The Geography of Opportunity in Mississippi's Gulf Coast Region

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PLAN FOR OPPORTUNITY

THE OHIO STATE UNIVERSITY

Kirwan Institute

Many Differences **One Destiny**

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The Plan for Opportunity

The Mississippi Gulf Coast was one of 45 regions nationwide to receive grant funding from the federal Partnership for Sustainable Communities to develop a regional sustainability plan. *The Plan for Opportunity*, under the leadership of the Consortium for a Sustainable Gulf Coast, aims to foster a shared vision among elected officials, planning professionals, and the public from the three coastal counties and eleven municipalities throughout the three-year comprehensive regional planning process.

This report is a product of a series of opportunity mapping engagements with members of the local consortium. During this process, stakeholders met repeatedly to decide on, develop, and refine the data they wanted to include as part of the opportunity maps. The end goal is a set of opportunity maps that will inform the remaining work of the consortium, providing a locally-derived information resource that will prompt discussions and decisions about expanding opportunity across the region.

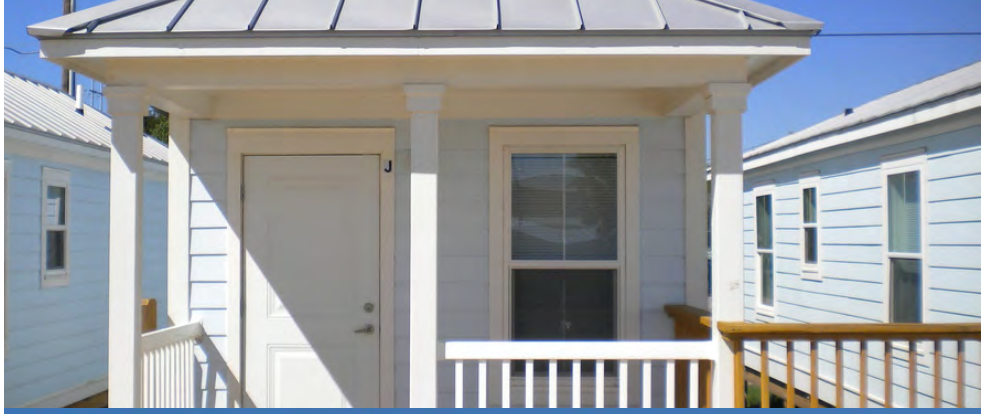


Photo sources:
Ohio State Univeristy City and Regional Planning
Cover Photo
http://seniorswalkingacrossamerica.blogspot.com

To view the report and maps in a web-based format, visit www.gis.kirwaninstitute.org/mississippi-gulf-coast/ or scan the QR code on the back cover of this report.

Executive Summary

In recognition of the many challenges and impediments to sustainable regional development in the United States, the Department of Housing and Urban Development (HUD) partnered with the Department of Transportation (DOT) and the Environmental Protection Agency (EPA) to establish the Sustainable Communities Initiative in 2010. The purpose of the initiative is to develop new planning approaches that embrace and integrate the principles of livability, sustainability, and social equity. The Mississippi Gulf Coast was one of 45 regions nationwide to receive grant funding from this federal partnership to develop a regional sustainability plan. Regional sustainability integrates economic prosperity, environmental stewardship, and social equity. Often forgotten, social equity can be represented by one's access to opportunity defined as a "situation or condition that places individuals in a position to be more likely to succeed or excel." Social, cultural, and physical characteristics of the environment profoundly influence a person's access to opportunity. As the findings of this report illustrate, opportunity has a geographic footprint in the Mississippi Gulf Coast, which highlights the inequities that exist among systems and structures across the region.

Over the past decade, the Kirwan Institute has developed Opportunity Mapping for use to build capacity for decision making and community engagement in more than two dozen states across the country. The geographic footprint of opportunity in the Mississippi Gulf Coast points to an important lesson about the region: the importance of, and linkages between, *opportunity* and *place*. Place is important for opportunity and it is multidimensional, this is why opportunity maps incorporate data across spheres such as access to healthcare, quality education, housing, and employment, among others. It is this holistic approach to community development which makes opportunity mapping unique.

Nearly two years of work with local groups has resulted in an index by which the geography of opportunity in the Mississippi Gulf Coast region can be understood. The five categories, public education, economics and mobility, housing, socioeconomics, and public health and security are mapped both individually to provide the opportunity for deeper analysis of each issue, and collectively in a comprehensive map to provide a general snapshot of opportunity in the region. In addition to analyzing *where* opportunity is high or low throughout the region, it is also important to consider *who* has access to these opportunities, analysis of population sub groups provided insight regarding populations. The following highlights from the opportunity mapping findings illustrate the importance of *opportunity* and *place* in the Mississippi Gulf Coast region:

- **Areas of high opportunity are proportionately more concentrated in the region's urbanized areas.** Though high opportunity areas exist in the region's rural communities, urban areas contain more.

- **Some demographic groups in the region are more likely to live in areas of high opportunity than others.** African Americans are more likely than any other group to live in a disadvantaged neighborhood.

- **The region's most affordable housing stock is more likely to be located in areas of low opportunity than the average housing unit.** This creates barriers for populations trying to work their way out of poverty.

- **The region is becoming more racially diverse, as population growth between 2000 and 2010 came from communities of color.** The health of the region will be increasingly tied to the health of these populations.

- **All of the findings represented above have direct ramifications on meeting many of the goals set forth for The Plan for Opportunity and Fair Housing requirements.** The opportunity mapping analysis should be utilized to inform planning efforts to meet the various goals of the Plan for Opportunity and to support community development and fair housing within the region.

It is the purpose of the opportunity framework to familiarize people with the idea that place and opportunity matter. Once

Source: *gulfcoastplan.org*

The Plan For Opportunity is an initiative intended to encourage regional collaboration across Mississippi's coastal communities.

this connection is made, the maps can be utilized as tools to create and connect people to opportunities. By focusing development towards people, places, and linkages, regional leaders and change agents can work to build opportunity structures that will benefit the entire region. This three-pronged opportunity oriented model of development consists of policies which invest in people, invest in places, and support linkages. Investments in people could include K-12 school reform, civic and youth engagement, job training and labor force development, and family support services, among others. Vacant land redevelopment, community development and infrastructure investments, foreclosure prevention, and community health investment and fresh food initiatives are but a few examples of investments in places. Finally, policies which support linkages could include supporting inclusionary housing development, developing transit infrastructure, and developing regional greenways and non-motorized paths.

It is critical to the success of *The Plan for Opportunity* that the efforts represented by this report continue to foster collaboration across the region to expand opportunity for all people and communities in the region.

Introduction

Sustainable regional development in the United States is an economic imperative. To be relevant in the hypercompetitive global economy, regions which are more equitable, have healthy neighborhoods, a better use of infrastructure, and more coordinated decision making are better positioned to compete. Unfortunately, the conditions facing many regions today do not position places well in respect to their economic competitiveness and sustainable development: distressed communities, infrastructure concerns, fragmented open space, agricultural encroachment, and damaged ecosystems are powerful reminders of the impacts of traditional development patterns and policies that have harmed both our regions and our economy. Our previous development models that too often have relied exclusively on jurisdictional fragmentation and inter-regional competition have resulted in unsustainable growth, less competitive regions, and unhealthy communities. A new framework is needed to produce sustainable development, economic vitality, livable communities, and an equitable, healthy society.

The Department of Housing and Urban Development (HUD) has recognized this urgency. In a hallmark partnership among HUD, the Environmental Protection Agency (EPA), and the Department of Transportation (DOT), the Sustainable Communities Initiative was created to prompt regional planning bodies, elected officials, and other stakeholders to take seriously the challenges to regional opportunity and work together to create a new planning approach that embraces and integrates the principles of livability, sustainability, and social equity. Guided by six "Livability Principles," the Partner agencies are coordinating investments, restructuring funding programs, and aligning policies to support local efforts to provide more housing choices, make transportation systems more efficient and reliable, and support vibrant and healthy neighborhoods that attract businesses.

The Mississippi Gulf Coast was one of 45 regions nationwide to receive grant funding from the federal Partnership for Sustainable Communities to develop a regional sustainability plan. The

The partnership among HUD, EPA, and USDOT represents an innovative approach to locally-driven regional sustainability planning.

Plan for Opportunity, under the auspices of the Consortium for a Sustainable Gulf Coast, aims to bring together and unite in a common vision elected officials, planning professionals, and the public from the three coastal counties and eleven municipalities in a three-year comprehensive regional planning process that aims to:

- Lower transportation and housing costs by creating better connections between where people live and work.
- Develop in ways that value the natural environment, understanding that regional prosperity depends on our many environmental assets.
- Improve air quality by making buildings more energy efficient and reducing vehicle miles traveled.
- Create a broad spectrum of employment and business opportunities by coordinating land use, transportation, and infrastructure planning.
- Improve regional health by ensuring that all communities have access to fresh food, safe recreation, open space, medical care, and clean air and water.

HUD awarded approximately $100 million in Sustainable Communities Initiative grants in 2010 to promote regional planning that better coordinates housing and transportation while supporting more sustainable and equitable land use,

infrastructure, and zoning. HUD continued the investment in 2011, awarding approximately $96 million to grantees. Together, these two grants have the potential to impact 133 million Americans in communities across the US.

HUD sustainability grants represent an unprecedented infusion of federal support for regional planning that is sustainable and equitable. The impact of this "new way" forward and federal support cannot be overstated. Regional consortia that were awarded grants will be able to utilize regional planning to align billions of dollars in capital investments- investments that will revitalize some of our nation's most distressed neighborhoods; support healthy, livable communities; and make access to opportunity-rich areas viable for all residents in a region. The benefits of this integrated systemic approach to planning and development will not only produce healthier and more equitable regions, but also more economically vibrant ones which will benefit all of the communities in the region.

This report is a product of a two-year opportunity mapping engagement with the Mississippi Gulf Coast Plan for Opportunity consortium. During this process, stakeholders met repeatedly to decide on, develop, and refine the data they wanted to include as part of the opportunity maps. The end goal is a series of opportunity maps that will inform the remaining work of the consortium, providing a locally-derived information resource that will not only prompt discussions about regional opportunity, but be reflected in the decision-making process as well.

The Kirwan Institute and Opportunity Mapping

The Kirwan Institute for the Study of Race and Ethnicity at the Ohio State University is a university-wide, interdisciplinary research institute. Its work is dedicated to understanding the causes of – and solutions to – racial and ethnic disparities worldwide and to bring about a society that is fair and just for all people.

The Kirwan Institute developed Opportunity Mapping over the past decade and has utilized it to build capacity for decision making and community engagement in more than two dozen states in the US. Opportunity maps have been used to target place-based

Source: *Ohio State University City and Regional Planning*

Classroom environment is one of the many critical aspects of community opportunity.

investment into low opportunity areas, to develop affordable housing in areas of high opportunity, and to improve linkages between areas of low and high opportunity in order to expand educational and employment opportunities for marginalized populations. Though the maps themselves do not represent solutions to regional challenges, they can help spark discussion and collaboration, and can serve as a valuable analytical tool as stakeholders develop strategies to expand opportunity across the region.

The hallmark of opportunity mapping is the way in which it represents a holistic approach to community development. By incorporating data across domains such as education, neighborhood quality, transportation, and employment, the maps present a comprehensive understanding of opportunity within a region. Lastly, opportunity maps are a unique way to understand conditions of neighborhoods and places within a region, relative to regional averages. This means that the maps presented in this report are all based on average conditions within the three-county Mississippi coastal region.[www[1]]

Opportunity can be defined as "situations or conditions that place individuals in a position to be more likely to succeed or excel."

Sustainability and the Role of Equity

What Does Regional Sustainability Mean?

Sustainability is a term that has come to represent a comprehensive approach to making places healthy and resilient. Sustainability advocates argue that development decisions must be guided by three goals, often referred to as the three "E's" of sustainability: Economic prosperity, Environmental protection, and social Equity. However, planners, advocates, and policymakers looking to produce more sustainable communities face multiple, interrelated challenges. There are environmental challenges produced by certain types of development, or natural disasters. There are social, racial, and geographic inequities, as certain communities are deprived of investment and opportunity. And there is also the need to create a vibrant economy, attract investment, and stimulate economic growth that is beneficial to all residents.

Perhaps the greatest challenge facing sustainable development is the need to balance these competing interests. While sustainable development ought to consider all three "E's" in advocating for policies, these goals are not always given equal weight, producing unintentional conflict. Most notably, social equity is often the forgotten "E," as many sustainability initiatives focus more on addressing environmental concerns, or balancing environmental and economic conflict, while ignoring or missing equity concerns. It's also important to recognize that each of these E's" functions at a regional level: people live in one place, work in another, and shop and recreate in still another part of the region.

A healthy and vibrant economy is essential to the well-being of the businesses, employees, and households of a region. In order for businesses to grow, workers to be employed at livable wages, and households to pay their bills, local and regional economies must be functioning properly. Likewise, careful use and stewardship of environmental resources is important; clean water and air are essential to the health of businesses and residents alike. Finally, opportunities to excel must be available to all. Access to a good education and a safe and affordable place to live must be afforded to all communities in order for the region to thrive. Regions lacking in any of these areas are likely to fall behind. In fact, a 2006 Federal Reserve study found that a skilled workforce, high levels of racial inclusion, and improved income equality correlate strongly and positively with economic growth at the regional level.[2]

The Role and Importance of Equity

The analysis presented in this report through the collaboration among the working group, the project management committee, and the executive committee, Gulf Regional Planning Commission, and the Kirwan Institute, represents a comprehensive approach to understanding these three concepts: Economy, Environment, and Equity. To this end, the Opportunity Index includes the following components: Public Education, Economics and Mobility, Housing, Socioeconomic conditions, and Public Health and Security. Subsequent analysis of opportunity across the region is intended to identify if and which communities have limited access to opportunity so that careful and strategic considerations can be made about how to improve access to opportunity for those communities. This demonstrates the critical role of equity in the region, and ensures that The Plan for Opportunity becomes an effort that positively impacts everyone across Mississippi's Gulf Coast.

Opportunity: Why it Matters and What it Means for the Gulf Coast

All people want to live healthy, productive, and successful

Source: *Ohio State University City and Regional Planning*

A place of high opportunity is a place that helps people thrive by giving them access to the tools and resources required to be successful.

lives. In America, pursuit of the American Dream is built upon a foundation of equal opportunity, where all of those who wish to succeed have access to the structures needed to pursue personal development and prosperity. Too often our prosperity is impacted by a number of external factors which have one thing in common; they represent barriers or pathways to opportunities. Healthy neighborhoods, strong educational systems, social capital, strong institutions and sustainable employment are just a few of the structures which facilitate and assist our growth and development. Building strong opportunity structures creates environments in which all are empowered to grow and succeed in life.

Opportunity can be defined as "a situation or condition that places individuals in a position to be more likely to succeed or excel." Five decades of research has shown that the social, cultural, and physical characteristics of the environment profoundly influence a person's access to opportunity.[3] Opportunity also has a geographic footprint, and access to social, cultural, and physical opportunity structures is distributed unevenly throughout regions. Areas of low opportunity tend to be characterized by poor employment prospects, underperforming schools, distressed housing, and public health and safety risks. It is crucial to recognize the connectivity between these structural inequalities and how their combined effects can create areas of extremely low access to opportunity. This is why creating situations or conditions in specific places that put people in positions to be more likely to succeed or excel is so important. Such places are referred to as places exhibiting high access to opportunity.

A place with high access to opportunity is a place that helps people thrive by giving them access to the tools and resources required to be successful. Such places are characterized as having access to sustainable employment, good schools, quality healthcare, and healthy food. These places have lower vacancy rates, the housing stock is typically better kept, and there are fewer public health or safety risks. These areas are also typically safe with low crime rates and ample well-kept places for children to play in safety.

One of the objectives of The Plan For Opportunity is to create these places of high access to opportunity by linking low opportunity areas to sustainable employment, transportation infrastructure, healthy food, quality education and healthcare, among others. The simple act of connecting housing to sustainable

Source: *Mississippi Dept. of Education, National Center for Educational Statistics, American Community Survey, Gulf Regional Planning Commission, HUD User, Census 2010, ESRI Business Analyst, Environmental Protection Agency, The Ohio State University City and Regional Planning Program.*

The opportunity index is a basis by which the geography of opportunity can be understood.

employment, for example, can go a long way to enhancing a person's access to opportunity. All people want the chance to be successful and most are willing to work hard to achieve success. Creating more places that give people access to these crucial opportunity structures will ultimately contribute to creating a more prosperous region.

What Does Opportunity Mean in the Gulf Coast Region?

One of the most valued characteristics across the Gulf Coast is Resilience, a theme more thoroughly explored in recent scholarship. But resilience is not a new idea to the Gulf Coast. Many outside the region fail to recognize that resilience was a regional value long before the disasters of the past seven years, and both the cultural and ecological environments reflect the enduring qualities of the region.

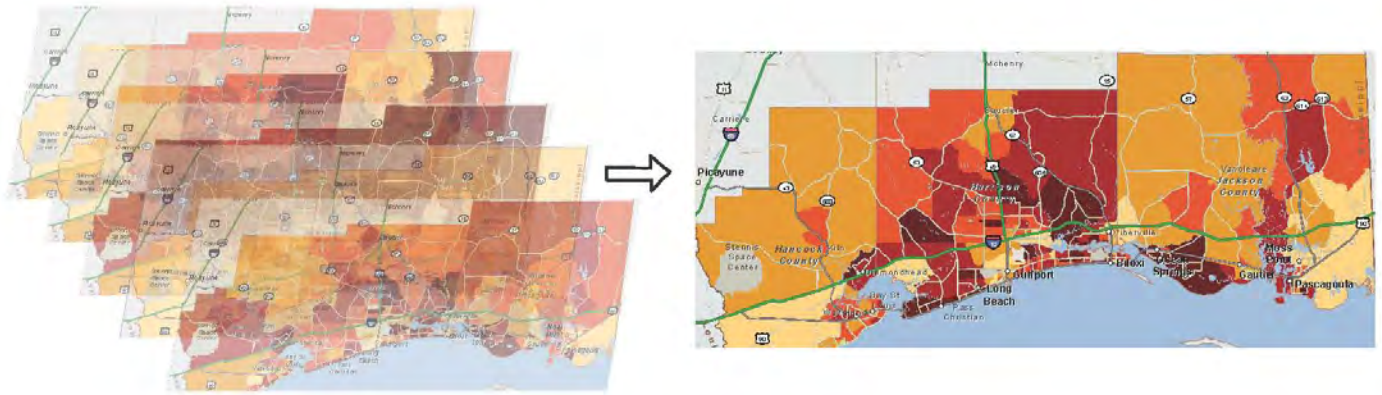
Sustainability planning builds upon the rich coastal heritage of resilience in order to prepare the region to bounce back quicker and more effectively from future disaster. Sustainability also combines disaster preparedness and recovery with an understanding of what it takes to become a healthy and equitable region regardless of circumstances. As The Plan For Opportunity continues to unfold, it is important to recognize the ties between regional resilience and planning for a sustainable future.

