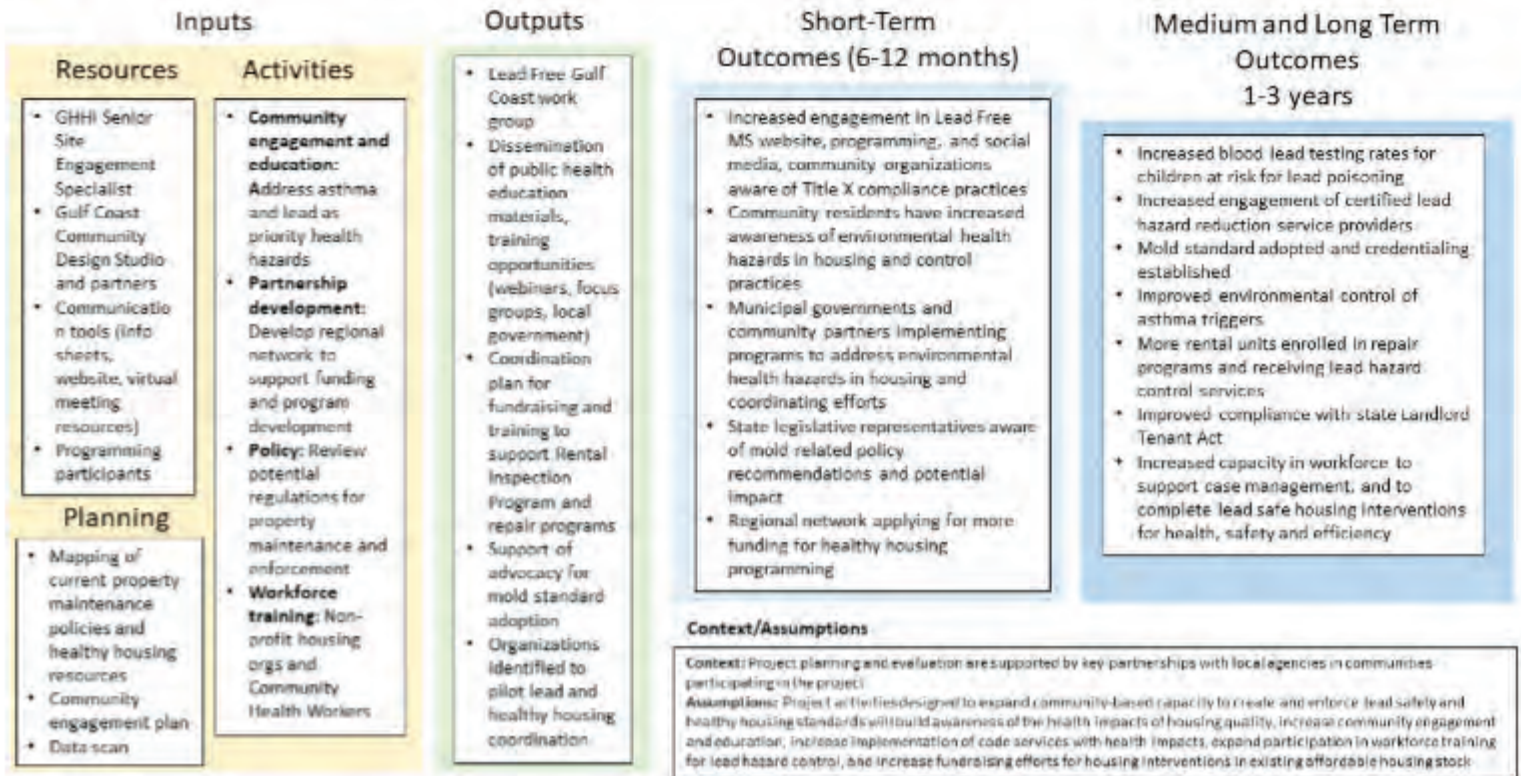
Housing Characteristics	Estimate
Total Housing Units	2,329 (100%)
Occupancy Characteristics	
Vacant Units	166 (7.1%)
Occupied Units	2,163 (92.9%)
Owner Occupied	1,557 (72%)
Renter Occupied	606 (28%)
Unit Type	
1-unit detached	1,969 (84.5%)
1-unit attached	31 (1.3%)
2 units	14 (0.6%)
3 or 4 units	21 (0.9%)
5 or more units	0 (0%)
Mobile home	294 (12.6%)
Year Constructed	
Median Year Structure Built	1992
Estimated Pre-1978 Units	574 (24.6%)
Pre-1950 Units	128 (5.5%)
Affordable Housing	
Renters paying 35% or more of income on housing	167 (34.6%)
Owners with a mortgage paying 35% or more of income on housing	103 (15%)

