National Center for Smart Growth Research and Education
Preinkert Fieldhouse, Suite 1112, College Park, MD 20742

301-405-6788
www.smartgrowth.umd.edu

MEMORANDUM

Date: September 16, 2013

To: Nexus Committee of the Baltimore Regional Sustainable Communities Initiative

From: Gerrit Knaap, National Center for Smart Growth

Re: Technical Memorandum #2: Measures of Opportunity in the Baltimore Metropolitan Region

INTRODUCTION

The U.S. Department of Housing and Urban Development (HUD) requires recipients of Regional Sustainable Community Planning grants to analyze disparities in opportunity within their planning region. The Baltimore Opportunity Collaborative (BOC) contracted with the National Center for Smart Growth to perform such analyses. As directed by the Nexus committee of the BOC, the NCSG proceeded in two phases. In Phase I, we prepared approximately 50 preliminary indicator maps[1] and presented them to the Nexus Committee on October 26, 2012. After reviewing the preliminary maps, the Nexus Committee established an Opportunity Mapping Advisory Panel (OMAP) and charged it with (1) reviewing the existing 50 maps, (2) identifying potential new data and maps, and (3) working to develop a set of composite opportunity maps. Consequently, the goals of Phase II of the opportunity mapping project are to prepare "six sets of maps including an opportunity map for each [of six] subject area[s]" and an accompanying technical memorandum. This is that memorandum.

This memorandum is organized as follows:

> Introduction
> The OMAP process
> Six Composite Category Index Maps
> > Education
> > Housing & Neighborhood Quality
> > Social Capital
> > Public Health and Safety
> > Employment and Workforce
> > Transportation and Mobility

---

[1] We use the term "indicator map" to refer to any map that displays one measure (e.g., median household income, access to employment, etc.). A "composite index map" is one which displays multiple standardized indicators merged into a single index. Opportunity mapping includes indicator and composite index maps, as well as the overlaying of additional data on top of those maps to understand their interaction with other measures (e.g. the location of minority households relative to areas of higher or lower opportunity).

THE OMAP PROCESS

The OMAP first met on November 27, 2012, and subsequently met 13 more times over the next eight months. Members of the OMAP were selected by BOC staff and drawn from Opportunity Collaborative members, members of the Housing and Workforce Development committees (and their consultants), and other subject matter experts. Others were engaged upon the recommendation of current participants. Ultimately about 70 people from across the region participated in the OMAP process.

The indicators reviewed by the OMAP were grouped into six categories:
- Education
- Housing and Neighborhood Quality
- Social Capital
- Public Health and Safety
- Employment and Workforce
- Transportation and Mobility

For each category of indicators, the OMAP met twice. At the first meeting, the NCSG presented preliminary maps and OMAP participants commented on the validity and utility of the maps, while offering suggestions for new maps and data. In the second meeting, the OMAP reviewed the new and updated maps, discussed which maps to include in a composite map, and considered how much weight to assign to each map. After a group discussion, each OMAP participant noted on a short form the indicator maps to include in a composite index and how much weight to assign to each indicator. These weights were averaged over all participants and used to create composite index maps. The OMAP then reviewed and discussed the composite maps.

Altogether, the OMAP reviewed approximately 165 maps and included 92 of those in the six composite category index maps.   In each category there were maps that nearly every OMAP member wanted to include in the composite map, but in every category there were also maps that only a few wanted to include. As a result, the recommend weights varied widely as well.

The use of oversight committees in the analysis of access to opportunity and the development of an opportunity map is a common practice. The OMAP process produced a set of composite maps,

described below, that do not differ extensively from similar maps produced by others. Engaging an oversight committee, however, is only one way to produce opportunity maps, and there is no consensus on how this should best be done.

SIX COMPOSITE CATEGORY INDEX MAPS

Each of the six composite category index maps is presented below. Each composite map was constructed as a weighted aggregate of 9 to 23 indicator maps in the respective category. The composite map is based in part on every map that any OMAP participant weighted higher than zero in the weighting exercise. The weight assigned to each map in the composite was computed as the average weight assigned by all OMAP participants.

In what follows, we present the composite map for each category and list the weights assigned to each of the indicators used to derive the composite map. These maps are presented in terms of five levels of opportunity ranging from highest to lowest opportunity. Each level represents 132, or one-fifth, of the census tracts in the region.

EDUCATION

Below is a list of the 17 education indicators that were selected by the OMAP to be included in a composite index and the weights that were assigned to each.