Understanding The Geography of Opportunity in the Gulf Coast

The Regional Opportunity Index and Maps

The degree to which thoughtful local input shaped the final comprehensive opportunity index cannot be overstated. Over the course of a nearly two year long process that included multiple iterations and review sessions with committee members, the following index emerged as the means by which the geography of opportunity would be understood in the region:

The process of developing this understanding of the geography of opportunity in Mississippi's Gulf Coast region began early in 2011 with a series of discussions among committee members, including the Project Management Committee, Executive Committee, and Sub-Committees. A preliminary set of opportunity maps was presented to local leaders, sparking an iterative process



Source: *The Kirwan Institute for the Study of Race and Ethnicity*

The comprehensive opportunity map combines multiple datasets in order to provide a multi-dimensional understanding of community opportunity.

of determining which indicators most accurately and effectively define opportunity within the region. Though many research-based indicators that are commonly used to define opportunity in places around the country were recognized as valid, through committee dialogue and community surveys, some issue areas emerged of particular importance to the Gulf Coast region.

The Opportunity Category Maps

Each component of the regional opportunity index was carefully constructed in order to fully capture the essence of opportunity across the region. Each category of the index thus provides two-fold value by contributing to a more meaningful comprehensive opportunity map as well as providing for a deeper analysis of particular aspects of opportunity. This allows practitioners, policymakers, and advocates to better understand the geography of opportunity for their issues of interest, and enables them to see how their issues impact the overall landscape of opportunity in the region. The following graphic illustrates how the categories are combined in order to construct the comprehensive opportunity map.

Maps 1-5 represent the opportunity categories that were used to construct the comprehensive opportunity map of the region. Just as the map for each category is developed by calculating an equally-weighted average of all indicators within the category, the comprehensive map is developed by calculating an equally-weighted average of all five categories. This methodology is used in order to represent how each aspect of opportunity is important to the overall health and vitality of the places within the region.[4] The following sections highlight the factors that were considered by the committees in the construction of each of the five categories of the opportunity index.

Public Education

An early recognition during the development of the opportunity index was that public schools do not represent the entirety of the region's primary and secondary education system; private schools play an important role in the educational system. Yet one of the main premises behind opportunity mapping is that access to structural resources and systems is critical. Given the fact that not every child in the region has equal opportunity to attend private schools, and though public schools don't represent the entire educational network, they are nevertheless the schools which all children have the ability to attend without exception. For this reason, the emphasis of the education component of the opportunity index is on the quality of the public schools.

Information about parochial schools was also gathered with the intent of incorporating it into the index. However, a few key issues emerged during that process. First, because private schools

MAP 1: Public Education

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Mississippi Gulf Coast Sustainable Communities Initiative

This map represents a relative measure of public education opportunity within Mississippi's Gulf Coast region.
Based on variables of the State QDI school proficiency index, high school graduation, student/teacher ratios, and student poverty, this index provides a comparison of conditions across the region.

Source(s): Mississippi Dept. of Education, National Center for Education Statistics

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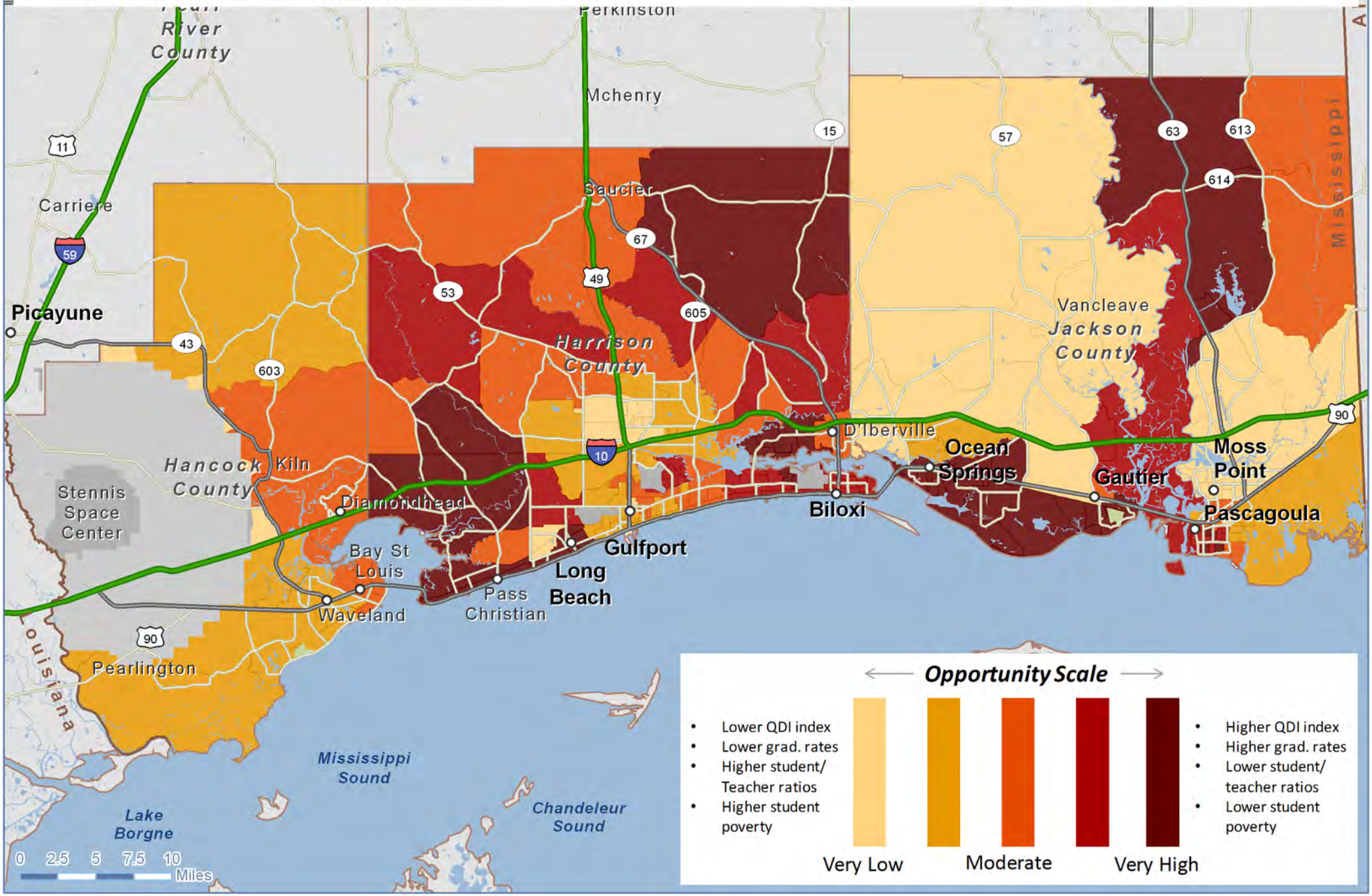

MAP 2: Economics and Mobility

PLAN FOR OPPORTUNITY
Mississippi Gulf Coast Sustainable Communities Initiative

This map represents a relative measure of economic and transportation opportunity within Mississippi's Gulf Coast region. Based on variables of transit access, automobile access, job access, and average land improvement value, this index provides a comparison of conditions across the region.

Source(s): American Community Survey, Gulf Regional Planning Commission, US Dept. of Housing and Urban Development

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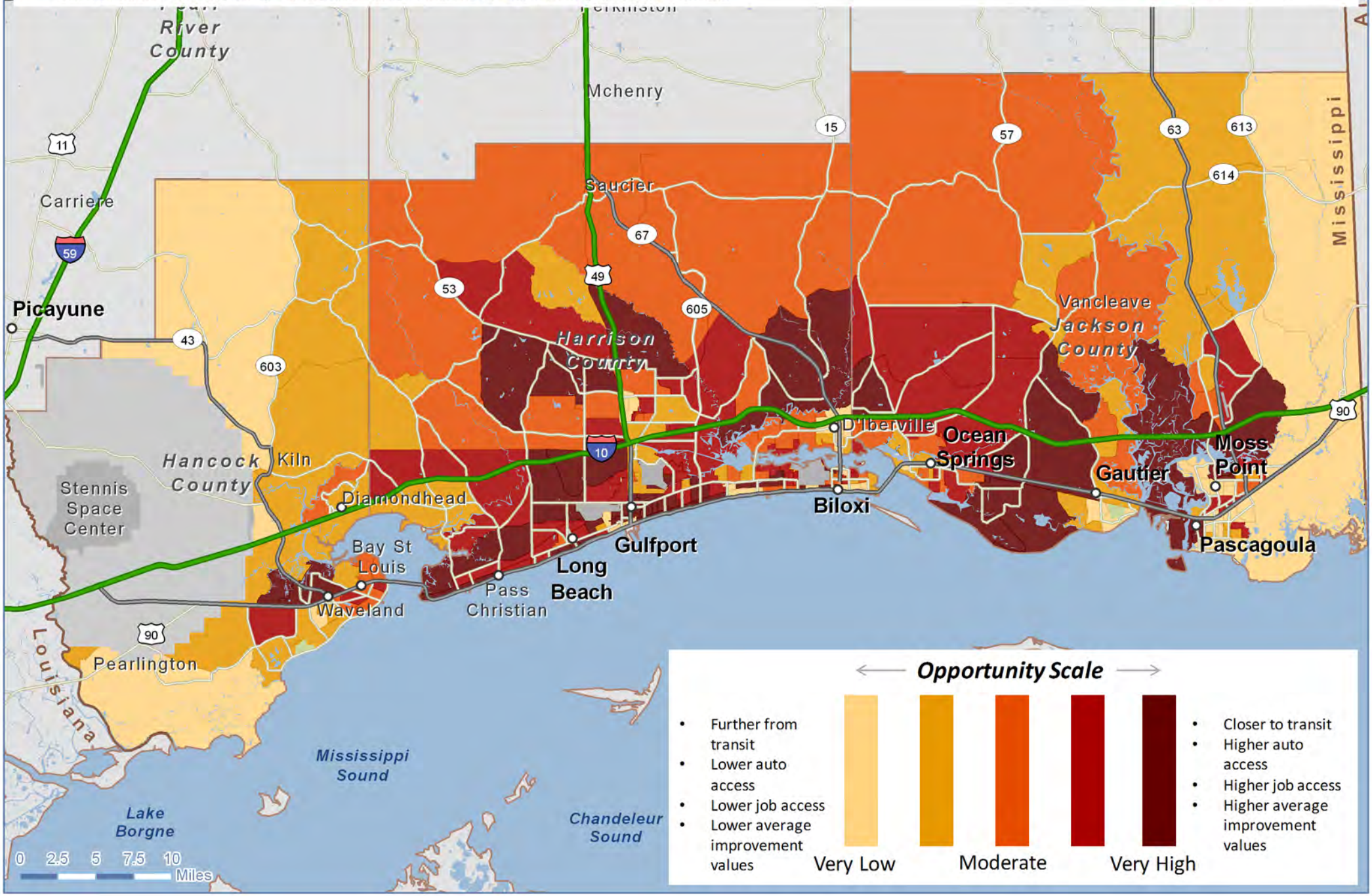

MAP 3: Housing

PLAN FOR OPPORTUNITY
Mississippi Gulf Coast Sustainable Communities Initiative

This map represents a relative measure of housing opportunity within Mississippi's Gulf Coast region. Based on variables of foreclosure rate, vacancy rate, cost burden, and insurance cost, this index provides a comparison of conditions across the region.

Source(s): American Community Survey, Census 2010, HUD User, Mississippi Windstorm Underwriting Association

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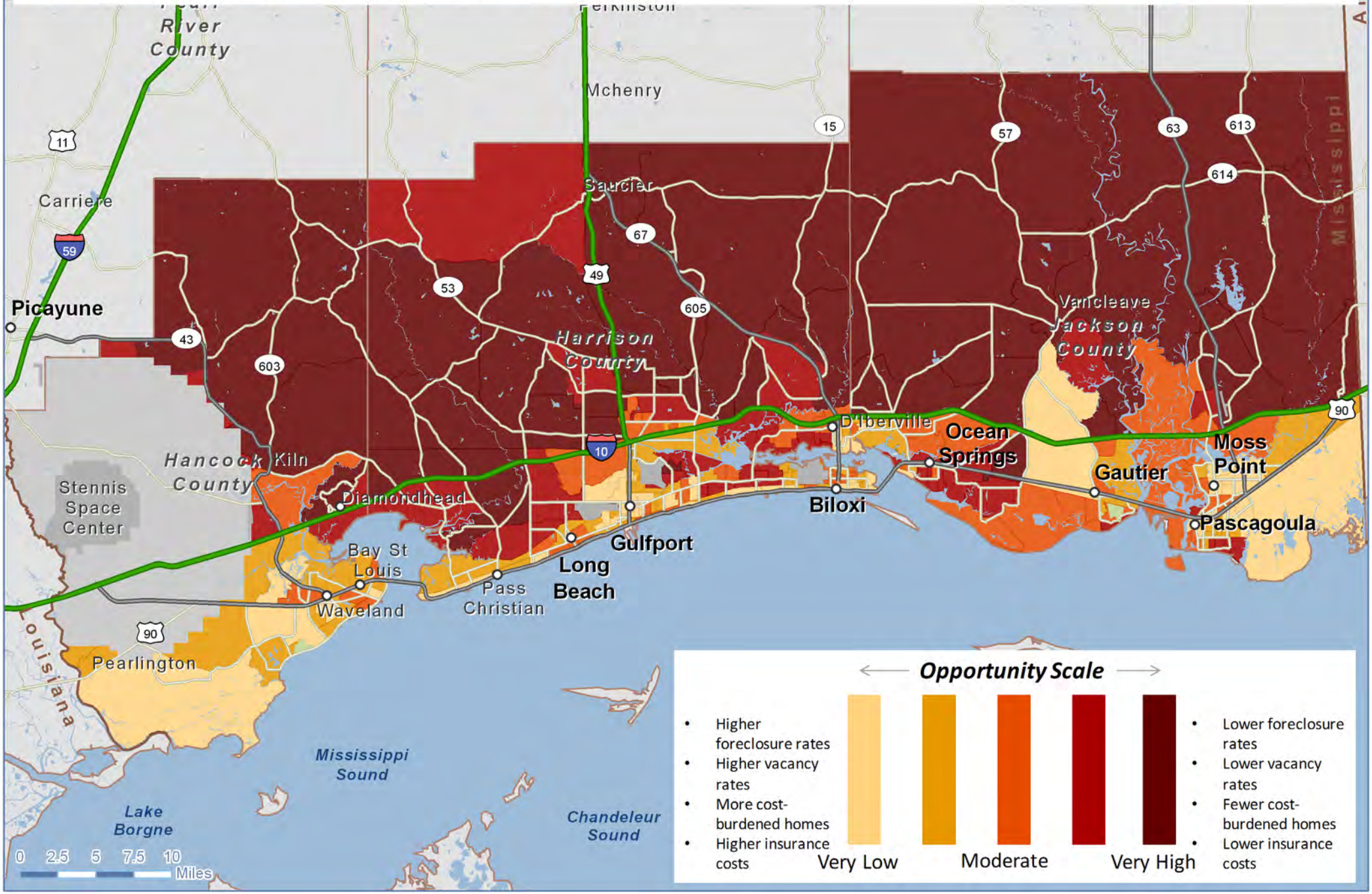

Opportunity Scale

- Higher foreclosure rates
- Higher vacancy rates
- More cost-burdened homes
- Higher insurance costs

Very Low — Moderate — Very High

- Lower foreclosure rates
- Lower vacancy rates
- Fewer cost-burdened homes
- Lower insurance costs

MAP 4: Socioeconomics

PLAN FOR OPPORTUNITY
Mississippi Gulf Coast Sustainable Communities Initiative

This map represents a relative measure of socioeconomic opportunity within Mississippi's Gulf Coast region. Based on variables of poverty, unemployment, public assistance, and educational attainment, this index provides a comparison of conditions across the region.

Source(s): American Community Survey

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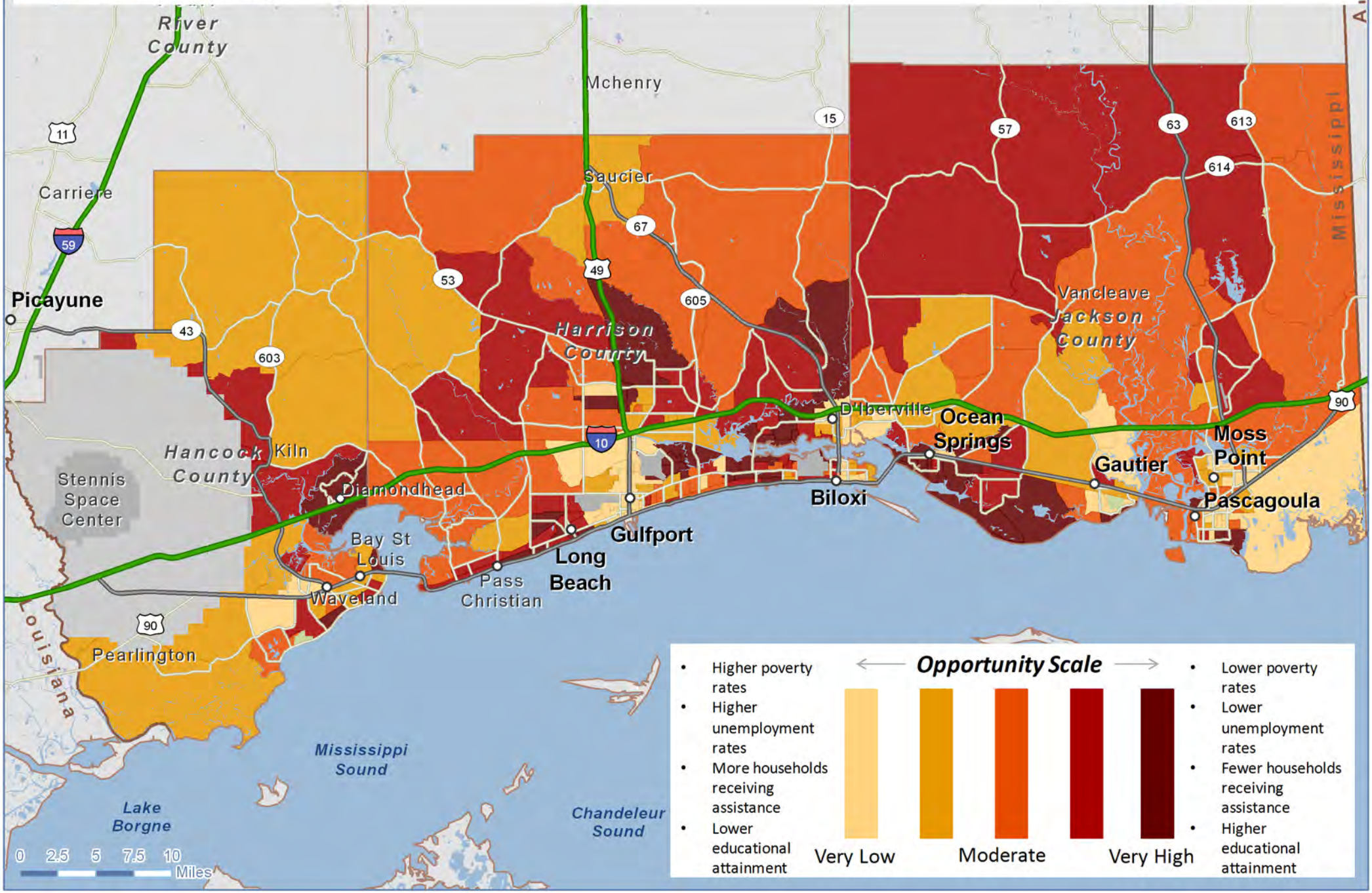

MAP 5: Public Health and Security

PLAN FOR OPPORTUNITY
Mississippi Gulf Coast Sustainable Communities Initiative

This map represents a relative measure of public health and safety opportunity within Mississippi's Gulf Coast region. Based on variables of toxic release, healthy food access, proximity to parks and activity centers, fire hazard index, and CRS discount ratings, this index provides a comparison of conditions across the region.