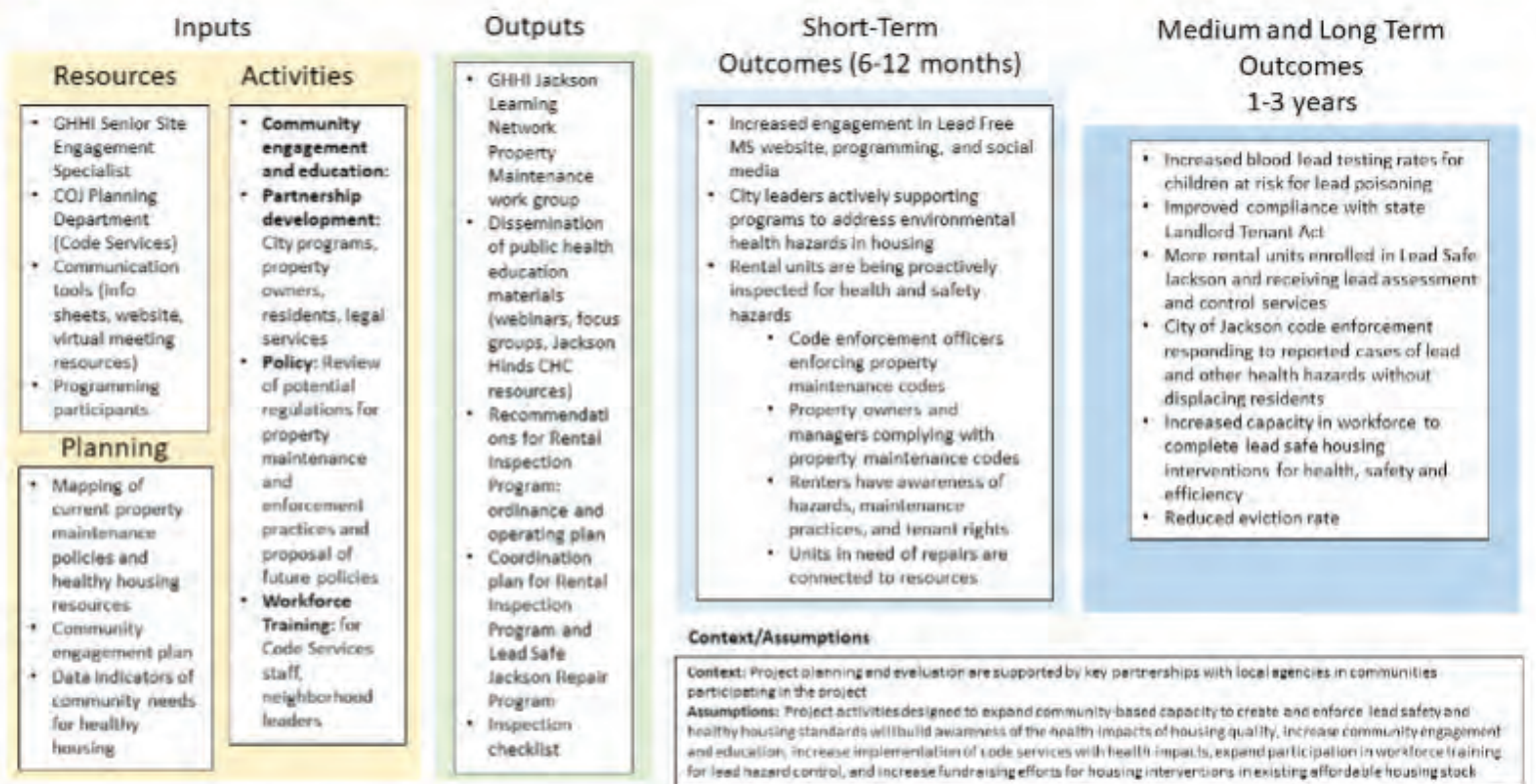
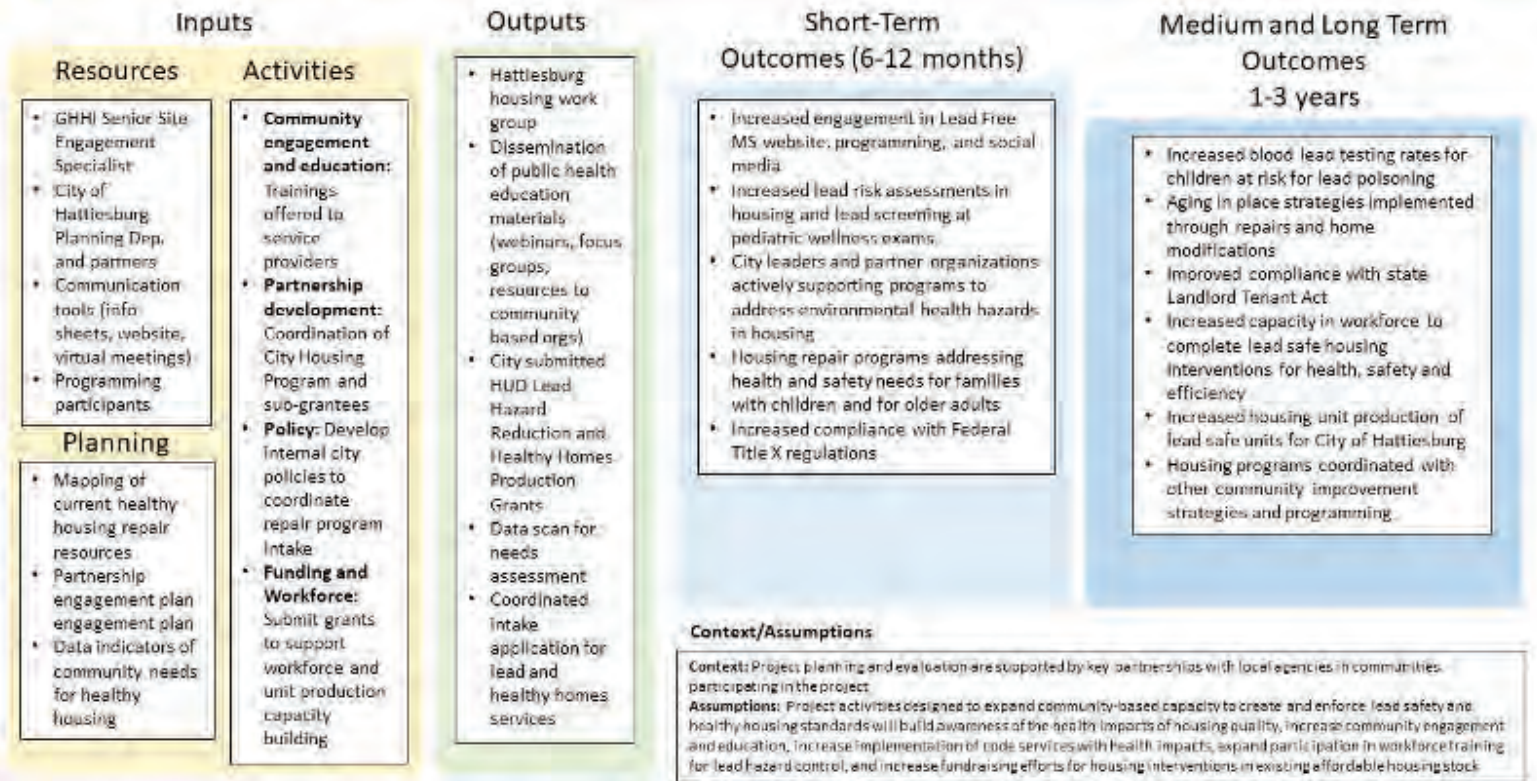
