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# MID-SOUTH REGIONAL GREENPRINT HEALTH IMPACT ASSESSMENT: EXECUTIVE SUMMARY

Prepared for the Memphis and Shelby County  
Office of Sustainability on behalf of  
the Mid-South Regional Greenprint Consortium  
by the Georgia Health Policy Center

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CONNECTING COMMUNITIES FOR OUR FUTURE

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## Introduction and Purpose

The purpose of this document is to provide the Mid-South Regional Greenprint Consortium and the larger Mid-South community with recommendations for ensuring that the final Greenprint Plan has the greatest positive impact on public health throughout the region.

### What is Health Impact Assessment?

HIA is a process for ensuring that plans and policies support healthy communities. HIA is typically used to enhance policies in non-health sectors, such as parks and recreation, transportation and land use planning, and economic and community development. HIA has evolved from the awareness that many projects, policies, and initiatives that have no explicit health goals still impact public health, and as such, decisions regarding these actions should be informed about these potential health impacts in a constructive and actionable way.

Within the context of the Mid-South Regional Greenprint Plan, this HIA is being conducted in order to achieve the Community Health and Wellness working group's strategic vision of ensuring that the Greenprint contributes to a region of healthy and safe communities. Specifically, this HIA furthers the implementation of Action 4.1.3, as defined in the Greenprint Vision Plan: "Advocate for the inclusion of Health Impact Assessments (HIA) and Health in All Policies (HiAP) reviews as part of jurisdictional planning, development and legislative processes."

## Overarching Comments and Priority Recommendations

There are three categories that best sum up the ways in which the Greenprint is likely to impact health: building healthy communities, framing parks and trails as existing resources for health, and promoting healthy travel behaviors. These overarching comments bring together information from analysis of each Strategic Direction and present an integrated perspective that is meant to inform implementation. Priority recommendations are then included based on this perspective. The analyses that lead to these recommendations and more information on who may be involved in carrying them out are available in the full report.

### Building Healthy Communities

Improving environmental conditions in the Mid-South is a critical function of the Greenprint, but much of the potential for improving public health is actually tied to actions that use green infrastructure as a catalyst for creating stronger communities throughout the region. The Greenprint is about more than parks, trails, and sustainable ecosystems: it is about creating contexts for healthy behaviors within the region's communities. These behaviors can range from simply being exposed to trees and greenery on a daily basis to having the ability to easily access employment and educational opportunities. The Greenprint Consortium should be viewed as an opportunity to foster collaboration that ensures future projects are designed and implemented in ways that maximize the benefits of sustaining healthy populations and environments. This HIA is meant as an early step toward that broader goal.

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Perhaps one of the best ways to ensure healthy outcomes in the context of Greenprint implementation is through robust community involvement, especially from communities that have high numbers of vulnerable subpopulations from a public health standpoint. These subpopulations include the young, the elderly, persons in poverty, the linguistically isolated, and other groups that may not traditionally be involved in shaping the decisions that impact their communities. The more that communities are involved in these decisions, the more likely that they will take advantage of improvements, and the more likely that they will achieve the potential for benefits to their health.

### **Parks and Trails as an Existing Resource for Health**

While new facilities and enhanced connectivity are attractive options for the long-term future of the Mid-South and will likely lead to a variety of public health improvements over the span of decades, focus on improving existing resources in the short-term should positively impact community health more immediately. This impact will be particularly relevant in communities identified as having higher risk for negative health outcomes, which tend to have access to green space, but not high quality green space. In these areas, it will be important to frame park improvements as part of broader neighborhood improvement to address issues such as fear of crime or other deterrents of park use and more broadly, community revitalization. Promotional and educational programming in these areas focusing on benefits of green space and safe walking and biking habits would also be good short-term strategies that could be leveraged in future improvements.

### **Promoting Healthy Travel Behaviors**

A significant portion of community health benefits is likely to come from potential increases in walking and biking for both recreation and transportation as a result of the strategies contained in the Greenprint. Developing an interconnected network of trails and other infrastructure for these active modes will not only facilitate recreational use, but it will also allow for greater use of these means as regular forms of travel. When people begin to choose walking or biking over car travel for daily trips, the greatest long-term benefits for health occur. These health benefits are only achievable if the facilities envisioned in the Greenprint are successful in changing travel behavior of individuals over time. For this to happen, there needs to be consideration given to contextual factors beyond physical design. Two especially important considerations within the context of Greenprint implementation are education about safety and access to functional destinations within the network (e.g. trails that connect residential areas to commercial centers).