Source(s): ESRI Business Analyst, Environmental Protection Agency, The Ohio State University City and Regional Planning Program, FEMA, Mississippi Windstorm Underwriting Association

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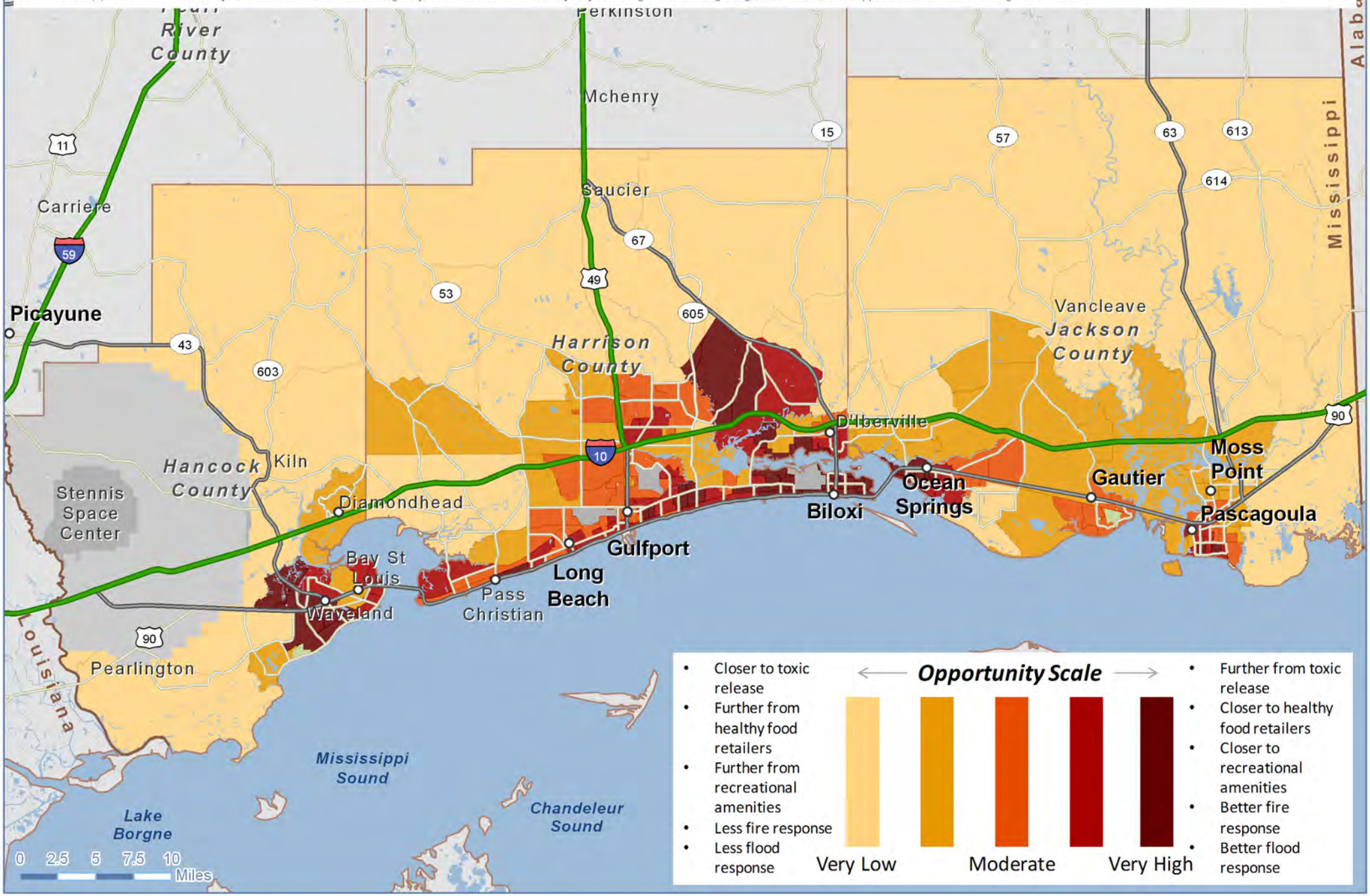

Source: *Ohio State University City and Regional Planning*
Housing quality and affordability are important aspects of opportunity-rich environments.

are not held to the same testing and data collection standards of public schools, making an apples-to-apples comparison of the two is challenging. Statistics such as high school graduation are not reported by many parochial schools, though they are assumed to be very high. A second, and perhaps more challenging issue with incorporating private school data is the fact that attendance of these schools is not tied to place the way it is with public schools. The purpose of opportunity mapping is to compare the conditions of neighborhoods within a region, and the geography of private school attendance is not commensurate with neighborhoods. The quality of public schools, on the other hand, mirror neighborhood conditions with much more accuracy.

Economics and Mobility

When it came to accurately capturing the region's economic and transportation opportunity structures, it was clear that access to jobs is an important aspect of this. Two themes emerged in the effort to represent jobs and mobility in the region, namely, recognizing the value of large job centers, and understanding that the region's jobs and workers exist beyond the state boundaries, and spill over into Louisiana and Alabama. Many of the challenges presented by these issues were able to be overcome by incorporating gravity-model data, made available by HUD, into the index. Additionally, reinforcing the notion that the opportunity map is designed to compare only the block groups within the region to one another, rather than with areas outside the region, helps to eliminate some of the complexity of the intra-state workshed.

Differences in the region's urban and rural areas was a topic that the project committees regularly discussed during the development of the opportunity index, and the Economics and Mobility category was no exception. This was particularly integral to understanding the context of the Stennis Space Center in Hancock County. As one of the region's most prominent job centers, the Space Center appeared to be underrepresented in early drafts of the opportunity index. However, by incorporating better datasets, and by recognizing the differences in density between urban and rural employment concentrations, the Space Center and other regional employment hubs have been appropriately represented in this segment of the opportunity index. The result is a map that illustrates where the highest concentrations of jobs, transportation amenities, and property values exist throughout the region.

Housing

Being able to afford quality housing is one of the fundamental aspects of opportunity. As this aspect of the index was discussed throughout the process, it became clear that post-Katrina insurance rates have uniquely impacted housing on the Gulf Coast. However, not only does insurance affect the cost of housing, but it also has implications for local economies and public safety.

The comprehensive map is designed to weave together the data from each of the separate categories to provide a more holistic understanding of opportunity within the region.

George Freeland, executive director of the Jackson County Economic Development Foundation, stated in a 2010 interview that "The exorbitant cost of insurance pervades all aspects of our economy, in an obviously negative way.[5] " In order to attempt to account for this in the regional opportunity index, three indicators were incorporated into three different categories of the index, acknowledging the very fact that changes in insurance costs have had pervasive impacts upon the region. These indicators include: average improvement value, housing insurance costs, and the CRS premium discount rates.[6]

Socioeconomics

The socioeconomic indicators bring valuable insights into the opportunity index. These indicators represent the wealth of social science research that point to the impact that impoverished environments can have on childhood development, as well as connection to the broader labor market. A strong body of literature shows the value of growing up in a neighborhood with high educational attainment and low poverty, and how areas of low unemployment contribute to career development and networking.[7] This sub index bolsters the other components of the comprehensive index with social environment factors that represent essential aspects of community opportunity.

Public Health and Security

The work of the Food Systems sub-committee and the Public Values Survey generated a greater sense of what residents of the Gulf Coast believe and value about sustainability. Among many things, the survey revealed that food security was a significant concern across the coast. In an effort to better understand this issue, a study of healthy food retailers and access was performed. The data developed by that study was then incorporated into the opportunity index as a measure of access to healthy food.

Proximity to parks and recreational amenities was another important indicator to have represented in this category. Though the region's waterfront can present annual challenges to public safety and increase the cost of insurance, beaches also represent one of the most valuable daily recreational amenities to residents and visitors of the coast. By acknowledging the trade-offs associated with the shoreline, and by integrating proximity to recreational beaches with a robust local database of the region's activity centers, this indicator became a strong complement to the Public Health and Security category.

As with other components of the index, the varying levels of population and development density across the region made this category challenging to represent. Through sophisticated approaches to indicators such as proximity to recreational amenities, these challenges were addressed throughout the process of developing the index.

The Comprehensive Opportunity Map

With the opportunity index in place, a series of maps and analysis was developed. An opportunity map of each category was created, while the comprehensive opportunity map is a compilation of all of the categories. Each of the category maps illustrates a unique aspect of opportunity across the region, while the comprehensive map is designed to weave together the data from each of the separate categories to provide a more holistic understanding of opportunity within the region. Map 6 is the comprehensive opportunity map of the region, and illustrates the compound effect that all five categories have on opportunity.

Finally, an analysis of population and demographic trends

MAP 6: OPPORTUNITY & THE GULF COAST

PLAN FOR OPPORTUNITY
Mississippi Gulf Coast Sustainable Communities Initiative

This map illustrates a place-based assessment of neighbohood conditions, and shows where people can thrive and where challenges exist. Representing a relative measure of opportunity within Mississippi's Gulf Coast region, the map is based on variables in public education, economics & mobility, socioeconomics, housing, and public health & security, the opportunity index provides a comparison of conditions across the region.

Source(s): Mississippi Dept. of Education, National Center for Education Statistics, American Community Survey, Gulf Regional Planning Commission, HUD User, Census 2010, ESRI Business Analyst, Environmental Protection Agency, The Ohio State University City and Regional Planning Program.

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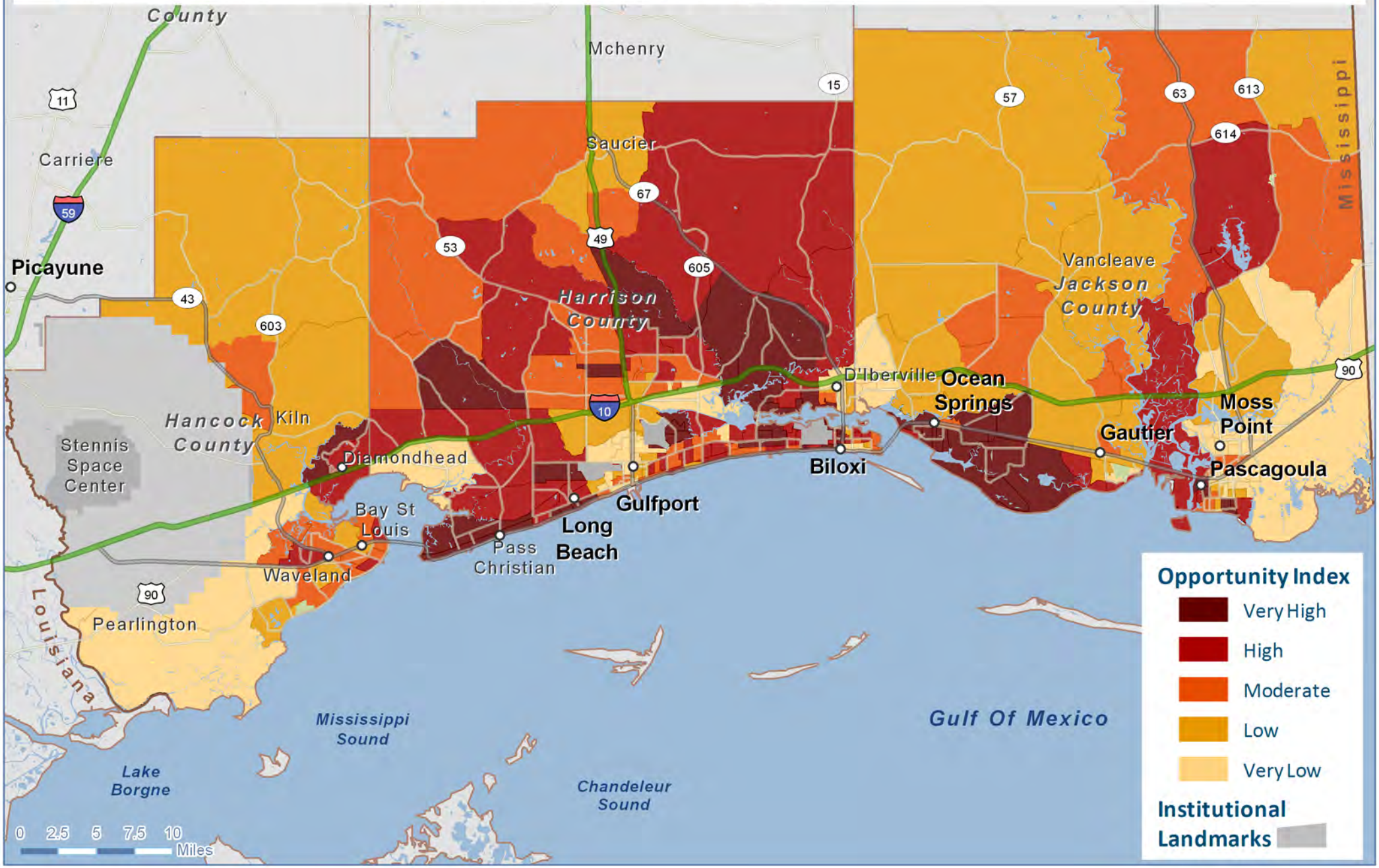


Opportunity	Total Population		Asian		Black or African American		Hispanic or Latino		White		All Others	
Very High	79,345	*21.4%*	2,153	*24.8%*	9,667	*13.1%*	3,694	*20.8%*	61,824	*23.7%*	2,007	*22.0%*
High	80,295	*21.7%*	2,238	*25.8%*	11,282	*15.3%*	3,933	*22.1%*	60,765	*23.3%*	2,077	*22.7%*
Moderate	71,529	*19.3%*	1,204	*13.9%*	11,670	*15.8%*	3,440	*19.4%*	53,350	*20.4%*	1,865	*20.4%*
Low	78,881	*21.3%*	1,718	*19.8%*	15,352	*20.8%*	3,100	*17.5%*	56,787	*21.7%*	1,924	*21.1%*
Very Low	60,652	*16.4%*	1,352	*15.6%*	25,847	*35.0%*	3,594	*20.2%*	28,599	*10.9%*	1,260	*13.8%*
Total	**370,702**		**8,665**	***2.3%***	**73,818**	***19.9%***	**17,761**	***4.8%***	**261,325**	***70.5%***	**9,133**	***2.5%***

Table 2. Regional Opportunity by Race or Ethnicity
Source: *Census 2010*

Understanding how different groups are situated relative to the opportunity geography is a critical step towards expanding opportunity for all communities within the region.

Table 1, Charts 1-2. Regional Opportunity by Geography

Source: *Census 2010*

Having strong opportunity structures regionwide is an important part of sustainability.

Population	Low	Moderate	High	Total
Rural	40,161	20,924	21,492	82,577
Urban	99,372	50,605	138,148	288,125
Total	139,533	71,529	159,640	370,702
% Rural	*48.6%*	*25.3%*	*26.0%*	*22.3%*
% Urban	*34.5%*	*17.6%*	*47.9%*	*77.7%*
Hancock County	22,468	11,051	10,410	43,929
Harrison County	35,537	42,070	109,498	187,105
Jackson County	81,528	18,408	39,732	139,668
% Hancock	*51.1%*	*25.2%*	*23.7%*	*11.9%*
% Harrison	*19.0%*	*22.5%*	*58.5%*	*50.5%*
% Jackson	*58.4%*	*13.2%*	*28.4%*	*37.7%*
% Total	*37.6%*	*19.3%*	*43.1%*	

Chart 1. Regional Opportunity by Area Population

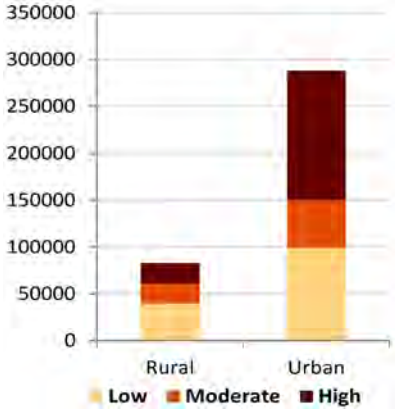
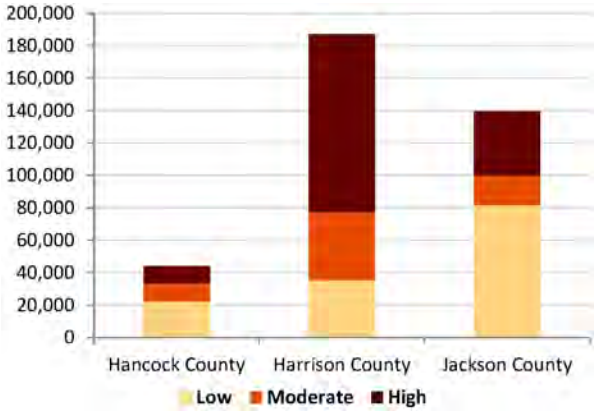


Chart 2. Regional Opportunity by County Population



sheds further light on the importance of expanding access to opportunity for every community in the region. Using the comprehensive map as the basis for further analysis, features such as population, race, and age were looked at in order to determine not only how opportunities vary across the region, but also how access to opportunity varies among different populations in the region. In addition to this analysis, the way in which different housing products are situated was compared in order to understand the unique way that housing provides access to a plethora of other opportunities. This analysis helps to illustrate where and how the region has been growing, and provides clues as to how the opportunity maps can be used to invest in the economic and social sustainability of the coast. The analysis of the comprehensive opportunity map reveals that high opportunity areas are more common in urban parts of the region, as well as in Harrison County (see Charts 1-2). Table 1 provides an overview of the region's population relative to the type of opportunity environment in which they live.

Overlay Maps: How Groups and Resources are Differently Situated

In addition to analyzing where opportunity is higher or lower throughout the region, it is also informative to take a closer look at how population sub groups and critical housing resources are situated relative to the opportunity geography. Table 2 provides a breakdown of the opportunity areas where different

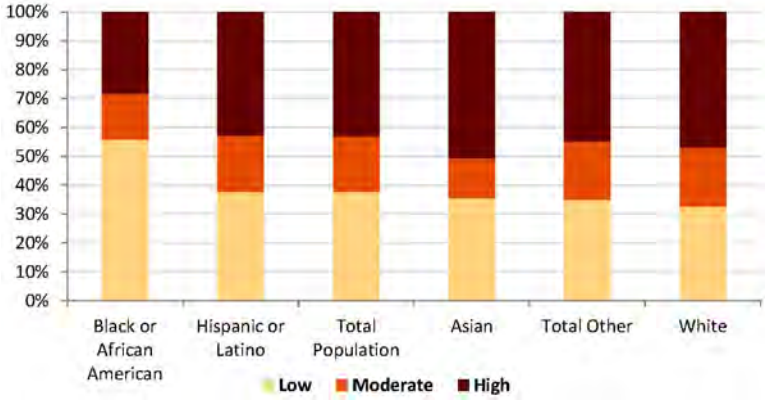


Chart 3. Opportunity Geography by Population Proportions

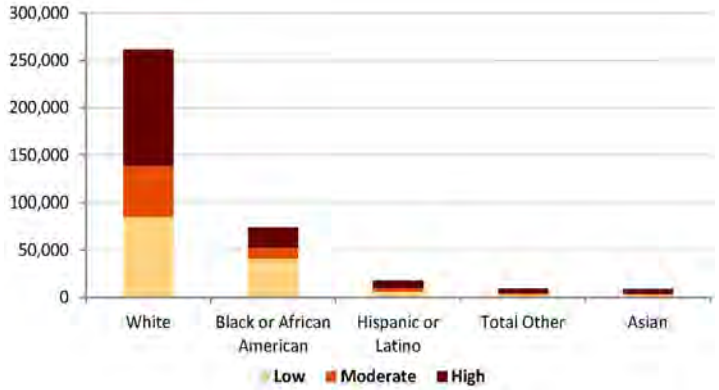


Chart 4. Opportunity Geography by Population Totals

Source: *Census 2010*

Considering population proportions, as well as totals, is important in order to better understand the complex dynamics of opportunity access.

race populations live, and Chart 3 and 4 summarizes this data graphically by consolidating opportunity into three categories.