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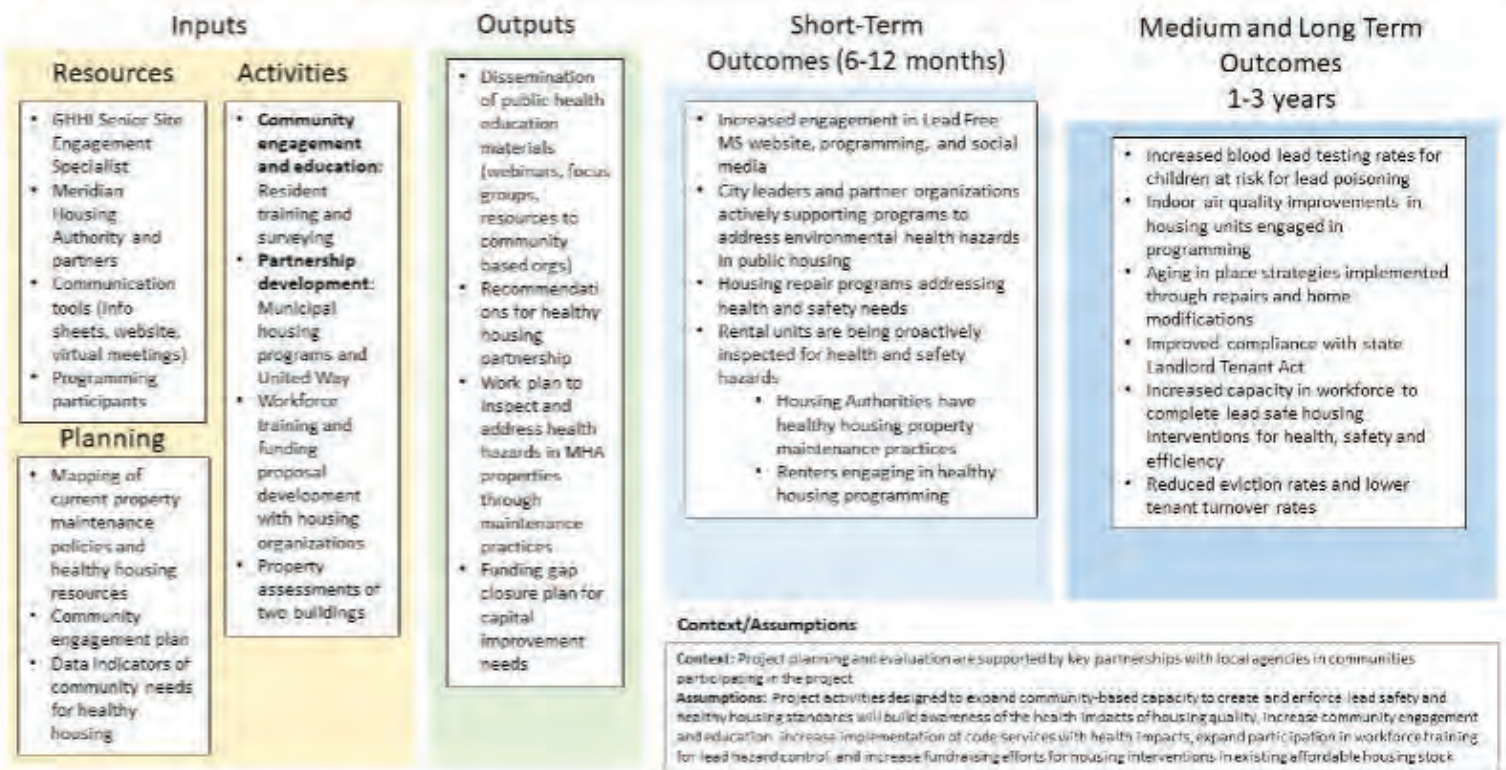