## Priority Recommendations

The following are key recommendations adapted from the analyses of each Strategic Direction presented in the full report. When existing Actions under the Healthy and Safe Communities Strategic Direction (SD4) are particularly relevant for achieving the broader recommendation, they are included for reference.

- **A public involvement plan for the Greenprint should be created to ensure that equity remains a focus throughout implementation.** Having a specific public involvement plan would ensure that communities' voices are heard and incorporated into the long-term actions that the Greenprint Plan sets out. Some Actions under Strategic Directions 2 and 8 address issues of sustained involvement of communities, but there is no suggestion of a specific plan for public involvement.
- **Examine population characteristics near redevelopment sites to determine the specific health concerns of the local community and how addressing underutilized property may impact them.** Where there are existing communities around sites designated for revitalization, engaging those populations to determine their desires and concerns will allow for more local support of the eventual reuse, which would likely increase any positive health impacts. For sites that are not near populated areas, there may be a wider range of potential reuse options; though the surrounding landscape and existing land uses should still be considered as important contexts for the reuse.
- **Use work in existing parks as an opportunity to broaden the discussion beyond the park boundaries to include neighborhood factors** such as vacant land and crime, allowing for a more concrete recognition of how closely the success of park renovation is tied to creating a healthy and safe neighborhood surrounding it. Engaging the community in these discussions will be critical.
- **Develop a coordinated maintenance and safety improvement plan for all existing parks,** rather than park-specific projects. The pilot park(s) under Action 1.2.4 (Create, fund and execute a pilot project to address maintenance and safety issues in one or more underused parks) should be chosen with the ultimate goal of defining this regional strategy.
- **Promote safety in existing parks as a means to potentially increase use of these existing resources for health improvement.** SD4 offers some specific recommendations as actions under Objective 4.3 to promote safe, healthy, and walkable communities. These should be considered priority recommendations in the short term:
  - **4.3.1** Create and organize citizen groups, agencies, and community police to enhance safety in parks, trails and green spaces

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- **4.3.2** Integrate active and passive security measures in parks, trails and green spaces
  - **4.3.3** Incorporate Crime Prevention through Environmental Design (CPTED) design principles in green space planning
- **Pursuit of actions that aim to increase greenery (through landscaping or other means) should be done in the context of other Greenprint strategies that more directly address underlying socioeconomic issues in the region** like employment, education, and housing affordability. Simply increasing the amount of vegetation in an area is unlikely to generate much health improvement in isolation; therefore it is critical to view Actions like 6.1.8 (Increase tree canopy throughout the region...) or 6.4.5 (Encourage changes in policy and covenants to allow for natural landscaping in existing and new development) as pieces of the broader livability goals of the Greenprint. For example, Action 4.3.6 and 4.1.4 under the SD4 will help to foster positive perceptions of greenery in the region, which may lead to more positive effects on mental health:
    - **4.3.6** Encourage the use and care of parks, trails, and green spaces and bicycle facilities by youth and youth organizations
    - **4.1.4** Create and support nature- and place-based youth education and physical fitness programs as a means for improving child health, development, and education
  - When defining plans for expanded connectivity for pedestrians and bicyclists, **strategies to supplement direct routes with less-direct and lower traffic routes within the street network should be considered.** Especially in the case of bicycling, newer users may be more comfortable on streets with less traffic, so identifying parallel or alternative routes, rather than focusing on major auto corridors, may lead to greater health benefits. Commuters tend to prefer more direct routes, which would correspond to auto-centric corridors.
  - **Implementing an educational program promoting bicycle and pedestrian safety,** especially among new and/or inexperienced riders and walkers, would likely mitigate any potential increases in injury risk. This recommendation supports the following Action under SD 4:
    - **4.3.5** Organize and promote activities for the safe use of parks, trail, green spaces, and bicycle and pedestrian facilities, such as organized walks and rides and walking school bus groups
  - **Incentivize mixed land use and higher densities through economic development tools** and corresponding changes to policy. This might include defined density bonuses for developers who chose to build near intersections of alternative transportation modes (i.e. allowance to build at a higher density because they chose a “healthy”



location). Other incentives may involve commitments to help expand or maintain trails near development, creation of location or design-based tax incentives, and targeted recruitment of businesses that support the use of alternative transportation.