Nearly 140,000 (38%) of the region's population lives in an area of relatively low opportunity. Furthermore, with over half of their population living in low opportunity parts of the region, African Americans are particularly concentrated in areas of disadvantage. Maps 7.1-7.4 show how different race populations are distributed across the regional opportunity landscape.

In addition to looking at people and opportunity, it is also insightful to look at how levers of opportunity, like affordable housing units, are situated in terms of opportunity. This is because housing is a critical access point for opportunity; where you live often determines the quality of schools, employment, shopping, and recreational amenities that you are able to access. Affordable housing is an especially significant access point for households trying to work their way out of poverty. Maps 8.1 and 8.2 illustrate where the region's subsidized housing is located relative to opportunity.

Chart 5 illustrates how housing vouchers and subsidized developments are situated compared to all housing units in the region. What this analysis reveals is that the region's public housing developments and voucher holders are disproportionately located

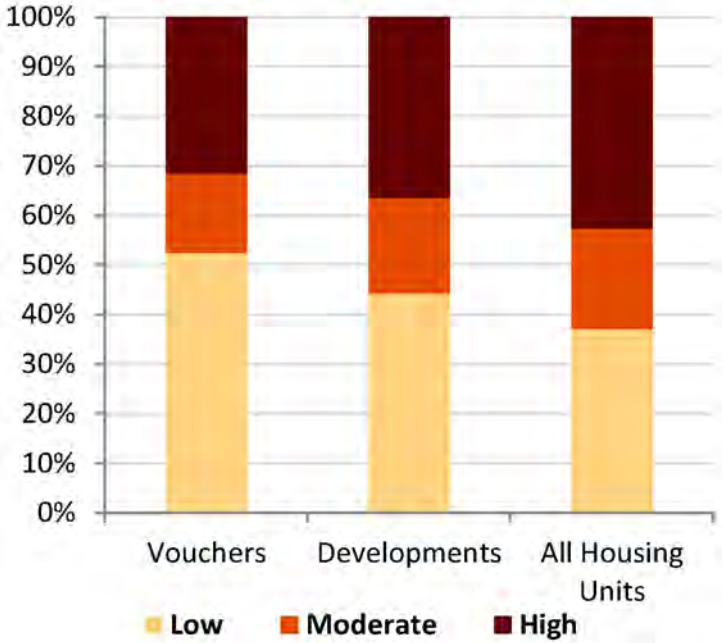


Chart 5. Housing Opportunity Geography by Type

Source: *HUD User, Census 2010*

Housing is a critical way in which many other opportunities are accessed.

MAP 7.1: OPPORTUNITY & ASIANS

PLAN FOR OPPORTUNITY
Mississippi Gulf Coast Sustainable Communities Initiative

This map illustrates where the Asian population lives relative to opportunity within Mississippi's Gulf Coast region. Based on variables in public education, economics & mobility, socioeconomics, housing, and public health & security, the opportunity index provides a comparison of livability conditions across the region.

Source(s): Mississippi Dept. of Education, National Center for Education Statistics, American Community Survey, Gulf Regional Planning Commission, HUD User, Census 2010, ESRI Business Analyst, Environmental Protection Agency, The Ohio State University City and Regional Planning Program.

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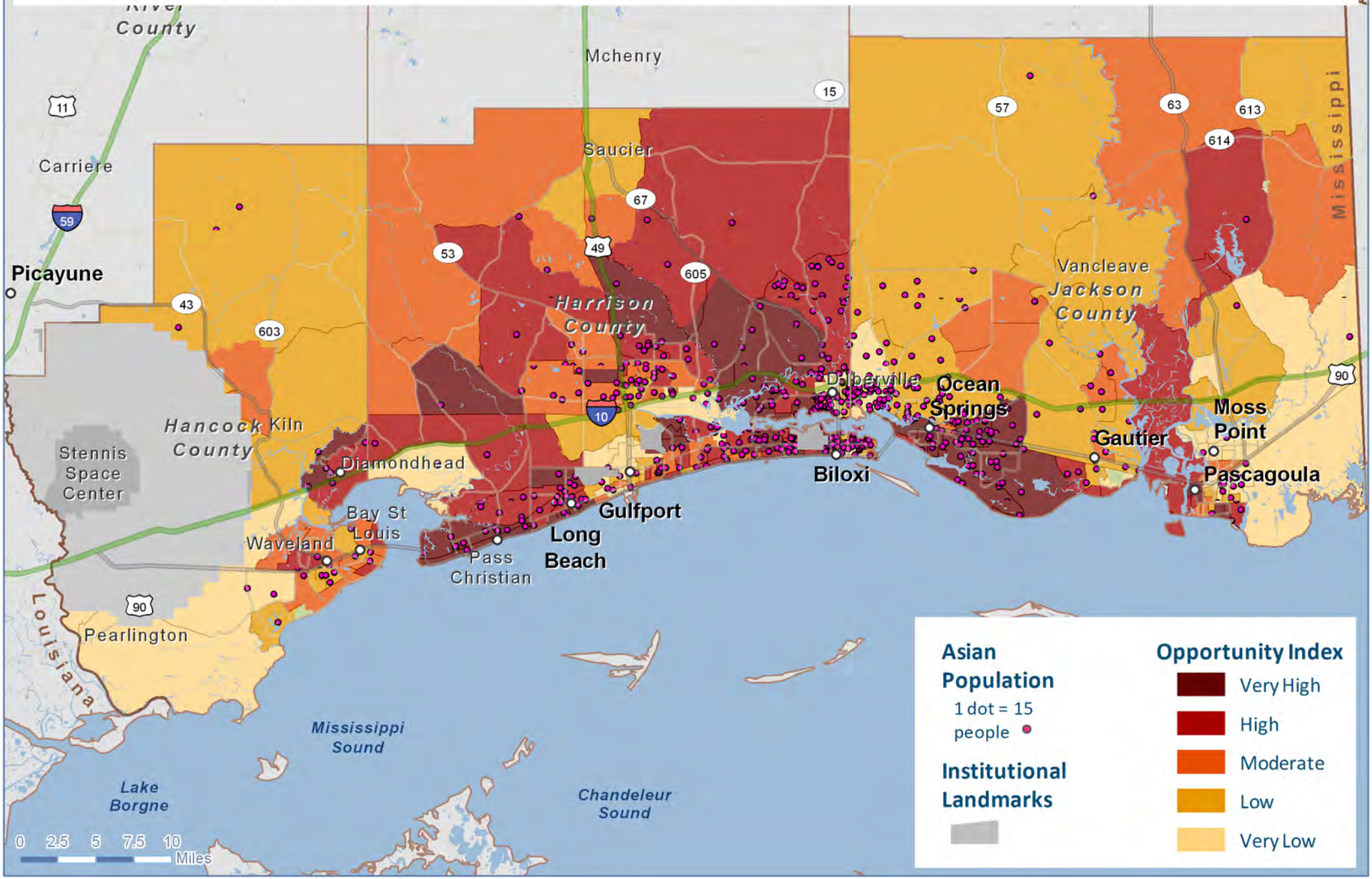

MAP 7.2: OPPORTUNITY & AFRICAN AMERICANS

PLAN FOR OPPORTUNITY
Mississippi Gulf Coast Sustainable Communities Initiative

This map illustrates where the African American population lives relative to opportunity within Mississippi's Gulf Coast region. Based on variables in public education, economics & mobility, socioeconomics, housing, and public health & security, the opportunity index provides a comparison of livability conditions across the region.

Source(s): Mississippi Dept. of Education, National Center for Education Statistics, American Community Survey, Gulf Regional Planning Commission, HUD User, Census 2010, ESRI Business Analyst, Environmental Protection Agency, The Ohio State University City and Regional Planning Program.

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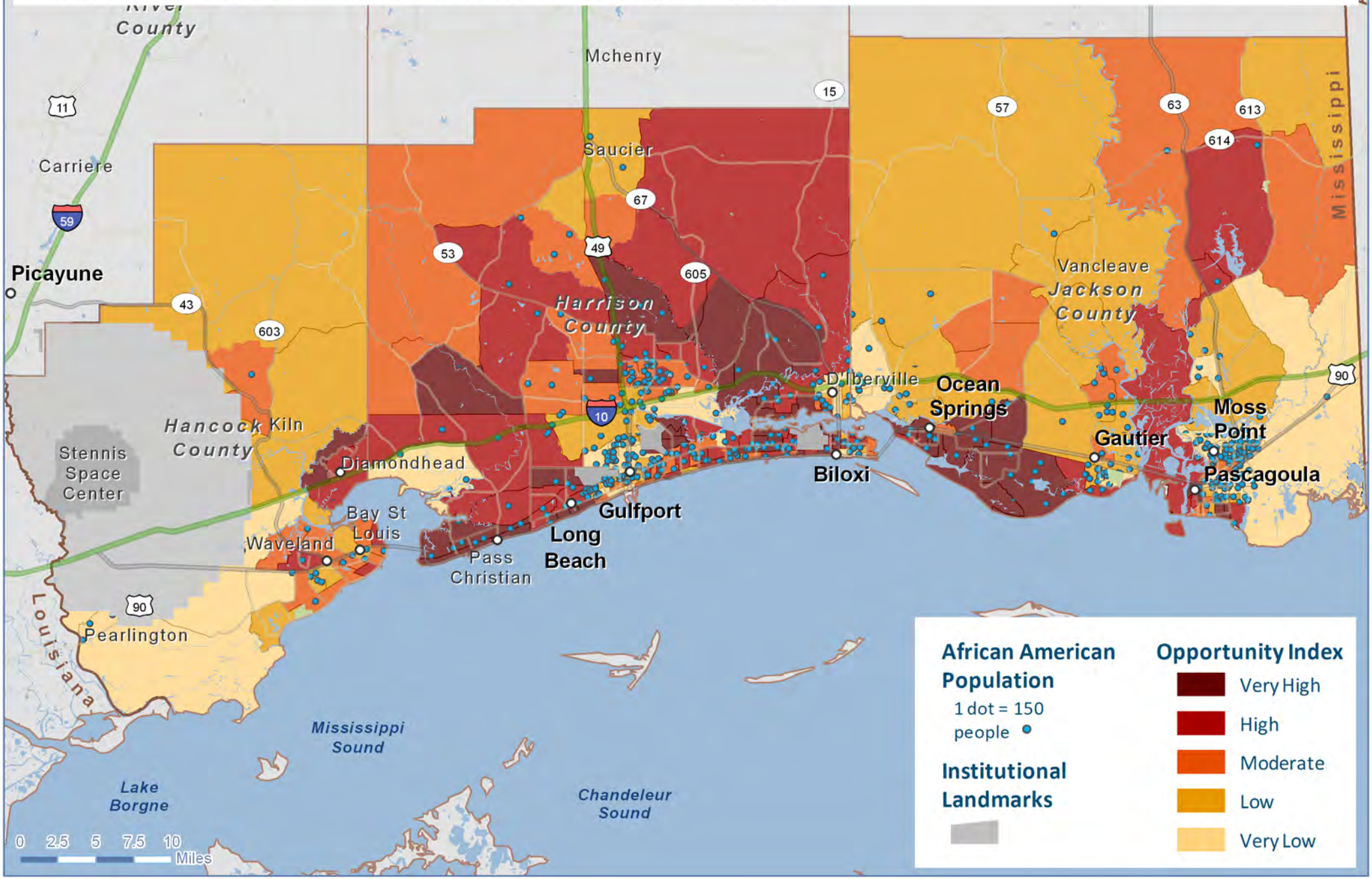

MAP 7.3: OPPORTUNITY & HISPANICS OR LATINOS

PLAN FOR OPPORTUNITY
Mississippi Gulf Coast Sustainable Communities Initiative

This map illustrates where the Hispanic or Latino population lives relative to opportunity within Mississippi's Gulf Coast region. Based on variables in public education, economics & mobility, socioeconomics, housing, and public health & security, the opportunity index provides a comparison of livability conditions across the region.

Source(s): Mississippi Dept. of Education, National Center for Education Statistics, American Community Survey, Gulf Regional Planning Commission, HUD User, Census 2010, ESRI Business Analyst, Environmental Protection Agency, The Ohio State University City and Regional Planning Program.

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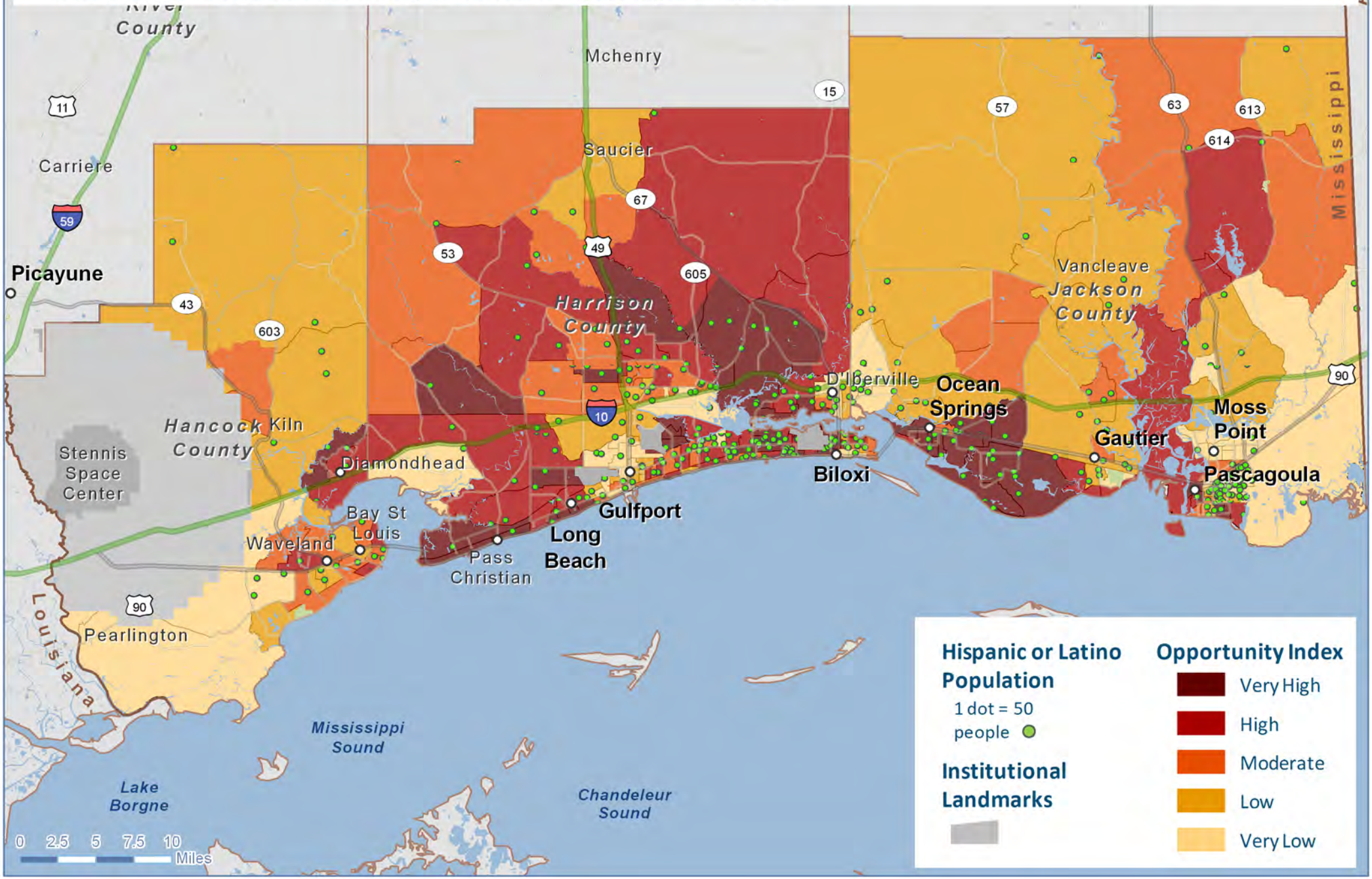

MAP 7.4: OPPORTUNITY & WHITES

PLAN FOR OPPORTUNITY
Mississippi Gulf Coast Sustainable Communities Initiative

This map illustrates where the White population lives relative to opportunity within Mississippi's Gulf Coast region. Based on variables in public education, economics & mobility, socioeconomics, housing, and public health & security, the opportunity index provides a comparison of livability conditions across the region.

Source(s): Mississippi Dept. of Education, National Center for Education Statistics, American Community Survey, Gulf Regional Planning Commission, HUD User, Census 2010, ESRI Business Analyst, Environmental Protection Agency, The Ohio State University City and Regional Planning Program.

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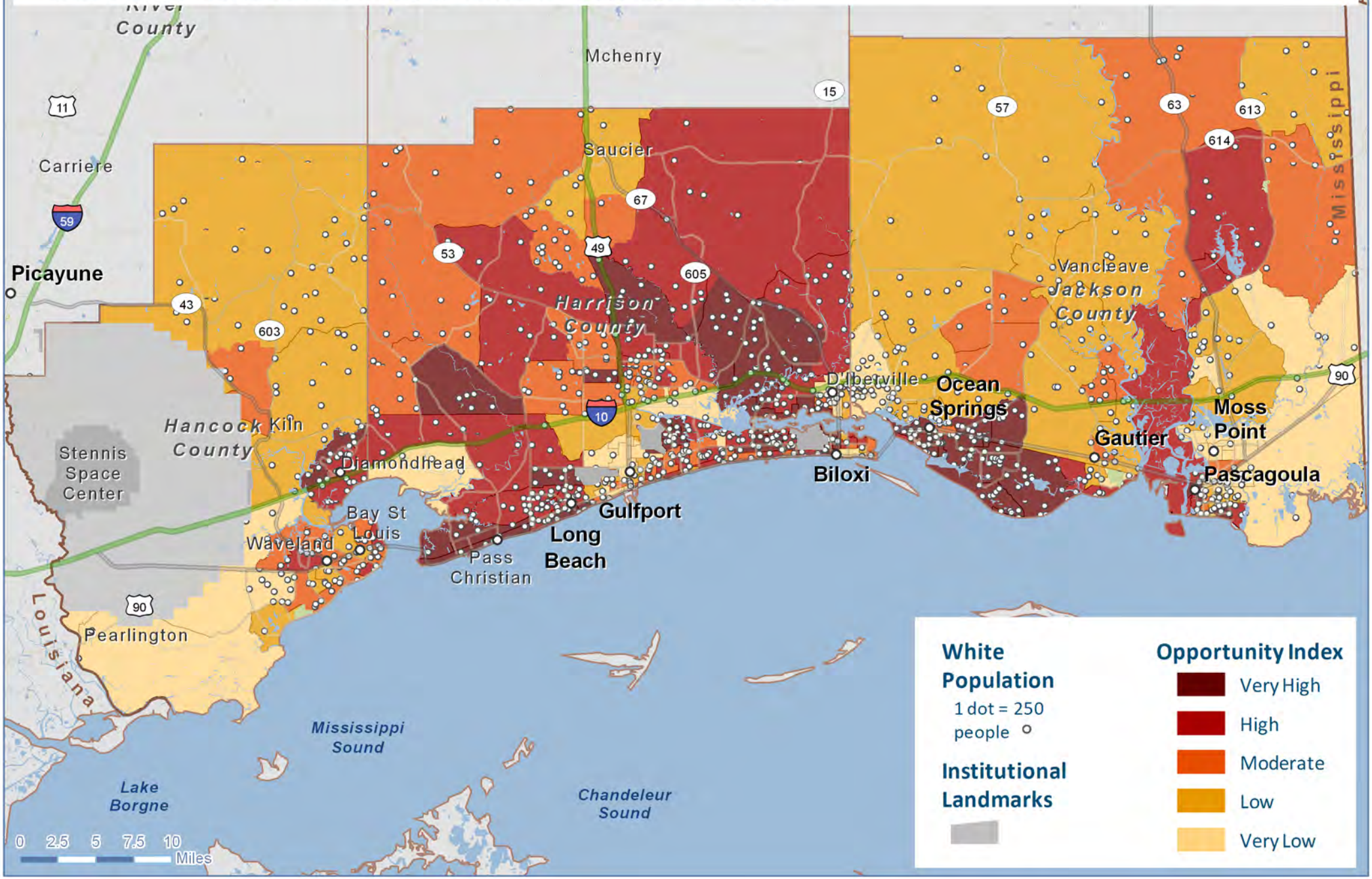

MAP 8.1: OPPORTUNITY & HUD VOUCHERS

PLAN FOR OPPORTUNITY
Mississippi Gulf Coast Sustainable Communities Initiative

This map illustrates where HUD housing vouchers are located relative to opportunity within Mississippi's Gulf Coast region. Based on variables in public education, economics & mobility, socioeconomics, housing, and public health & security, the opportunity index provides a comparison of livability conditions across the region.