Subcategory	Indicator Title	Weight
Elementary School	Student Performance (Elementary School)	10.4%
	3rd Grade Reading	6.6%
	3rd Grade Math	4.3%
	5th Grade Reading	5.1%
	5th Grade Math	4.3%
	Percent of Teachers Highly Qualified (Elementary School)	10.7%
Middle School	Student Performance (Middle School)	13.0%
	Percent of Teachers Highly Qualified (Middle School)	10.7%
High School	Student Performance (High School)	5.0%
	Advanced Placement Course Enrollment	2.1%
	Advanced Placement Exam Scores	2.6%
	SAT Scores	5.6%
	High School Dropout	3.9%
	Percent of Teachers Highly Qualified (High School)	4.5%
Adult Workforce Development	Access to Work Force Investment Area Training Programs	4.8%
	Proximity to Community Colleges	4.1%
	Proximity to Private Career Schools	2.4%
		100.0%

The map based on these selected indicators and weights shows that all of the high and highest education opportunity areas exist outside Baltimore City. In contrast, nearly 93 percent of Howard County's census tracts are classified as high or highest education opportunity. On average, Howard's tracts had the highest index scores, followed by Carroll, Anne Arundel, Harford, Baltimore, and Baltimore City. Each of the five counties had a positive index score, indicating a better than average education opportunity. Statistically, only Howard and Baltimore City have average tract scores that are significantly different from the average scores of every other jurisdiction in the region.

Average Tract Index Score

	Average Score	Percentile Rank	Statistically different from…					
			Howard	Carroll	Anne Arundel	Harford	Baltimore	Baltimore City
Howard	0.550	80th	N/A	**	**	**	**	**
Carroll	0.328	67th	**	N/A			**	**
Anne Arundel	0.289	64th	**		N/A		*	**
Harford	0.194	59th	**			N/A		**
Baltimore	0.160	58th	**	**	*		N/A	**
Baltimore City	-1.088	16th	**	**	**	**	**	N/A

* significant at the 5% level   ** significant at the 1% level

Quintile Limits

Minimum	-2.019	3rd Quintile	0.228
1st Quintile	-0.968	4th Quintile	0.558
2nd Quintile	-0.268	Maximum	1.209