- **Strategies to promote positive attitudes toward walking should be implemented in tandem with policies that could lead to supportive changes in the built environment, like mixed-use development.** Some of the SD4 Actions help to address this:
  - **4.3.5** Organize and promote activities for the safe use of parks, trail, green spaces, and bicycle and pedestrian facilities, such as organized walks and rides and walking school bus groups
  - **4.3.6** Encourage the use and care of parks, trails, and green spaces and bicycle facilities by youth and youth organizations
- **Ensure pedestrian-oriented design** in mixed use and mixed income communities to enhance the benefit of having a mix of uses. To further enhance the potential for these communities to benefit from proximity to green infrastructure, also incorporate bicycle facilities into designs.
- **Ensure that areas in and around employment and education centers are developed to include a variety of land uses (such as residential and commercial) and densities high enough to facilitate alternatives to driving** as viable transportation modes in an integrated network. Connectivity can only be successful in the context of destinations, so encouraging a variety of other residential and commercial uses to be co-located with employment and education centers will increase the likelihood of people utilizing active forms of transportation (including transit), which would likely lead to improvements in health.



## Strategic Directions and Potential Health Impacts

The table presented below provides a brief summary of each Greenprint Strategic Direction and its connection to creating healthy communities. The full report contains more information about baseline conditions in the Mid-South and analyses of one or two specific Actions under each Direction.

Summary of Greenprint Strategic Directors, Corresponding Goals, and Broad Health Impact		
Strategic Direction	Goals from Greenprint Vision	Comment on Health Impact
Strategic Direction 1: A Regional Interconnected Network of Parks, Greenways and Open Spaces	<ul style="list-style-type: none"> <li>• Improve access and use of existing parks and greenways</li> <li>• Expand and connect green assets including parks, greenways, and linkages</li> <li>• Protect and enhance natural corridors for people and animals</li> </ul>	Actions taken to achieve these goals are likely to have long term positive effects on community health through increases in use of green infrastructure. The strongest positive influence will occur if people who currently do not visit these spaces often begin using them regularly.
Strategic Direction 2: Increased Equitable Participation and Community Ownership	<ul style="list-style-type: none"> <li>• Engage and include a diverse group of individuals, groups, and communities from across the region</li> <li>• Connect regional communities to build relationships and bring down barriers</li> <li>• Buy-in from all communities in region</li> <li>• Develop capacity of social equity partners to stay involved through plan implementation</li> </ul>	Engaging the broadest range of individuals in planning and implementation of the Greenprint will ensure maximum positive public health impact by increasing both community ownership and use of facilities, precipitating many of the health impacts discussed throughout this assessment. Having this broad engagement, especially from vulnerable populations, will also increase the likelihood of the Greenprint Actions reducing health disparities in the long term.



**Summary of Greenprint Strategic Directors, Corresponding Goals, and Broad Health Impact**

Strategic Direction	Goals from Greenprint Vision	Comment on Health Impact
Strategic Direction 3: Enhanced Access through Transportation Choices	<ul style="list-style-type: none"> <li>• Increase transportation choices and modal connections</li> <li>• Connect people to jobs, schools, goods and services, and natural areas</li> <li>• Link communities and neighborhoods across the region</li> <li>• Improve the impact of the transportation system on the built environment, natural environment, and regional quality of life</li> </ul>	<p>Actions taken to achieve these goals are likely to have positive long term health effects for the Mid-South community; however, these impacts will likely vary based on the sub-populations considered. People most likely to see health benefits are those who chose to switch from driving to regular use of alternative transportation modes (i.e., walking, biking, and/or transit) within this enhanced system. There will also be potentially positive health effects for people who already utilize these modes regularly, as well as for some drivers in the region, though the impact may be smaller in magnitude. Any improvements in environmental health as a result of changes in the transportation system would likely be evenly spread across the region.</p>
Strategic Direction 4: Healthy and Safe Communities	<ul style="list-style-type: none"> <li>• Develop and promote a comprehensive concept of community health and wellness</li> <li>• Assess and promote health impacts of green infrastructure on residents and communities</li> <li>• Promote healthy, safe, and walkable communities</li> <li>• Enhance regional quality of life for all residents and communities</li> </ul>	<p>Achieving these goals will have both direct and indirect impacts on population health in the region. Direct impacts will come from emphasizing healthy behaviors through education and advocacy; while the indirect impacts will occur by integrating health perspectives into decision-making processes and collaborations where it may not typically be included, as recommended throughout this HIA.</p>