Source(s): Mississippi Dept. of Education, National Center for Education Statistics, American Community Survey, Gulf Regional Planning Commission, HUD User, Census 2010, ESRI Business Analyst, Environmental Protection Agency, The Ohio State University City and Regional Planning Program.

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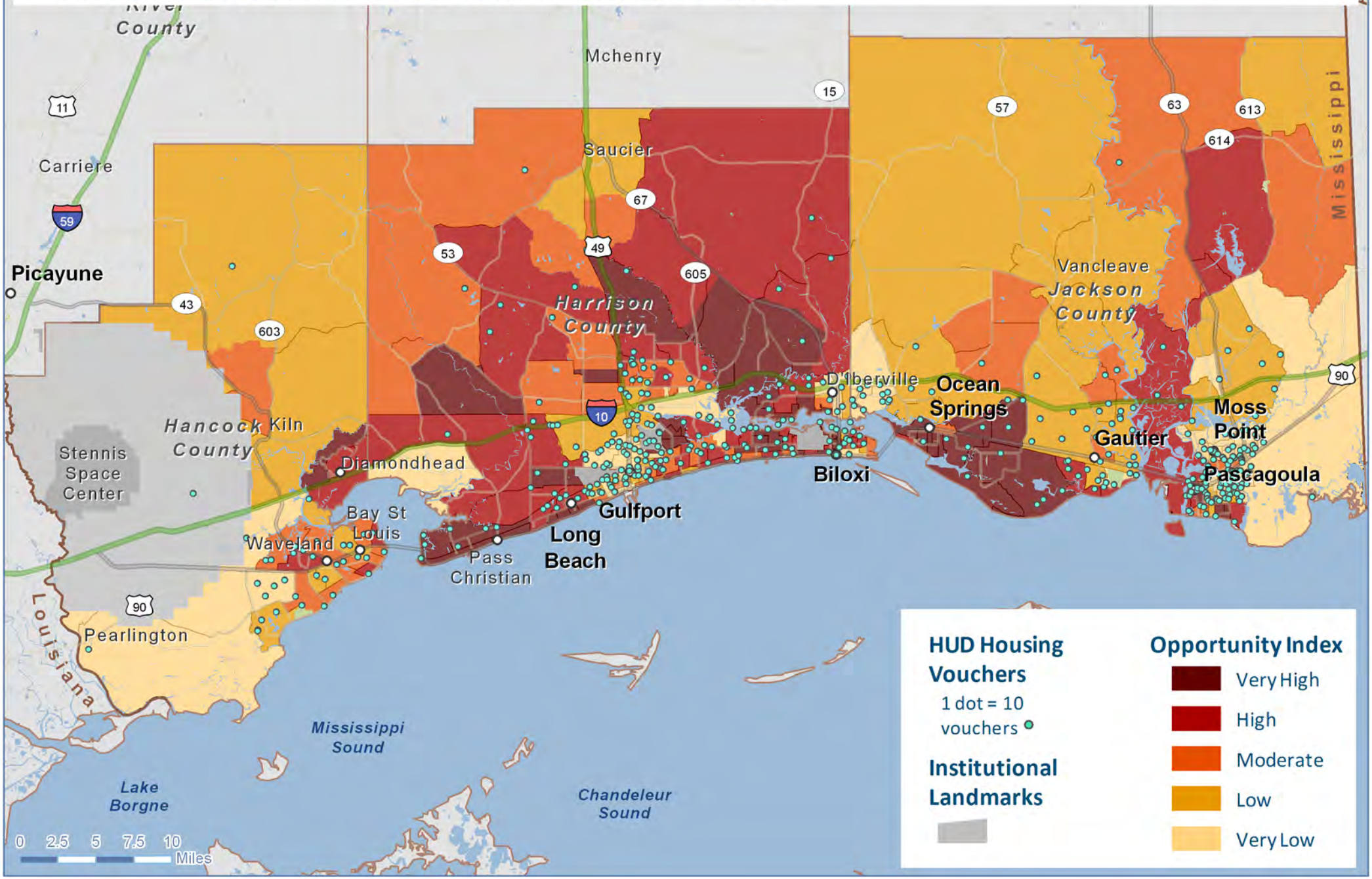

MAP 8.2: OPPORTUNITY & HUD DEVELOPMENTS

PLAN FOR OPPORTUNITY
Mississippi Gulf Coast Sustainable Communities Initiative

This map illustrates where HUD housing developments are located relative to opportunity within Mississippi's Gulf Coast region. Based on variables in public education, economics & mobility, socioeconomics, housing, and public health & security, the opportunity index provides a comparison of livability conditions across the region.

Source(s): Mississippi Dept. of Education, National Center for Education Statistics, American Community Survey, Gulf Regional Planning Commission, HUD User, Census 2010, ESRI Business Analyst, Environmental Protection Agency, The Ohio State University City and Regional Planning Program.

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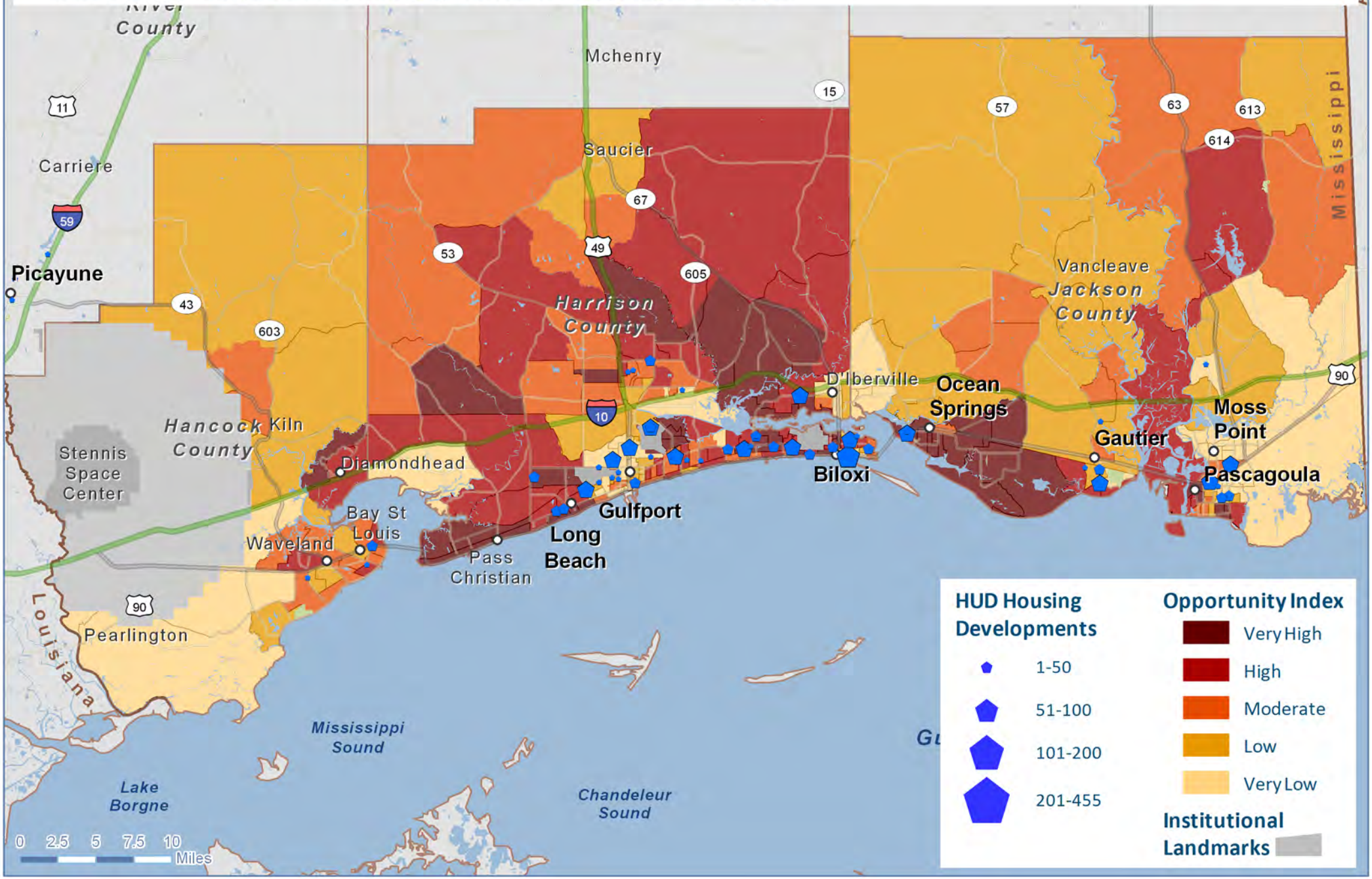
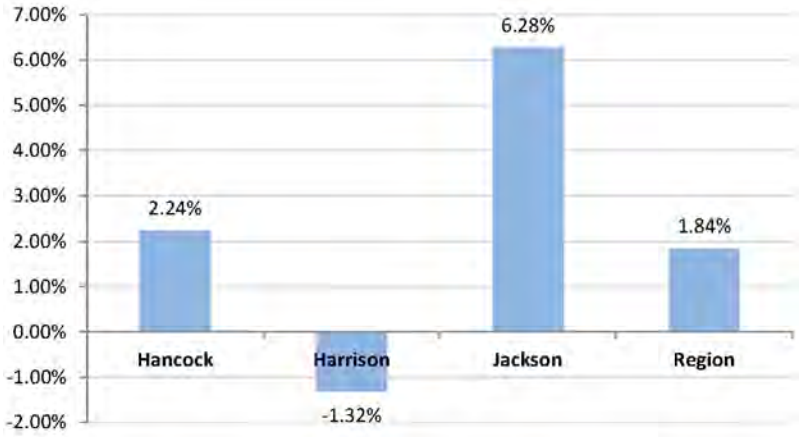


Chart 6. County & Region Population Change, 2000-2010

Source: *US Census*

Population trends provide valuable context for understanding regional opportunity.



in areas of low opportunity relative to other housing in the region. Among many things, living in low opportunity areas impedes these households from mobilizing out of poverty and into more sustainable employment and housing.

Population Trend Analysis: Where and How Population is Changing in the Region

The opportunity maps represent a snapshot in time, and provide helpful insight as to current conditions throughout the region. One way to contextualize these maps is to understand some of the trends from the past decade. Looking at where and how people and housing have been moving within the region since 2000 is a helpful supplement to the study of opportunity.

Chart 6 illustrates the percent change in population from 2000 to 2010 by county. It shows that while the region has experienced marginal growth in the period, Harrison County saw a slight decrease, while Jackson County grew by more than 6%.

Charts 7 and 8 show population change by race for each county. Chart 7 represents total population size and change, while Chart 8 illustrates the percent change of each population in the counties. Collectively these charts show how the region's growth is coming from Hispanics or Latinos as well as other non-White populations.

Providing further geographic context of these changes, Maps 9.1

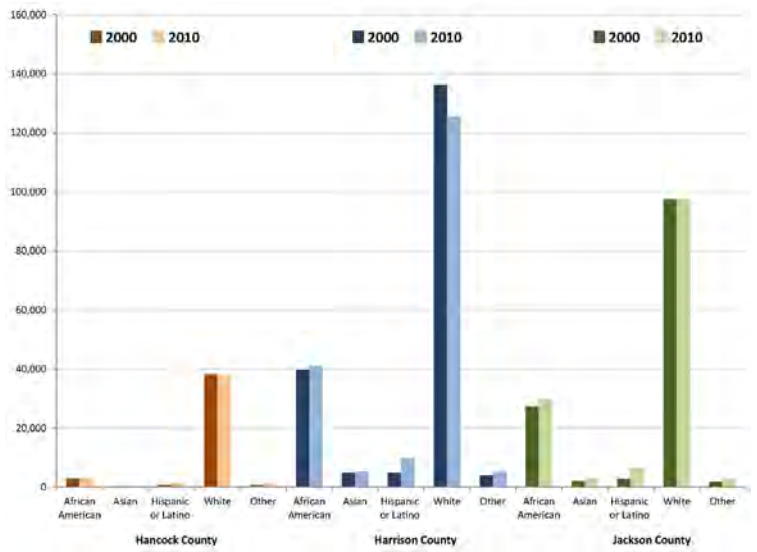


Chart 7. County Population Change by Race, 2000-2010

Source: *US Census*

Demographic trends add meaningful detail to trend analysis.

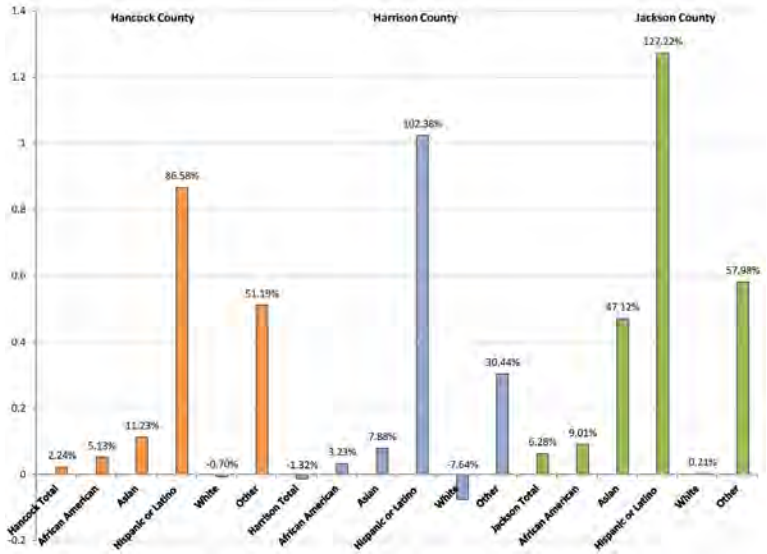


Chart 8. Percent Change in Population by County by Race, 2000-2010

Source: *US Census*

Looking at percent change in population can provide greater insight regarding regional trends.

and 9.2 show how population and housing units changed between 2000 and 2010, both illustrating a general pattern of movement inland from the coast.

Regional Opportunity and Trend Analysis: Interpreting the Maps and Facts

A careful look at the opportunity category maps reveals that different parts of the region may be strong in some areas while facing challenges in others. The comprehensive opportunity map reveals that while some parts of the region perform well across all or most categories, others perform poorly in most or all areas. Moderate opportunity parts of the region are those that may be strong in one or more areas, while facing challenges in others.

The overlay maps add to the understanding gained by the category and comprehensive opportunity maps by revealing that there are disparities in opportunity among geography and population. What this means is that strategies to expand opportunity must be developed for people, and places.

While the trends in population migration among the counties may only represent temporary patterns resulting from the storms of the previous decade, they nevertheless provide further context for the opportunity maps. The population growth in Hancock and Jackson counties is good for the region, and strong opportunity structures in the communities of these counties will be important in order to ensure that the growth truly benefits the region.

The trends reflected in the racial composition of the population change mimic national trends that do not appear to be fading. This means that as the population continues to grow, the health and vitality of the region will be increasingly tied to a more racially diverse population. Ensuring that everyone in the region, including these groups, has access to good housing, quality education, healthy food, and sustainable employment will be important for the future of the Gulf Coast. Considering what these patterns will look like in the coming decade may help shape strategic investments in opportunity for the people and places across the three counties.

Source: *Ohio State University City and Regional Planning*

Source: *Ohio State University City and Regional Planning*

Ensuring that regional growth areas are developing strong opportunity structures is an important part of sustainability.

MAP 9.1: Population Change & The Gulf Coast

This map represents percent change in total population between 2000 and 2010. Blue areas represent the largest population loss, while the dark orange areas represent the largest increases in population.