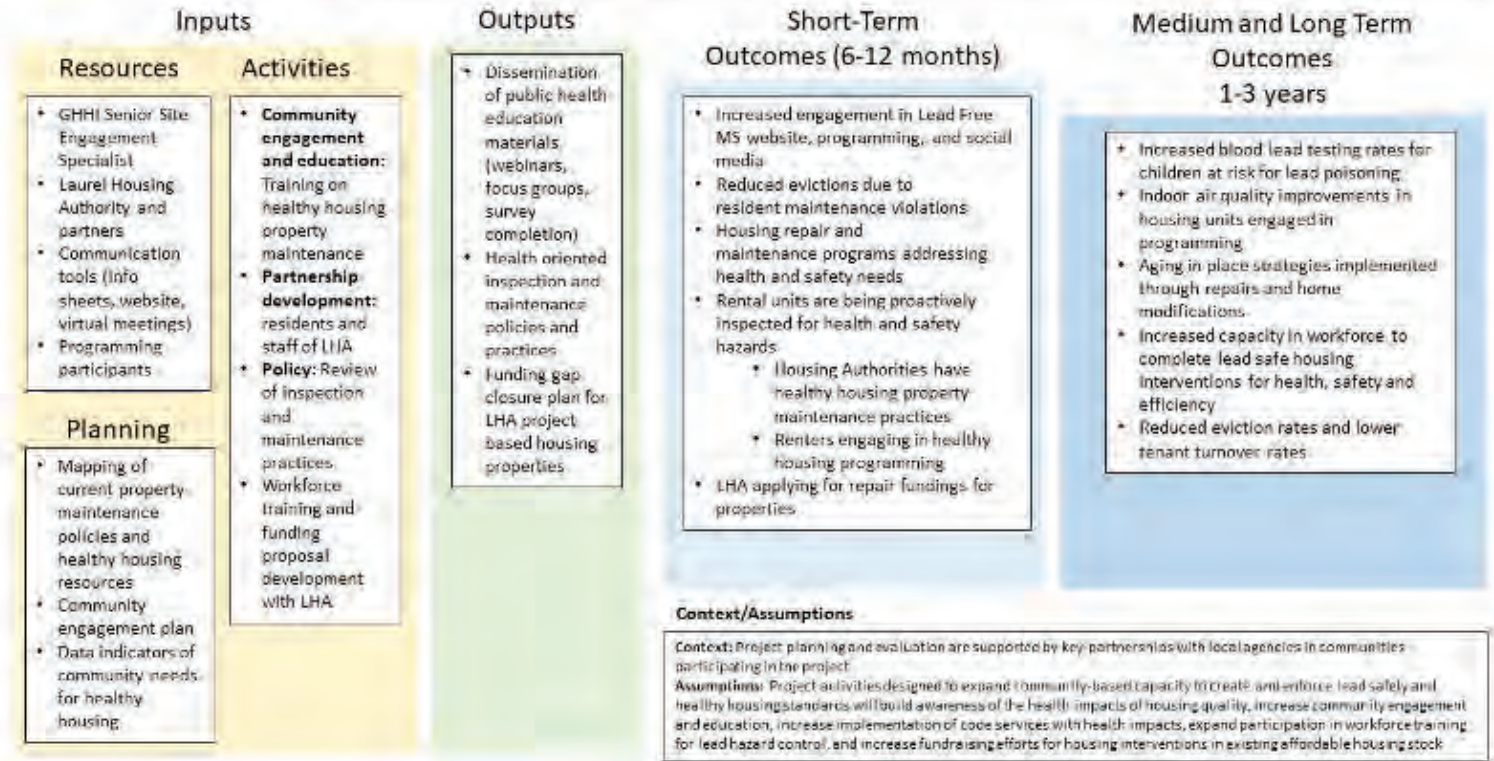
House Heating Fuel	Estimate
Utility Gas	99
Electricity	1,417
Other fuels (kerosene, coal, wood, solar)	143
No fuel used	45