Histogram
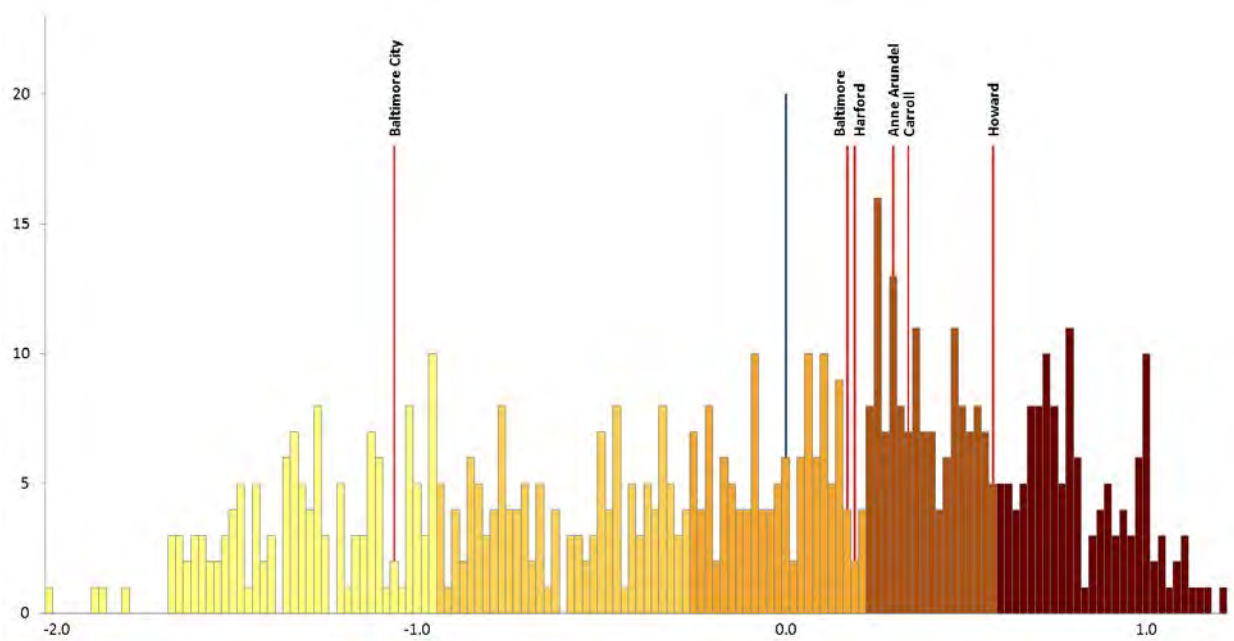
Tracts in Each Opportunity Category
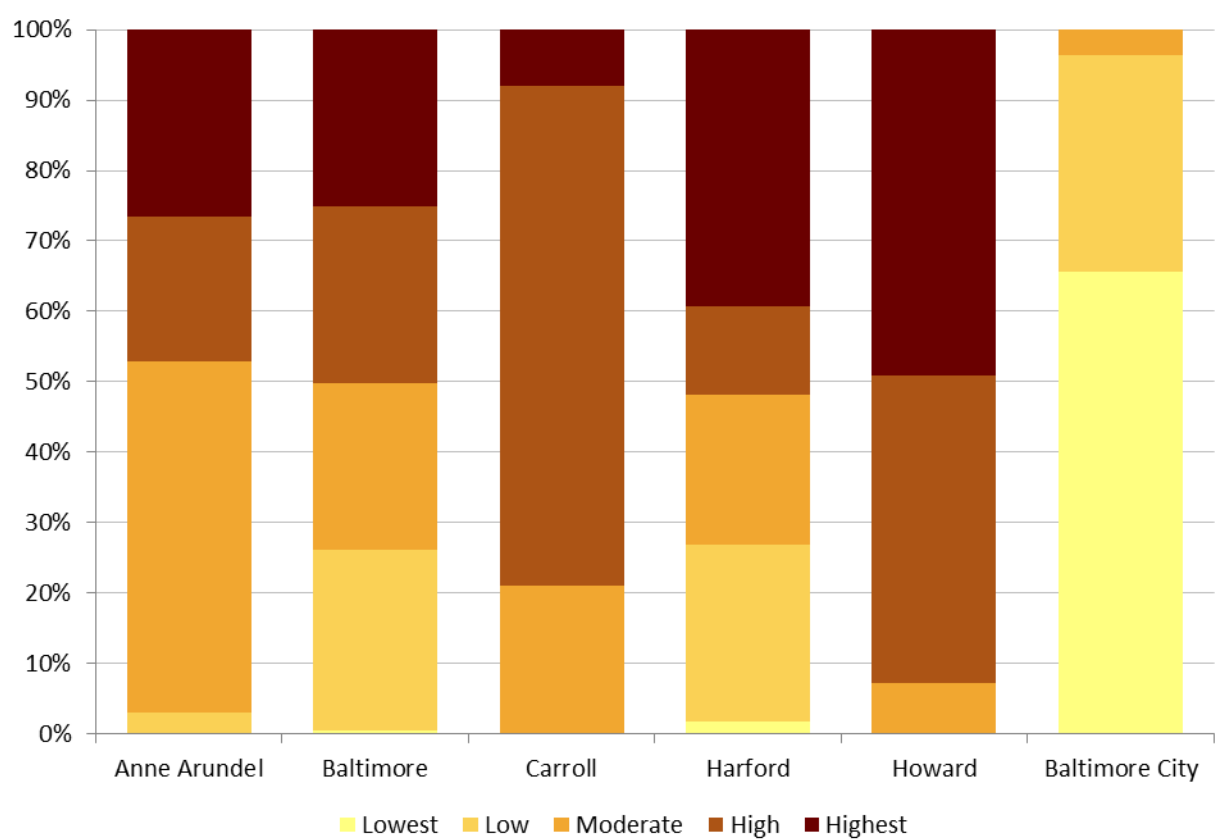
Index Map

OMAP Education Index

Legend:
- Lowest Opportunity
- Moderate Opportunity
- Highest Opportunity
- Excluded CTs
- No data