Source(s): Census 2000, 2010

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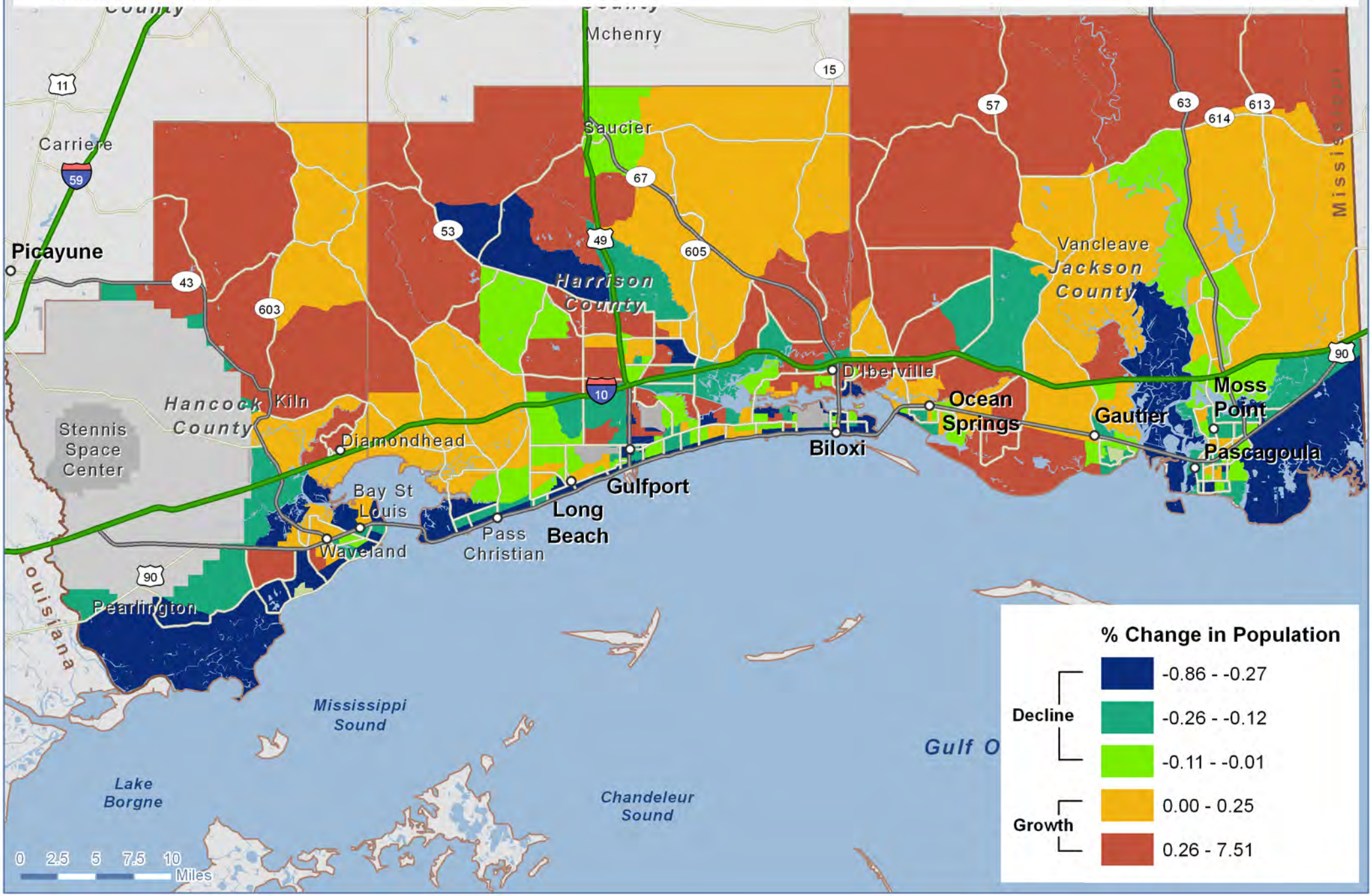

MAP 9.2: Housing Change & The Gulf Coast

This map represents percent change in total housing units between 2000 and 2010. Blue areas represent the largest decline in units, while the dark orange areas represent the largest increases in units.

Source(s): Census 2000, 2010

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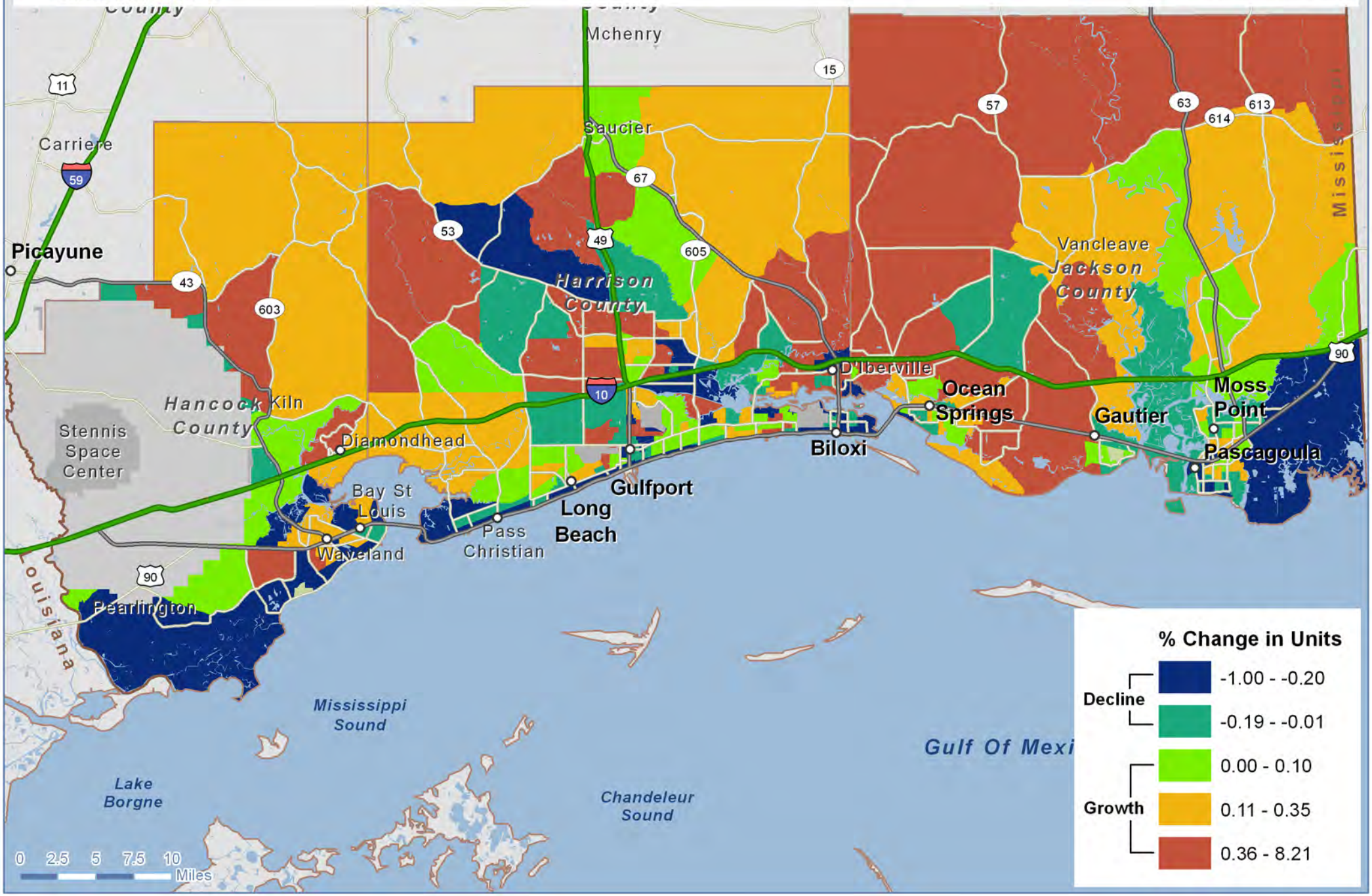

The purpose of the opportunity maps is to help regional leaders and change agents understand the link between opportunity and place so that they can make better, more informed decisions about how to improve the quality of life for individuals in the region.

Next Steps

I. Using The Maps

1. Convene, Converse, Collaborate

The maps now represent the careful thought and input that the Working Group has invested in order to develop this understanding of opportunity within the region. The key to making this process meaningful is to use the opportunity maps and framework to convene a broader discussion of opportunity in the region. Getting community leaders from across the region to begin a dialogue about expanding opportunity is an important first step. Taking this work to more local leaders, community organizations, employers, developers, and social service agencies will expand the conversation and help foster collaboration around building stronger opportunity structures across the region.

2. Using the Online Map to Explore and Learn

In addition to the maps presented throughout this report, an interactive web map has been developed, enabling viewers to further explore the opportunity geography of the region.[8] The web map features all indicator data, as well as a series of other layers such as transit coverage, school locations, and population overlays. Developed to make the maps more accessible and useful to a variety of stakeholders, this online version of the maps is a tool that will help foster collaborative learning and community planning.

3. Understand the Importance of Place, People, and Linkages to Opportunity

The idea behind the opportunity framework is to orient people around the notion that place and opportunity matter. We all know how important it is to possess skills and a strong work ethic in order to achieve successful life outcomes and it is also important for people to live in places that afford them opportunity and help them to thrive. The purpose of the opportunity maps is to help regional leaders and change agents understand the link between opportunity and place so that they can make better, more informed decisions about how to improve the quality of life for individuals in the region.

II. Develop Recommendations and Implement Strategies

Opportunity mapping is a valuable tool for sparking conversation among regional stakeholders and community leaders. Visualizing the geographic footprint of opportunity often brings clarity to a community's understanding of its strengths and challenges. Opportunity mapping is also a valuable resource for developing strategies for policy and investment. The maps don't provide answers to the region's challenges, but they do draw the region into a common effort to expand opportunity in a multitude of ways.

All regional stakeholders, from service providers, to business and government leaders, to community organizations and others are encouraged to use the comprehensive map and the category maps to consider how their initiatives can create opportunity for more of the region's population. The following three points provide examples of the kind of solutions that community leaders can develop when they engage in collaborative thought and discussion about improving the region together. Chart 9 provides a supplemental illustration of the following points.

1. Investing in Places

The maps and analysis point to some specific parts of the region which are low in opportunity. Identifying areas like these is one step towards developing solutions, but it takes further reflection

Investing in People

Investing in Places

Supporting Linkages

An Opportunity Oriented Model of Development: Focusing on *People, Places* and *Linkages* Through Model Policies

Investing in People	Investing in Places	Supporting Linkages
Asset & Wealth Building	Vacant Land Redevelopment, Land Banking & Blight Removal	Assuring Housing Mobility Through Regional Housing Strategies
K 12 School Reform	Community Land Trusts & Housing Stabilization	Supporting Fair Housing Enforcement
Magnet Schools	Community Development & Infrastructure Investments	Supporting Inclusionary Housing Development
Civic & Youth Engagement	Coordinated Service Delivery for Service Providers & Organizations	Developing Transit Infrastructure
Mentoring & Leadership Training	Foreclosure Prevention	Pedestrian & Bicycle Infrastructure Investments
Job Training & Labor Force Development	Small Business Development & Business Incubation	Supporting Strong Professional & Business Networks
Reentry Programs for Ex Offenders	Community Health Investments & Fresh Food Initiatives	Transit Oriented Development
Early Childhood Care & Education Services	Improving Infrastructure and Open Space	Bus Rapid Transit Systems
Family Supportive Services	Community Crime Prevention & Supporting Safescapes	Developing Regional Greenways & Non Motorized Paths

Chart 9. Source: *The Kirwan Institute for the Study of Race and Ethnicity*

Investing in people and places while also supporting linkages are key strategies to providing more opportunity for everyone in the region.

to develop appropriate solutions. For example, a number of communities south of Interstate 10 face challenging levels of opportunity, while nearly half of the region's more rural residents live in areas of low opportunity as well. Place-based strategies may be more appropriate for some of these communities than others. In more urban environments, reinvesting in aging infrastructure and leveraging existing assets is often a model approach. In rural areas however, creating and supporting linkages to health care, education, and workforce development may be more appropriate. Additionally, since rural areas inherently have less physical infrastructure, investments in civic infrastructure and entrepreneurship are critical to expanding opportunity for these communities.[9]

2. Investing in People

The analysis of population and the opportunity geography reveals that some people face greater challenges than others. For instance, the overlay analysis of population and opportunity illustrates that while 38% of the total population lives in low opportunity areas, 56% of the Black or African American population lives in areas of low opportunity. Programs and policies that invest in the region's human capital are an important part of expanding opportunity. Supporting small business development, worker training, and early childhood development are examples of such efforts which leverage the asset that the people of the Gulf Coast represent.

3. Supporting Linkages

Connecting people to resources and places of opportunity is what linkages are all about. A powerful example of this was suggested by Jim Foster, President of Gulf Coast Heritage Trails Partnership, after seeing and reflecting on the final opportunity maps. Upon realizing that parts of the region suffer from little to no transit service, as well as limited automobile access, Jim recommended that these factors be considered as future investments in the regional trail network are planned. Expansion of these trails could help connect communities to better employment opportunities, provide recreational amenities to communities that have few, and can help bridge cultural and social gaps as well. As more community leaders reflect on the implications of the opportunity maps, other ideas for transformational linkages will continue to emerge.

III. Continuing the Regional Dialogue About Opportunity and Monitor Progress

Now that the maps are complete, it is important for regional stakeholders to begin viewing them, talking about them, and using them to engage their communities in the discussion about opportunity. As the region begins to consider together how to improve opportunity for all communities, the results of such collaboration will begin to shape strategies and approaches.

Once recommendations have been developed and strategies have begun to be implemented, it is critical to identify ways to monitor progress and continue to make strides to expand opportunity throughout the region. Whether a strategy is a place based approach or a mobility-based one, measuring impact is an essential part of continually improving policies and programs.

Endnotes

[1]For more details on Opportunity Mapping methodology, see Appendix C of this report.

[2]Eberts, Randall, George Erickcek and Jack Kleinhenz. 2006. "Dashboard Indicators for the Northeast Ohio Economy: Prepared for the Fund for Our Economic Future." in Working Paper 06-05. Cleveland, OH: Federal Reserve Bank of Cleveland.

[3]See Opportunity Mapping literature review in Appendix A

[4]See Opportunity Mapping methodology details in Appendix C

[5]http://blog.gulflive.com/mississippi-press-news/2010/08/property_insurance_woes_stifle.html

[6]http://www.fema.gov/national-flood-insurance-program/community-rating-system

[7]See Opportunity Mapping literature review in Appendix A

[8]http://www.arcgis.com/explorer/?open=b69dc9e0aa2e4d7186737ff9cf6a1fec&extent= -9986073.92935046,3513815.1727028,-9837787.06771017,3608811.4434411

[9]Beaulieu, Lionel. (2002). Creating Vibrant Communities & Economies in Rural America. Southern Rural Development Center.

Appendix

Appendix A: Opportunity Mapping Research Literature

Education

School Proficiency Index

(Lee, J., Fox, J., & Brown, A. L. (2011). Content analysis of children's mathematics proficiency. Education and Urban Society, 43(5), 627-341. doi: 10.1177/0013124510380906

Rose, H., & Betts, J. R. (2004). The effect of high school courses on earnings. The Review of Economics and Statistics, 96(2), 497-513. doi: 10.1162/003465304323031076

Hock, M. F., & Deshler, D. D. (2003). "No Child" leaves behind teen reading proficiency. Educational Digest, 69(4), 27.

Nye, B., Hedges, L. V., & Konstantopoulos, S. (2001). The long-term effects of small classes in early grades: Lasting benefits in mathematics achievement at grade 9. Journal of Experimental Education, 69(3), 245-257

Graduation Rate

J. C. Day & E. C. Newburger, The big payoff: Educational attainment and synthetic estimates of work-life warnings (2002). http://www.census.gov/prod/2002pubs/p23-210.pdf

Gary Orfield and John T. Yun, Deepening segregation in American public schools (1997), Harvard Project on School Desegregation. Available on-line at http://www.civilrightsproject.harvard.edu/research/deseg/Resegregation_American_Schools99.pdf

Christenson, S. L., & Thurlow, M. L. (2004). School dropouts: Prevention considerations, interventions, and challenges. Current Directions in Psychological Science, 13(1), 36-39

Student/Teacher Ratio

Education Indicators: An international perspective, National Center for Education Statistics, http://nces.ed.gov/pubs/eiip/eiipid39.aspNumber of students per teacher.

Krueger, A. B., & Whitmore, D. M. (2001, March). Would smaller classes help close the black-white achievement gap? Paper presented at Closing the gap: Promising approaches to reducing the achievement gap.

Zahorik, J. A. (1999). Reducing class size leads to individualized instruction. Educational Leadership, 57(1), 50-53

Nye, B., Hedges, L. V., & Konstantopoulos, S. (2001). The long-term effects of small classes in early grades: Lasting benefits in mathematics achievement at grade 9. Journal of Experimental Education, 69(3), 245-257

Student Poverty

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Appendix B: Supplemental Maps

Map 6B was developed using natural neighbor statistical interpolation of the region's block group centroids. This map is based on the same data upon which the comprehensive opportunity map (Map 6) in the report was derived, but the interpolation of point data helps to illustrate regional opportunity with more nuance and gradation. This map provides a helpful supplement, especially in terms of understanding opportunity in the rural parts of the region.

The other two maps in this appendix were developed in order to provide further insight into the differences between urban and rural areas regarding opportunity. Each map was generated by calculating the opportunity index based solely on the respective area. This means that the rural opportunity map only compares the rural block groups with one another, while the urban opportunity map only compares the urban block groups with one another. The maps underscore which areas performed highest in the index in each part of the region.

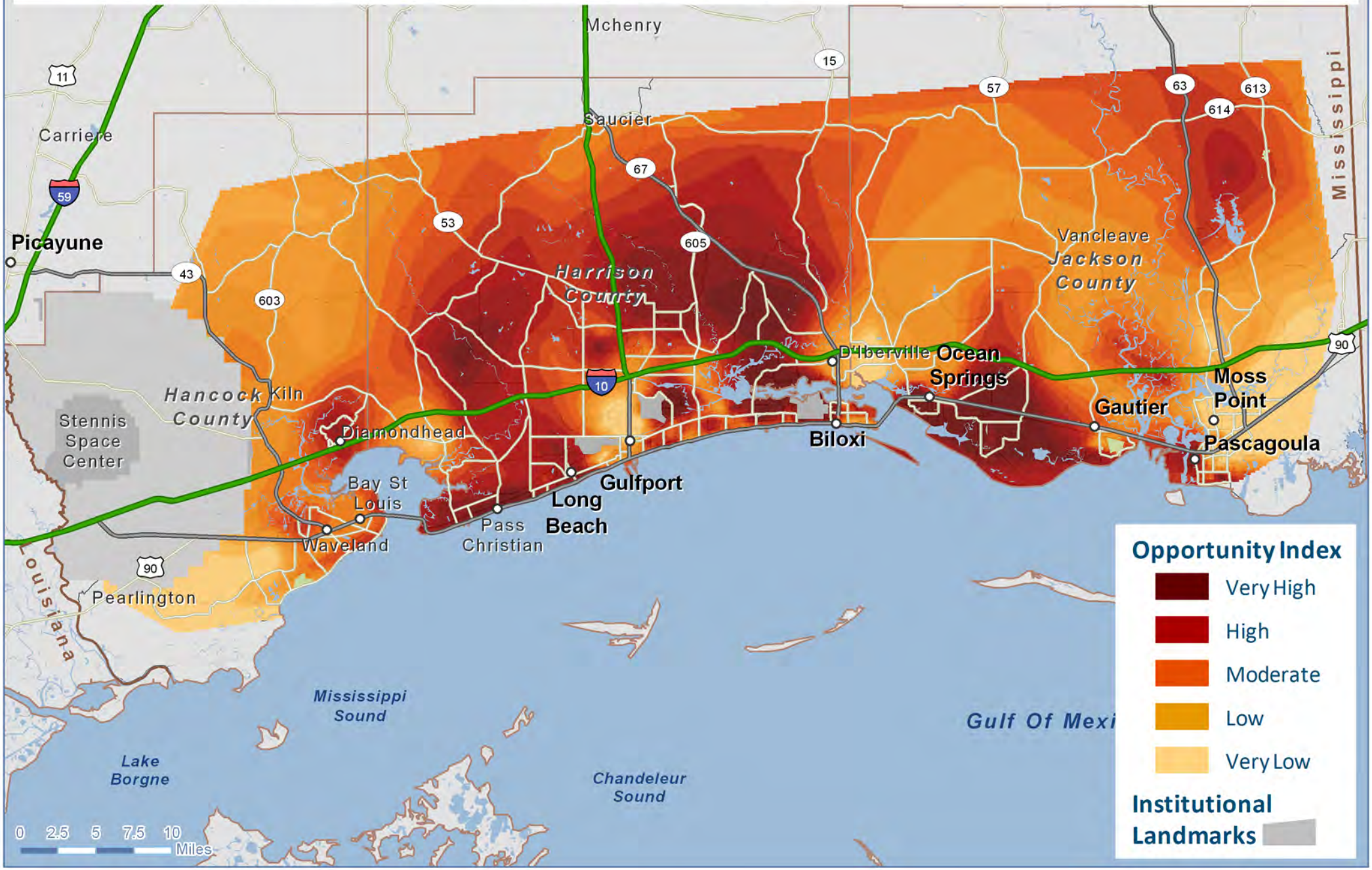
MAP 6.B: OPPORTUNITY & THE GULF COAST

PLAN FOR OPPORTUNITY
Mississippi Gulf Coast Sustainable Communities Initiative

This map illustrates a place-based assessment of neighbohood conditions, and shows where people can thrive and where challenges exist. Representing a relative measure of opportunity within Mississippi's Gulf Coast region, the map is based on variables in public education, economics & mobility, socioeconomics, housing, and public health & security, the opportunity index provides a comparison of conditions across the region.