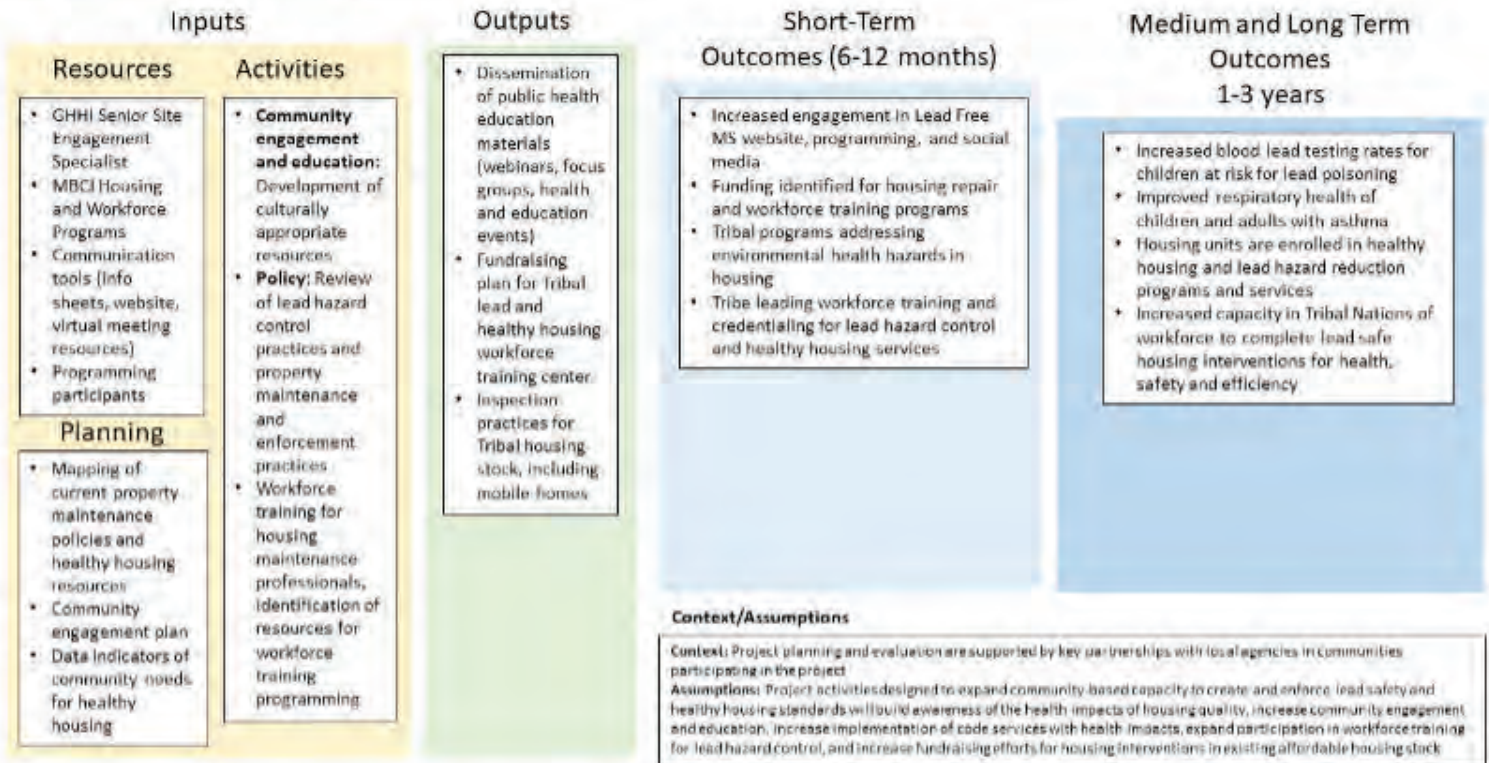
Source: data.census.gov (2018: ACS 5-Year Estimate Subject Tables DP04)