Miles
0   5   10

Source: NCSG 2013
Geography: Census Tract 2010

NCSG

Opportunity Index
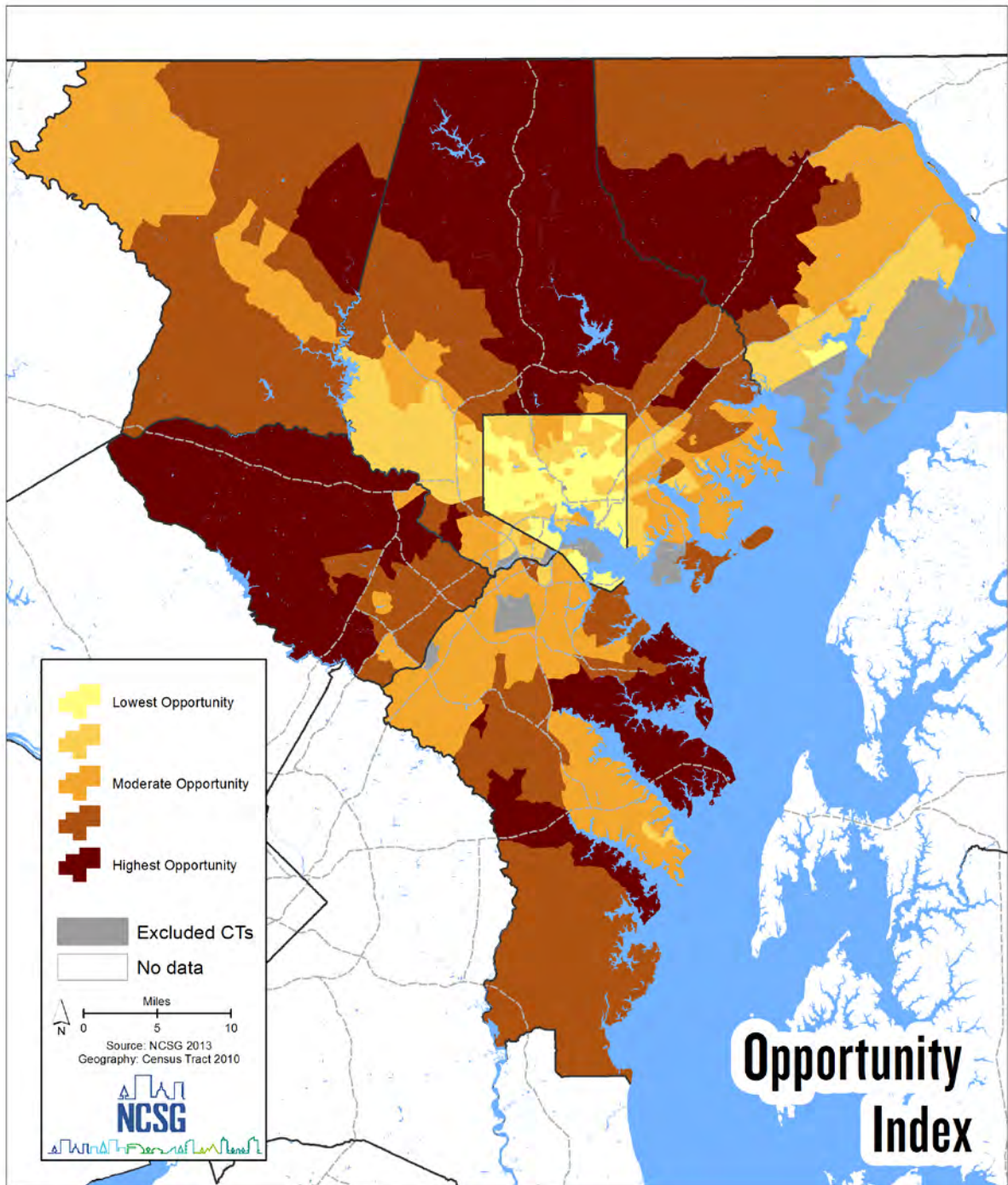
HOUSING & NEIGHBORHOOD QUALITY

Below is a list of the 23 housing and neighborhood quality indicators that were selected by the OMAP to be included in a composite index and the weights that were assigned to each.

Subcategory	Indicator Title	Weight
Housing Characteristics	Median Housing Value	15.0%
	Median Gross Rent	12.6%
	Percent Change of Total Housing Units (2000-2010)	1.8%
	Percent Change of Total Occupied Housing Units (2000-2010)	2.8%
	Percent Change of Owner-Occupied Housing Units (2000-2010)	5.1%
	Percent Change of Renter-Occupied Housing Units (2000-2010)	1.9%
	Percent of Single Family Housing Units (Attached)	2.9%
	Percent of Single Family Housing Units (Detached)	3.2%
	Percent of Multi-Family Housing Units	5.1%
Housing Burden/Affordability	Selected Monthly Owner Costs as Percentage of Income	2.5%
	Gross Rent as Percentage of Income	3.4%
	Ratio of Median Gross Rent to FMR	1.7%
	Owner Cost Burden	3.8%
	Renter Cost Burden	4.1%
	Severe Owner Cost Burden	2.9%
	Severe Renter Cost Burden	3.2%
	Housing Affordability Index	1.9%
	Housing + Transportation Index (local base)	3.7%
	Housing + Transportation Index (AMI base)	2.3%
	High Cost Loan Rate	3.8%
Housing Market	Foreclosure Rate	5.1%
	Vacant Units Abandoned	7.4%
Housing Policy	Housing Capacity per Acre	3.9%
		100.0%