Source(s): Mississippi Dept. of Education, National Center for Education Statistics, American Community Survey, Gulf Regional Planning Commission, HUD User, Census 2010, ESRI Business Analyst, Environmental Protection Agency, The Ohio State University City and Regional Planning Program.

Kirwan Institute
Many Differences **One Destiny**



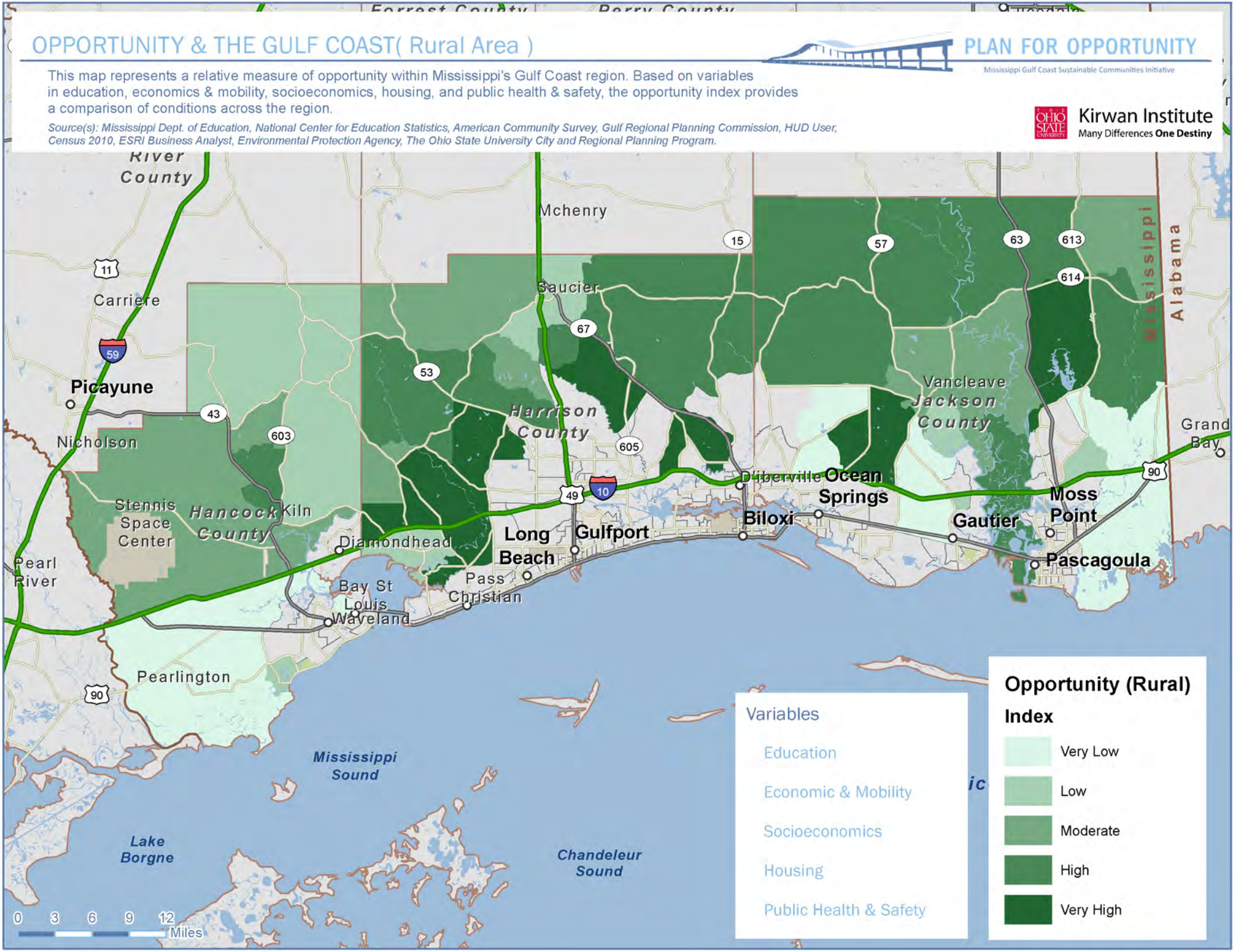
OPPORTUNITY & THE GULF COAST(Rural Area)

PLAN FOR OPPORTUNITY
Mississippi Gulf Coast Sustainable Communities Initiative

This map represents a relative measure of opportunity within Mississippi's Gulf Coast region. Based on variables in education, economics & mobility, socioeconomics, housing, and public health & safety, the opportunity index provides a comparison of conditions across the region.

Source(s): Mississippi Dept. of Education, National Center for Education Statistics, American Community Survey, Gulf Regional Planning Commission, HUD User, Census 2010, ESRI Business Analyst, Environmental Protection Agency, The Ohio State University City and Regional Planning Program.

Kirwan Institute
Many Differences **One Destiny**



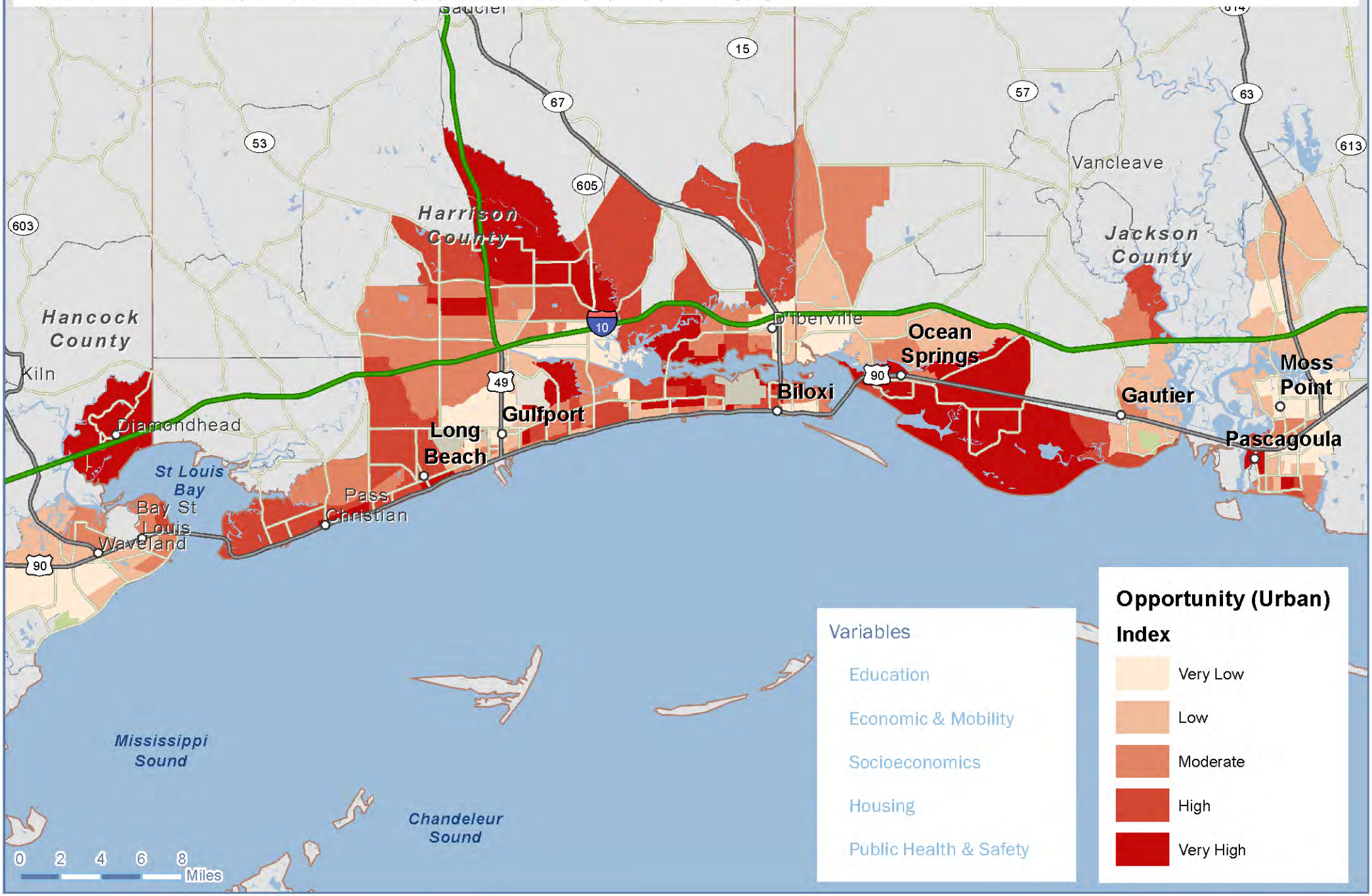
OPPORTUNITY & THE GULF COAST(Urban Area)

PLAN FOR OPPORTUNITY
Mississippi Gulf Coast: Sustainable Communities Initiative

This map represents a relative measure of opportunity within Mississippi's Gulf Coast region. Based on variables in education, economics & mobility, socioeconomics, housing, and public health & safety, the opportunity index provides a comparison of conditions across the region.

Source(s): Mississippi Dept. of Education, National Center for Education Statistics, American Community Survey, Gulf Regional Planning Commission, HUD User, Census 2010, ESRI Business Analyst, Environmental Protection Agency, The Ohio State University City and Regional Planning Program.

Kirwan Institute
Many Differences **One Destiny**



Appendix C: Data and Methodology Details

Public Eduation

Data Item	Description	Source	Dates
QDI School Proficiency Index	Index of school proficiency (district level data)	Mississippi Department of Education	2010
High School Graduation Rate	Percentage of seniors graduating from nearest high school	Mississippi Department of Education	2010
Student/Teacher Ratio	Number of students per teacher	National Center for Education Statistics (NCES)	2010
Student Poverty	Percentage of students receiving free or reduced price lunch	National Center for Education Statistics (NCES)	2010

Housing

Data Item	Description	Source	Dates
Foreclosures	Number of foreclosed mortgages	HUD User	2004-2006
Residential Vacancy Rate	Percent of housing units vacant	Census	2010
Housing Cost Burden	Proportion of residents "cpst burdened" (paying more than 30% of their income for housing)	American Community Survey	2006-2010
Housing Insurance Cost	Annual insurance cost based ib MSWUA & FPC (Fire Protection Class)	Mississippi Windstorm Underwriting Association	2008

Public Health & Security

Data Item	Description	Source	Dates
Proximity to Release of Toxic Substances	Pounds released within block group	Environmental Protection Agency (EPA) Toxic Release Inventory	2009
Proximity to Healthy Food	RFEI (%) [Total number of bad food sources - fast food rest., convenience store and liquor store]	City and Regional Planning, The Ohio State University	2011
Proximity to Parks and Open Spaces	Distance to nearest recreation beach	ESRI Business Analyst	2010
	Recreation points of interest within 5 miles of centroid	Gulf Regional Planning Commission	2012
Fire Hazard Index	Fire Class	Mississippi Windstorm Underwriting Association	2011
CRS Premium Discount Rate	Premium discount for CRS classes 1-10 within different flood zones	FEMA	2011

Economics and Mobility

Data Item	Description	Source	Dates
Access to Transit	Distance from block group centroid to nearest transit service route/line	Gulf Regional Planning Commission, CTA	2011
Access to Automobile	Percent with no car at home	American Community Survey	2006-2010
Job Access	Tract-level job counts, job worker counts, origin-destination flows, aggregate commute time, average commute time by mode	HUD Opportunity Index (LEHD, ACS, CTTP)	2000, 2005-2009, 2009
Improvement Value	Average improvement value of parcel data	Parcel Data	2012

Socioeconomic

Data Item	Description	Source	Dates
Poverty	Percent of population in poverty	American Community Survey	2006-2010
Unemployment Rates	Percent of population unemployed	American Community Survey	2006-2010
Public Assistance	Percent of population receiving public assistance	American Community Survey	2006-2010
Educational Attainment	Percent of adult 25 and older who have received an associate's degree or higher	American Community Survey	2006-2010

Overlay

Data Item	Description	Source	Dates
Race	Population; Asian, Black, Hispanic, White, Other	Census	2010
Subsidized Housing Units	Number of subsidized units	HUD User	2009
Sub-Prime Loans	Number of high cost HMDA loans	HUD User	2004-2006
Senior	Population over 65	Census	2010
Under 18 years	Population under 18	Census	2010

Summary of Methodology and Data Notes

The following presents the methodology and indicators for the Mississippi gulf region area opportunity analysis. If you plan to map the regional opportunity index and are a more advanced technical user, the Mississippi Gulf Coast Opportunity data is available at www.gis.kirwaninstitute.org/mississippi-gulf-coast/.

Spatial distribution of opportunity and subsequent analysis were based on a number of indicators categorized under five subareas of opportunity — public education, economics and mobility, housing, socioeconomics, and public health and security — comprising 20 indicators for which data were collected from public (e.g., U.S. Census, Department of Education, Environmental Protection Agency) and private (e.g., ESRI) data sources. The analysis was conducted using census tracts as geographic representations of neighborhoods. The comprehensive opportunity map represents a combined score based on these five categories.

To map opportunity in the region, we used variables that are indicative of high and low opportunity. A central requirement of indicator selection is a clear connection between the indicator and opportunity. Opportunity is defined as environmental conditions or resources that are conducive to healthier, vibrant communities and are more likely to be conducive to helping residents in a community succeed. Indicators could either be impediments to opportunity (which are analyzed as negative neighborhood factors, such as high neighborhood poverty) or conduits to opportunity (which are analyzed as positive factors, such as an abundance of jobs). High opportunity indicators include high-performing schools, the availability of sustainable employment, stable neighborhoods and a safe environment.

A. Public Education

These indicators represent the quality of local schools and educational resources as well as student poverty rates. This table illustrates the description, source, and date(s) for each indicator.

B. Economics & Mobility

These indicators represent access to economic opportunity. Included in these indicators is access to transportation and jobs as well as parcel improvement data. This table illustrates the description, source, and date(s) for each indicator.

C. Housing

These indicators represent the health of neighborhoods and their housing markets. This table illustrates the description, source, and date(s) for each indicator.

D. Socioeconomics

These indicators represent socioeconomic health and access to socioeconomic opportunity. All data was collected from the American Community Survey. This table illustrates the description, source, and date(s) for each indicator.

E. Public Health & Security

These indicators represent proximity to park/open space/recreation area and healthy food, as well as amount of toxic release emitted from toxic waste sites. Also included are indicators representing fire hazard and community emergency response rating. This table illustrates the description, source, and date(s) for each indicator.

Calculating the Opportunity Index

The various opportunity indicators were analyzed relative to the other census tracts within the region by standardizing through the use of "Z-scores." A Z-score is a statistical measure that quantifies the distance (measured in standard deviations) a data point is from the mean of a data set. The use of Z-scores allows data for a census tract to be measured based on its relative distance from the regional average. The Z-score method allows indicators to be either "negative" or "positive" in relation to opportunity. For example, proximity to toxic waste release sites is a negative indicator of opportunity. The final opportunity index for each census tract is based on the average Z-score for all indicators by category. The corresponding level of opportunity (very low, low, moderate, high, very high) is determined by sorting all census tracts into quintiles based on their opportunity index scores. Thus, the census tracts identified as "very high" opportunity represent the top 20% of scores among census tracts. Conversely, census tracts identified as "very low" opportunity represent the lowest-scoring 20% of census tracts.

Example Z-Score Calculations

The formula for the Z-scores is included in Table 7 ("x" — distribution mean/ distribution standard deviation). In the case of negative indicators, such as

FIPS	Total Labor Force	Unemployed	Z-Score
28001000100	2352	237	((D2-MEAN)/STDEV)*-1
28001000200	2135	259	0.121311475
28001000300	1013	261	0.257650543
28001000400	1032	164	0.158914729
28001000500	1599	185	0.115697311

poverty or unemployment, this formula must be multiplied by "-1" in order to make all indicator scores compatible. The following table shows an example of unemployment data and Z-score calculations for a subset of tracts. Using the full distribution mean of 10.2432 and standard deviation of 7.6887, one can see how the Z-score for each tract is calculated.

Z-scores are helpful in the interpretation of raw score performance, since they take into account both the mean of the distribution and the amount of variability (or the standard deviation). The Z-score indicates how far the raw score is from the mean, either above or below it, in standard deviation units. A positive Z-score is always above the mean (upper 50%). A negative Z-score is always below the mean (lower 50%) and a Z-score of zero is always exactly on the mean or equal to 50% of the cases. Thus, when trying to understand the overall comparative performance of different groups with respect to a certain variable, we can assess how a certain group (of individuals, tracts, etc.) is performing with respect to the mean performance for the certain variable. No weighting was applied to the various indicators; all indicators were treated as equal in importance.

Indicator Metadata

Note: In order to map access to opportunity at the Census block group level, all indicators have either been collected in or converted to the 2010 block boundaries and FIPS codes. For tract-based data from the American Community Survey (ACS) or different boundaries from 2010 block boundaries , data was translated to its 2010 equivalency through the parent-child relationship of the tract names, and the areal proportion of the 2010 children to the 2000 parent.

For data that was originally collected at another geography, (i.e. postal address, traffic analysis zone, or some other coverage) processes were employed to assign a value to each of the 2010 blocks based on the raw data, and a description of these is included in the methodology section of each of the following indicator profiles.

Public Education Indicators

QDI school proficiency index

Description: The Quality of Distribution Index (QDI) represents an overall measure of student performance on statewide assessments in a given school year for a school. The QDI is based on a relatively simple concept – if more students score in the higher proficiency levels on the test, the distribution of scores is more positive, if more students score in the lower proficiency levels, the distribution is more negative. If 100% of a school's students scored at the Advanced level, the school's QDI would be 300, the maximum QDI possible.

The formula for calculating QDI is: QDI = (1 x % of students scoring Basic) + (2 x % of students scoring Proficient) + (3 x % of students scoring Advanced)

Field Code: EDU1

Data Source: Mississippi Department of Education

Geography: Point-based, School locations

Date: 2010-2011 school year

Methodology: Each tract was assigned the average of the reading proficiency scores of the three elementary schools nearest the block centroid. This process also considered school district boundaries, so as to assign data to blocks only according to the district in which the block resides.

High School graduation rate

Description: The percentage of students who graduated from high school on time

Field Code: EDU2

Data Source: Mississippi Department of Education

Geography: Point-based, School locations

Date: 2010-2011 school year

Methodology: Each tract was assigned the graduation rate of the three high schools nearest the block centroid. This process also considered school district boundaries, so as to assign data to blocks only according to the district in which the block resides.

Student/teacher ratio

Description: Number of students per teacher

Field Code: EDU3

Data Source: National Center for Education Statistics (NCES)

Geography: Point-based, School locations

Date: 2010-2011 school year

Methodology: Each tract was assigned the Student/teacher ratio of the schools nearest the block centroid. This process also considered school district boundaries, so as to assign data to blocks only according to the district in which the block resides.