Logic Models









Survey Form: Housing & Community Characteristics

About this Survey

You are invited to fill out this survey about your housing, neighborhood, city services and related topics; the answers will be used for a policy project conducted for the Lead Free Mississippi Healthy Housing Policy Project by the Green & Healthy Homes Initiative with support from Mississippi State Department of Health. It should take about 10 minutes to fill out. Filling out this survey is voluntary and there are no likely risks involved in participating. You may refuse to take part in the research or exit the survey at any time without penalty. You are free to decline to answer any question you do not wish to answer for any reason.

The survey does not collect personal data such as your name, email address, or phone number but you do have the option to share it at the end of the survey. No one will be able to identify you or your answers from this survey. If you choose to share your name, email address, or phone number with the researchers they will only use it to contact you with follow up questions. You can also enter your information for a chance to win a gift card. If you have questions at any time about the study, you may contact Catherine Lee at (601) 345-2052 or clee@ghhi.org.

Consent

- I have read the information above about this survey
- I agree to participate
- I am at least 18 years of age

Please check the box next to the answer that applies to you or your household.

1. Name of town or city where you live:

2. Zip Code: _____

3. Age:

- 18-34
- 35-54
- 55-74
- 75 or older

4. Race:

- Asian/Pacific Islander
- Black or African American
- Native American or American Indian
- White
- Two or More Races
- Other: _____
- Prefer not to answer

5. Hispanic Origin:

- Hispanic or Latino
- Non-Hispanic or Latino
- Prefer not to answer

6. Gender:

- Female
- Male
- Other: _____
- Prefer not to answer

7. Employment Status:

- Disabled or Unable to Work
- Employed for wages
- Military
- Out of work not seeking a job currently
- Out of work seeking a job
- Retired
- Self-employed
- Student
- Other: _____

8. Education Level:

- 12th grade or less (no diploma)
- High school graduate or equivalency
- Some college, no degree
- Vocational degree or certification
- Associates degree
- Higher education degree

9. Household Income:

- \$24,999 or less
- \$25,000-\$39,999
- \$40,000-\$54,999
- \$55,000-\$69,999
- \$70,000 or more

10. Health Insurance Coverage (check all that apply):

- Private Insurance
- Medicaid
- Medicare
- VA (Tricare)
- Uncovered

11. Number of people living in your household (including yourself): _____

12. Do you have homeowners or renters' insurance?

- Yes
- No

13. Type of housing unit:

- Apartment with 4 units or less
- Apartment in building or complex with 5 or more units
- House
- Mobile home
- Townhome
- Other: _____

14. How long have you lived in your current home?

- Less than one year
- 1-2 years
- 3-4 years
- 5-10 years
- More than 10 years

15. Do any of these answers describe members of your household? (check all that apply)

- Senior (age 65 or older)
- Children under age 6 live in house full-time
- Children under age 6 visit regularly
- Pregnant woman

16. What year was your home built?

- Before 1950
- 1950 to 1978
- After 1978
- Don't Know

17. Types of heating sources (check all that apply):

- Gas furnace or boiler
- Hot water radiator
- Other fuels for heating (kerosene, coal, wood)
- Portable space heater
- Other
- None

18. Types of cooling sources (check all that apply):

- Central AC
- Window or wall AC units
- Ceiling or box fans
- Other
- None

19. Please tell us how you usually travel to and from home:

- Drive my own vehicle
- Use public transit
- Ride with others
(carpool, family provides a ride)
- Walk
- Bicycle
- Taxi or Ride Share Service
- Depends on the day as to what is available

20. Rank the top 3 issues that apply to your home, 1 being the worst:

- Appliances do not work
- Chipping or peeling paint (inside or out)
- Electrical problems
(such as outlets that do not work)
- Energy bills seem too high
- Flooding or storm damage
- Home is too hot or cold
- Mold or dampness
- No carbon monoxide detectors
- No smoke detectors
- Overcrowded (not enough sleeping space)
- Pests or pest droppings
- Roof leak(s)
- Security (doors or windows do not lock, not enough lighting)
- Trouble moving around house because of clutter
- Trouble moving around house because of layout

- Unaffordable (I have trouble covering monthly housing and family expenses)
- Uneven floors/broken stairs
- Water leaks from faucets or plumbing
- Windows leak air

21. How long has the issue you ranked #1 been a problem in your home?

- Weeks
- Months (up to a year)
- More than one year
- More than two years

22. Rank the top 3 issues that apply to your neighborhood or community, 1 being the worst:

- Feel unsafe/worried about crime
- Flooding in heavy rain
- Frequent natural disasters
(tornadoes, hurricanes)
- Grocery stores are too far away
- Healthcare services and hospitals are hard to access
- Homes or land around me not maintained
- Illegal dumping of trash and bulk items in areas nearby
- Land uses nearby may be bad for the outdoor air, rivers, lakes, or animals
- Litter in streets or neighborhood spaces
- Litter near businesses
- Noise that annoys me everyday
- Utility services are bad or too expensive