**Summary of Greenprint Strategic Directors, Corresponding Goals, and Broad Health Impact**

Strategic Direction	Goals from Greenprint Vision	Comment on Health Impact
Strategic Direction 5: Improved Neighborhoods and Fair Housing Choices	<ul style="list-style-type: none"> <li>• Build on existing assets at the neighborhood level</li> <li>• Increase affordable, location-efficient, and fair housing choices</li> <li>• Ensure access to green space from every neighborhood in the region</li> <li>• Implementation of the plan in an equitable way that ensures resources are distributed fairly across the region</li> </ul>	<p>Actions taken to achieve these goals are likely to have long term effects on the health of the region and more immediately on the areas that are targeted by these actions. There is great opportunity to use these objectives to improve the housing situation of some of the most vulnerable populations in the region; though this effort may need to be contextualized within broader efforts to promote mixed-use development in the region. The strongest positive influence on community health will likely occur when activities target existing communities where disparities in health are most evident.</p>
Strategic Direction 6: Sustainable Resources and a Quality Environment	<ul style="list-style-type: none"> <li>• Conserve and protect natural resources (air, water, and land) and biodiversity</li> <li>• Convert vacant lands and brownfields into productive green assets</li> <li>• Promote sustainable agricultural and watershed management policies and practices</li> <li>• Promote and protect biodiversity and wildlife habitat</li> </ul>	<p>Improvements to the environment brought about by Actions to achieve these goals will likely lead to improvements in community health status through impacts on environmental determinants such as air and water quality. The magnitude of these impacts is likely to be small in comparison to other Strategic Directions because of the nature of environmental quality determinants. These impacts will accrue relatively equally across the population, with vulnerable populations potentially experiencing the greatest benefit. Environmental improvement also includes addressing more visible aspects like litter and trash removal, which will have bearing on people’s perceptions of green space as safe and/or useable. Actions that focus at this level (similar to those explored under Strategic Direction 1) may lead to more proximal improvements to health through promoting physical activity and exposure to nature.</p>



Summary of Greenprint Strategic Directors, Corresponding Goals, and Broad Health Impact		
Strategic Direction	Goals from Greenprint Vision	Comment on Health Impact
Strategic Direction 7: A Productive Workforce and Economy	<ul style="list-style-type: none"> <li>• Empower individuals to improve economic outcomes</li> <li>• Increase and enhance regional employment opportunities, and</li> <li>• Support neighborhood-level economic development</li> </ul>	<p>Actions taken to achieve these goals are likely to have long term effects on the health of the community; though these effects could be unevenly distributed throughout the region. The strongest positive influence on community health will likely occur when activities target low income areas and/or areas with high unemployment.</p>
Strategic Direction 8: Effective Long-term Regional Planning	<ul style="list-style-type: none"> <li>• Build capacity for long-term participation in the public planning process</li> <li>• Form or utilize an organization that can sustain the goals of the Mid-South Regional Greenprint Consortium</li> <li>• Establish a system to maintain shared data resources long-term</li> <li>• Incorporate social equity in the public planning process across the region</li> </ul>	<p>Actions to accomplish these goals are not likely to have a direct impact on population health in the short-term, but they will have positive effects in the long-term, as long as public health perspectives are consistently included in future planning and data activities.</p>

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## Conclusions and Lessons Learned

Conducting this HIA as part of the Mid-South Greenprint provided decision makers, stakeholders, and community members an opportunity to reflect on the public health implications of green infrastructure planning in the region. The Greenprint Consortium had already taken important steps in this direction by including a Working Group and Strategic Direction focused on community health and wellness early in the process. The inclusion of HIA as one of this Working Group's key actions leveraged their initial involvement into the current opportunity to more consistently apply a public health lens to the broad range of decisions and actions outlined by the Greenprint Vision and Plan.

One of the most apparent and overarching lessons learned from this HIA is that collaborative execution of Greenprint Actions and Objectives is critical for success. From an HIA perspective, this collaborative execution is necessary to maximize the potential for improvement of community health within the Greenprint context. As detailed in this report, the Community Health and Wellness Working Group should continue to promote its work to improve public health as an integral piece of the other Working Groups' efforts and to seek out opportunities for collaboration and information sharing in the future. The other Working Groups should also begin to more consistently consider the integration of public health perspectives into their ongoing work, especially in the arenas of Social Equity and Long Term Planning.

The regional scale and inclusive nature of the Greenprint process presented both opportunities and challenges for HIA. An overriding theme of this assessment is that the Greenprint Plan will impact a wide variety of health determinants throughout the region, and by influencing these determinants, it has great potential to positively impact public health outcomes over time. Fully characterizing and addressing these influences requires sustained collaboration, both within the public health sector and with professionals from other sectors involved with the Greenprint.

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