Student Poverty Rates

Description: The percentage of students receiving free or reduced price lunch

Field Code: EDU4

Data Source: National Center for Education Statistics (NCES)

Geography: Point-based, School locations

Date: 2010-2011 school year

Methodology: Each tract was assigned the student poverty rate of the three elementary schools nearest the block centroid. This process also considered school district boundaries, so as to assign data to block only according to the district in which the block resides.

Economics & Mobility Indicators

Access to Transit

Description: Distance from block group centroid to nearest transit service route/line

Field Code: MT1

Data Source: Gulf Regional Planning Commission, CTA

Geography: Transit service route/line

Date: 2011

Methodology: By measuring the distance from transit service route/line to block group centroid, data is aggregate.

Access to Automobile

Description: Percentage of household with no car at home

Field Code: MT2

Data Source: American Community Survey

Geography: Census Tract

Date: 2006-2010 5-year estimates

Methodology: For the 2010 tracts data was translated to its 2010 blocks equivalency through the areal proportion of the 2010 children to the 2000 parent.

Job Access

Description: Tract-level job counts, job worker counts, origin-destination flows, aggregate commute time, average commute time by mode

Field Code: MT3

Data Source: HUD Opportunity Index (LEHD, ACS, CTTP)

Geography: Census Tract

Date: 2000, 2005-2009, 2009

Methodology: Data was translated to its 2010 equivalency through the areal proportion of the 2010 children to the 2000 parent.

Average Improvement Value

Description: Average improvement value of parcel data

Field Code: MT4

Data Source: Parcel data

Geography: Parcel

Date: 2012

Methodology: aggregate data based on the areal proportion of the 2010 block boundaries

Housing Indicators

Foreclosures

Description: Number of foreclosed mortgages

Field Code: HS1

Data Source: HUD User

Geography: Block Group

Date: 2010

Methodology: none

Residential Vacancy Rate

Description: Percentage of housing vacant units vacant

Field Code: HS2

Data Source: Census

Geography: Block Group

Date: 2010

Methodology: none

Housing Cost Burden

Description: Proportion of residents "cost burdened" (paying more than 30% of their income for housing)

Field Code: HS3

Data Source: American Community Survey

Geography: Block Group

Date: 2010

Methodology: none

Housing Insurance Costs

Description: Annual insurance cost based on MSWUA & FPC (Fire Protection Class)

Field Code: HS4

Data Source: Mississippi Windstorm Underwriting Association

Geography: boundary of annual insurance cost

Date: 2008

Methodology: aggregate data based on the areal proportion of the 2010 block boundaries

Socioeconomics Indicators

Poverty Rate

Description: Percentage of people below poverty for whom the poverty level has been determined by block groups

Field Code: SC1

Data Source: American Community Survey (ACS)

Geography: Block Group

Date: 2006-2010 5-year estimates

Methodology: None

Unemployment Rates

Description: The percentage of workforce unemployed

Field Code: SC2

Data Source: American Community Survey (ACS)

Geography: Block Group

Date: 2006-2010 5-year estimates

Methodology: None

Public Assistance

Description: The percentage of population receiving public assistance

Field Code: SC3

Data Source: American Community Survey (ACS)

Geography: Block Group

Date: 2006-2010 5-year estimates

Methodology: None

Educational Attainment

Description: The percentage of adults with a bachelor's degree or more

Field Code: SC4

Data Source: American Community Survey (ACS)

Geography: Block Group

Date: 2006-2010 5-year estimates

Methodology: none

Public Health & Security Indicators

Proximity to Release of Toxic Substances

Description: Pounds released within block group

Field Code: PHS1

Data Source: Environmental Protection Agency (EPA) Toxic Release Inventory

Geography: Point, Locations of Toxic Release Sites

Date: 2009

Methodology: The indicator is based on the proportion of each site's toxic release within a 2-mile area. Blocks received a value if they were within 2 miles of at least one toxic release site.

Proximity to Healthy Food

Description: RFEI (%) [Total number of bad food sources - fast food rest., convenince store and liquor store]

Field Code: PHS2

Data Source: City and Regional Planning, The Ohio State University

Geography: Point, Locations of food stores

Date: 2011

Methodology:

Proximity to Parks and Open Spaces

Description: average of the z-score of two indicators 1) Distance to nearest recreation beach and, 2) Recreation points of interest within 5 miles of centroid

Field Code: PHS3

Data Source: ESRI Business Analyst/ Gulf Regional Planning Commission

Geography: recreation beach line, recreation point

Date: 2010

Methodology: 1) By measuring the distance from recreation beach line to block group centroid, data is aggregate. 2) The indicator is based on the count of each recreation sites within a 5-mile area. Blocks

Fire Hazard Index

Description: Fire Class

Field Code: PHS4

Data Source: Mississippi Windstorm Underwriting Association

Geography: Fire Class Boundary

Date: 2011

Methodology: Data is aggregated based on block group boundary through the areal proportion of the 2010 block groups

CRS Premium Discount Rate

Description: Premium discount for CRS classes 1-10 within different flood zones

Field Code: PHS5

Data Source: FEMA

Geography: Jurisdiction boundary/ county boundary

Date: 2011

Methodology: Data is aggregated based on block group boundary through the areal proportion of the 2010 block groups

Overlay Data

Race

Description: The population of Whites, Blacks, Hispanics, Asians, and Native Americans

Field Code: OVLY1

Data Source: U.S. Census (SF1)

Geography: Census Tract

Date: 2010

Methodology: none

Subsidized Housing

Description: The number of housing vouchers and public housing units

Field Code: OVLY2

Data Source: HUD User

Geography: Census Tract

Date: 2008

Methodology: none

Senior (above 65 year)

Description: The population of senior

Field Code: OVLY5

Data Source: U.S. Census (SF1)

Geography: Census Tract

Date: 2010

Methodology: none

Youth Population (under 18year)

Description: The population of youth

Field Code: OVLY6

Data Source: U.S. Census (SF1)

Geography: Census Tract

Date: 2010

Methodology: none

HUD development

Description: the location of HUD development

Field Code: OVLY7

Data Source: HUD User

Geography: pointed, development location

Date: 2010

Methodology: none

Appendix D: Online Opportunity Map Tutorial

This map was designed to be a tool to help local residents and community development officials better understand the region so as to make informed and strategic decisions about the future of their communities. The following is an introductory tutorial of the online map and how to maximize its capability to meet you or your organization's interest. If you are interested in saving and customizing a version of this map for your own particular community development work, visit www.arcgis.com to learn how to create a free online mapping account through ESRI.

Opening the map: Open the map using the ArcGIS.com map viewer.

Select the 'Open' button, located beneath the map icon, then select 'Open in ArcGIS.com map viewer'

Navigating the map: Start with the three icons in the top left-hand corner of the screen, located beneath the 'Details' button. The center icon shows the layer contents of the map; layers can be turned on and off by checking the boxes to the left of the layer names. The icon on the right shows the map legend; this provides a graphic representation of the layers being displayed.

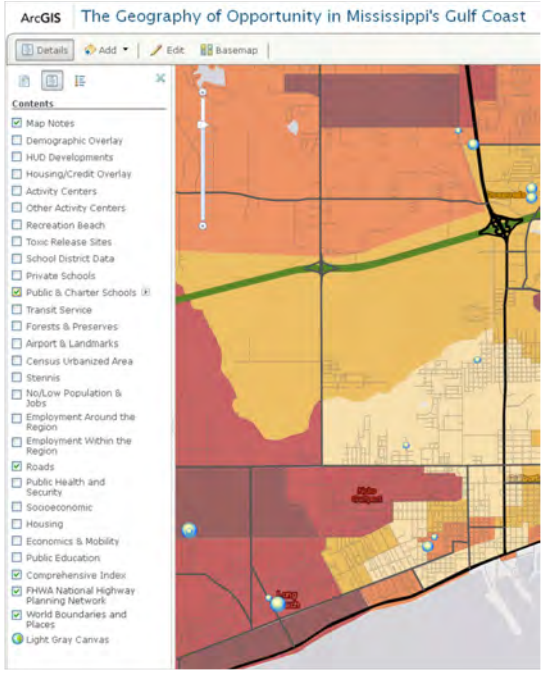
Other tools are located along the menu bar on the top of the map. These tools allow you to add new data, change the basemap to aerial photo or other formats, save a version of the map, share the map with others using a link, print the map, measure distances, or create a bookmark of a particular display or view.

Using the map: Begin exploring the map by turning different layers on and off, and by selecting layers or symbols on the map.

This map was created to have six (6) different base layers of data, and sixteen (16) different overlay layers.

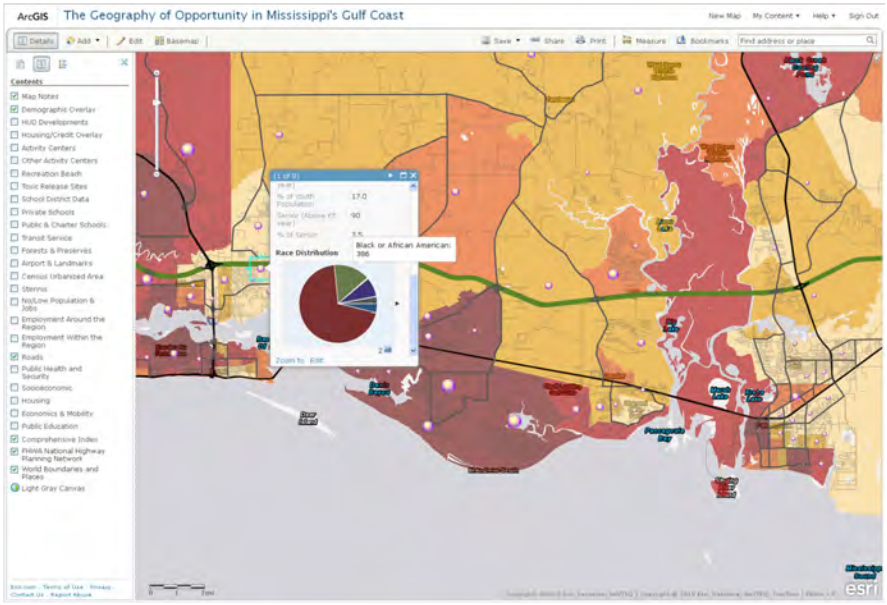
Source: *ArcGIS Online, ESRI*

The web map provides a valuable tool for local leaders and community members.



Source: *ArcGIS Online, ESRI*

The web map allows users to view multiple layers of geographic data in addition to the comprehensive opportunity map.



Source: *ArcGIS Online, ESRI*

Point and click features allow users to access the data, and provide helpful analysis tools to so users can more easily interpret information.

Base Layers:

- *Neighborhood Opportunity Index:* This layer is based on The Kirwan Institute's Opportunity Communities Model, an approach to comprehensively understanding the relationship between the complex systems that make up our cities and regions. The layer includes the most current data on (a) Public Education, (b) Economics & Mobility, (c) Housing and (d) Socioeconomics (e) Public Health & Safety and represents neighborhood opportunity from 'Very High' to 'Very Low'. When you select a neighborhood on the map, data for that area will pop up automatically. By scrolling to the bottom of the list of data, you can see a bar chart which shows how that area performed in each category of the index. Hover over the chart with your mouse in order to view the data in the bar chart. The source(s) of the data in this layer include the U.S. Census 2010; American Community Survey, 2006-2010; Mississippi Department of Education, 2010; National Center for Education Statistics (NCES), 2010; Gulf Regional Planning Commissions, CTA, 2011; HUD Opportunity Index, 2000, 2005-2009, 2009; Environmental Protection Agency (EPA), Toxic Release Inventory, 2009; ESRI Business Analyst, 2010; Mississippi Windstorm Underwriting Association, 2011; FEMA,2011; Gulf Regional Planning Commission, 2012; City and Regional Planning ,the Ohio State University, 2011.

- *Sub-Category Neighborhood Opportunity Index (Education, Economics& Mobility, Housing, Socioeconomic, and Public Health and Safety):* These layers are categorized according to 1) education 2) Economics& Mobility, 3) Housing, 4) Socioeconomic, and 5) Public Health & Safety. The source of the data in this layer as follows.

    - Public Education: Mississippi Department of Education, 2010; National Center for Education Statistics (NCES), 2010
    - Economics & Mobility: Gulf Regional Planning Commission, CTA, 2011; American Community Survey,2006-2010; HUD Opportunity Index (LEHD, ACS, CTPP), 2000,2005-2009, 2009; Parcel data, 2012
    - Housing: HUD User, 2010; Census, 2010; American Community Survey, 2006-2010; Mississippi Windstorm Underwriting Association, 2008
    - Socioeconomics: American Community Survey, 2006-2010
    - Public Health & Security: Environmental Protection Agency (EPA), Toxic Release Inventory, 2009; City and Regional Planning, The Ohio State University, 2011; ESRI Business Analyst, 2010; Gulf Regional Planning Commission, 2012; Mississippi Windstorm Underwriting Association, 2011; FEMA, 2011

Overlay Layers:

- *Demographic Overlay:* This layer is displayed using graduated symbols, and represents the location and size of the population and various sub-groups of population. When you select a dot or symbol on the map, data for that area will pop up automatically. By scrolling to the bottom of the list of data, you can view a pie chart summarizing the population in that area by race and age. Hover over the chart with your mouse in order to view the data in the charts. Note that this layer displays Total Population by default. View the final section of this tutorial to learn how to display different race and ethnic group populations. The source(s) of the data in this layer include US Census, 2010.

- *HUD Developments:* this layer represents the location of a project, which is enacted by HUD. There are two types of projects at Mississippi, named S8 NC/SR (Section 8 New Construction/Substantial Rehabilitation) and LIHTC (Low Income Housing Tax Credit).

- *Housing/Credit Overlay:* This layer represents the location of HMDA mortgages, high cost mortgages, and subsidized housing vouchers throughout the county. The source(s) of the data in this layer is HUD User, 2008 and 2010.

- *Activity Centers and Other Activity Centers:* this layer represents the location of park and recreation, and was provided by Gulf Coast Regional Planning Commission and Southern Mississippi Planning and Development District.

- *Recreational Beach:* This layer illustrates the locations of the region's recreational beaches, and was developed by The Kirwan Institute for the Study of Race and Ethnicity with the use of aerial imagery.

- *Toxic Release Sites:* this layer is a database that contains information concerning specific toxic chemical releases, transfers, waste management and pollution prevention activities from manufacturing facilities. When you select a dot or symbol on the map, data for that site will appear automatically, showing the amount of on-site toxic release. The source for this layer is the U.S. Environmental Protection Agency (EPA), 2011.

- *School District Data:* This layer is a form of special-purpose district which serves to operate local public primary and secondary schools. In Mississippi, there are unified school districts, which include both primary school (kindergarten through middle school or junior high) and high school (grades 9–12) under the same district control. When you click a shape on the map, data for that are will pop up automatically. The data include total enrollment, QDI, Graduation Rate, HSCI, number of teachers, student/teacher Ration, number of students receiving free or reduced lunch, number of female and male, and race.

- *Private Schools:* This layer represents the location of the region's private and parochial schools, and includes information about school name, location, grade levels, enrollment by race, free and reduced breakfasts and lunches, and student transportation. The data was provided by Gulf Regional Planning Commission.

- *Public and Charter Schools:* This layer represents the location of public and charter schools in the region. When you select a symbol on the map, data for that area will pop up automatically. Each school data has number of students and teachers, number of students receiving free or reduced lunch, QDI (Quality of Distribution Index), graduation rate, and student/teach ratio. By scrolling to the bottom of the list of data, you can view a pie chart summarizing the population in that area by race and gender. Hover over the chart with your mouse in order to view the data in the charts.

- *Transit Service:* This layer shows the fixed transit routes within the region, and was provided courtesy of Coast Transit Authority, coasttransit.com.

- *Forests & Preserves:* this layer shows the location of Forests & Preserves. Because these areas take up most of the area of the census tracts in which they reside, it often helps to provide context and orientation for the data being displayed.

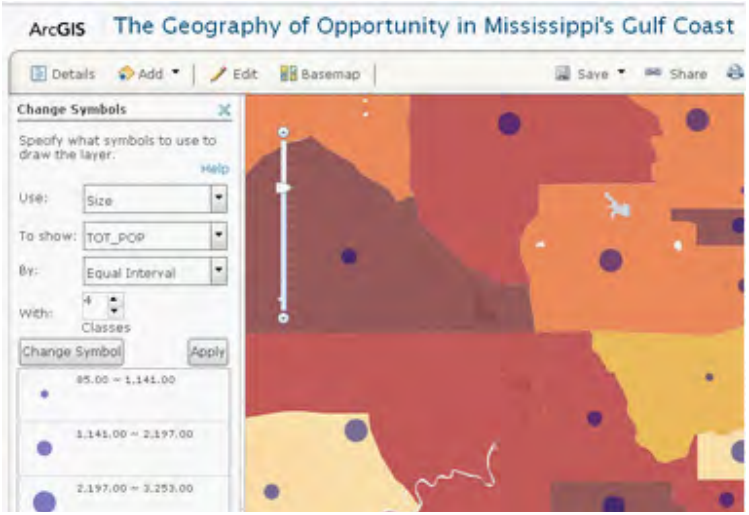
- *Airport & Landmarks:* This layer shows the locations of airports and state parks. Because these areas take up most of the area of the census tracts in which they reside, it often helps to provide context and orientation for the data being displayed.

- *Census Urbanized Area:* this layer shows the distribution of urban areas and represents urbanized areas (UAs) of 50,000 or more people.

- *Stennis:* The John C. Stennis Space Center (SSC) is a NASA rocket testing facility. It is located in Hancock County, Mississippi, on the banks of the Pearl River (Mississippi–Louisiana) at the Mississippi-Louisiana border. As of 2012, it is NASA's largest rocket engine test facility.

- *No/Low Population & Jobs:* This layer shows the areas with little to no population. Because these areas take up most of the area of the census tracts in which they reside, it often helps to provide context and orientation for the data being displayed.

- *Employment around Region/ within Region:* this lay displayed using graduated symbols, and represents the location and size of the jobs within each block group. It is a helpful supplement when viewing the Economic and Mobility base layer. The data source for these layers is ESRI Business Analyst, 2010.



Source: *ArcGIS Online, ESRI*

Viewing layer symbology allows users to adjust settings in order to view more datasets.

Changing Layer Display:

In order to view and adjust the way a map layer is displayed, use your mouse hover over the layer name in the contents menu on the left side of the screen (must select the center icon below 'Details' to view this list). This will cause an arrow to appear next to the layer name. Select the arrow, which will provide a list of options, then choose 'Change Symbols'. This will allow you to display different elements of data, as well as adjust the manner and color in which the data is displayed. To display a different data element, select the drop-down arrow next to the 'To Show' menu (Note that although these item titles are coded for tabular use, most retain an intuitive description).

If you have any questions about how to use this map, or about the data it includes, please contact Matthew Martin, Research Associate with The Kirwan Institute, at martin.1227@osu.edu or 614.292.7139 for assistance.

Special thanks to the Gulf Regional Planning Commission for their efforts to convene the development process of this research, and facilitate collaboration among regional leaders throughout The Plan For Opportunity.

Kirwan Institute

Many Differences **One Destiny**

The Kirwan Institute for the Study of Race and Ethnicity at The Ohio State University is a university-wide, interdisciplinary research institute. Our work is dedicated to understanding of the causes of — and solutions to — racial and ethnic disparities worldwide and to bring about a society that is fair and just for all people.

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