23. How long has the issue you ranked #1 been a problem in your neighborhood or community?

- Weeks
- Months (up to a year)
- More than one year
- More than two years

24. Please check any ways that you have tried in the past to address these concerns about your neighborhood or community:

- Attended a public meeting about the issue
- Contacted a local news reporter
- Discussed with property owners nearby
- Reported to local government enforcement agency (Police, Fire or Code Services)
- Reported to a local elected official (Mayor, Councilmember or Alderman)
- Reported to a statewide elected official (Congressional Representative, Public Service Commission, etc.)
- Other: _____

25. Type of Housing Occupancy

- Renter with Housing Authority, HUD or other assistance
- Renter with no payment assistance
- Owner currently paying a mortgage loan
- Owner not paying a mortgage loan
- Other: _____

For Renters Only

26. How do you typically deal with minor repair needs?

- Hire a contractor or repair worker to complete repair
- Notify my landlord to request repair
- Repair myself if possible

27. How would you rate your satisfaction with repairs completed in your housing unit?

- Excellent
- Very Good
- Satisfactory
- Poor

28. If you rated your repair services as poor, please explain the main reason why:

For Homeowners Only

29. How do you typically deal with minor repair needs?

- Hire a contractor or repair worker to complete repair
- Repair myself if possible

30. How do you typically deal with major repair needs?

- Hire a contractor or repair worker to complete repair
- Repair myself if possible
- File an insurance claim

Optional Responses

31. Have you ever had any of the following experiences with local government?

- Applied for a building permit
- Applied for a demolition permit
- Applied for rezoning or variance permit for land use
- Received fine for non-compliance with building or property codes
- Received notice of a building or property maintenance code violation
- Received notice of eviction
- I would like to speak with surveyors about this experience**
- I would like to submit my name for a chance to win a gift card**

Name: _____

Phone Number: _____

Email Address: _____

Preferred way for surveyors to contact you:

- Email
- Phone call
- Text messages

Lead Free MS Focus Group Meeting Interview Template

Welcome and introductions

Attendees: _____

Date: _____

Community: _____

Meeting facilitation plan/ground rules

- Focus group leaders share purpose of this meeting
- Discuss plans for privacy protection (may record for notetaking but responses will be anonymous—recordings will be deleted, no individual names included in final report)
- Any actions taken by facilitator to limit comments by a participant will be to ensure everyone has an opportunity to speak and that all of the questions can be covered in the planned amount of time
- Participants can also share ideas by completing the survey
- We will share a summary report of recommendations on the Lead Free MS website in September

Discuss project purpose

GHHI and partnering organizations are working with communities and the State of Mississippi with a shared goal to reduce hazards in housing that impact the health of community members. We hope to achieve that goal by learning your opinions about community needs related to home health and safety. We think specific outcomes of this work will be plans for education, fundraising, workforce training, and recommendations for the creation or change of housing related

policies (both local ordinances and state legislation), but we want to hear your concerns and ideas.

Another way to think of this is how to build up resources so every housing unit has the 8 elements of green and healthy housing: dry, clean, safe, well-ventilated, pest-free, contaminant-free, well maintained, and energy efficient (attachment available to share)

Focus Group Questions

1. Do you think of housing as a resource for family health? If so in what ways?

2. What do you think about the quality of rental housing in your community and why?

3. Do you think renters have enough resources to meet their needs for affordable and healthy housing? What do they need that they are not getting now?

4. Do you think property owners have enough resources to provide good service to renters? What do they need that they are not getting now?

5. Who should help resolve tenant and landlord disputes if they cannot directly manage a problem?

6. Do you think of evictions as a serious issue in your community? What do you think evictions impact most?

7. Would you be in favor of a rental inspection program in your community, similar to those in cities of Clinton, Ridgeland and Brandon?

8. What information or resources would benefit efforts to make housing healthier?

9. Who else should we engage in these conversations?

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