Placing the highest emphasis on home value, gross rent, and vacant abandoned units, the OMAP housing composite index, like the education index, results in the five counties all having an average tract percentile rank above 50 percent. Baltimore City's tracts are in the 17th percentile, whereas Howard County's tracts are in the 87th percentile. For the housing index, Anne Arundel County (74th percentile), Baltimore City and Howard County all have average tract index scores that are significantly different from the average scores of every other jurisdiction in the region. The average scores for Baltimore, Carroll and Harford Counties are not statistically different from each other.

Average Tract Index Score

| | Average Score | Percentile Rank | Statistically different from… | | | | | |
			Howard	Anne Arundel	Harford	Carroll	Baltimore	Baltimore City
Howard	0.433	87th	N/A	**	**	**	**	**
Anne Arundel	0.274	74th	**	N/A	**	**	**	**
Harford	0.105	57th	**	**	N/A			**
Carroll	0.069	54th	**	**		N/A		**
Baltimore	0.069	54th	**	**			N/A	**
Baltimore City	-0.377	17th	**	**	**	**	**	N/A

* significant at the 5% level   ** significant at the 1% level

Quintile Limits

Minimum	-1.370	3rd Quintile	0.129
1st Quintile	-0.346	4th Quintile	0.334
2nd Quintile	-0.076	Maximum	1.559

Histogram
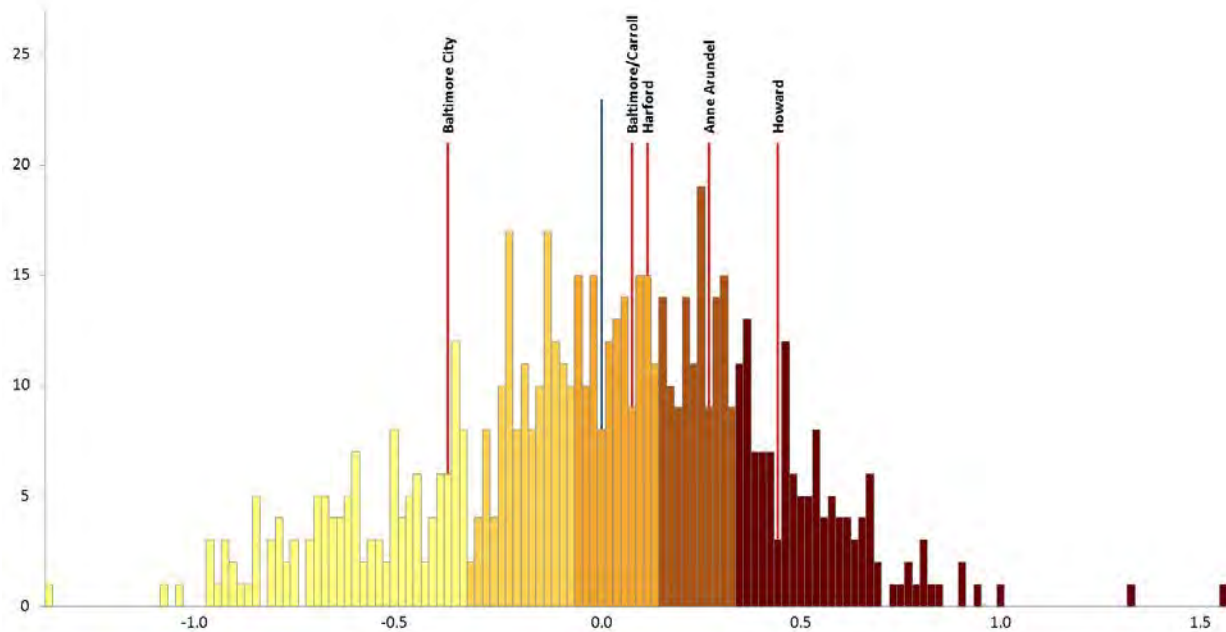
Tracts in Each Opportunity Category
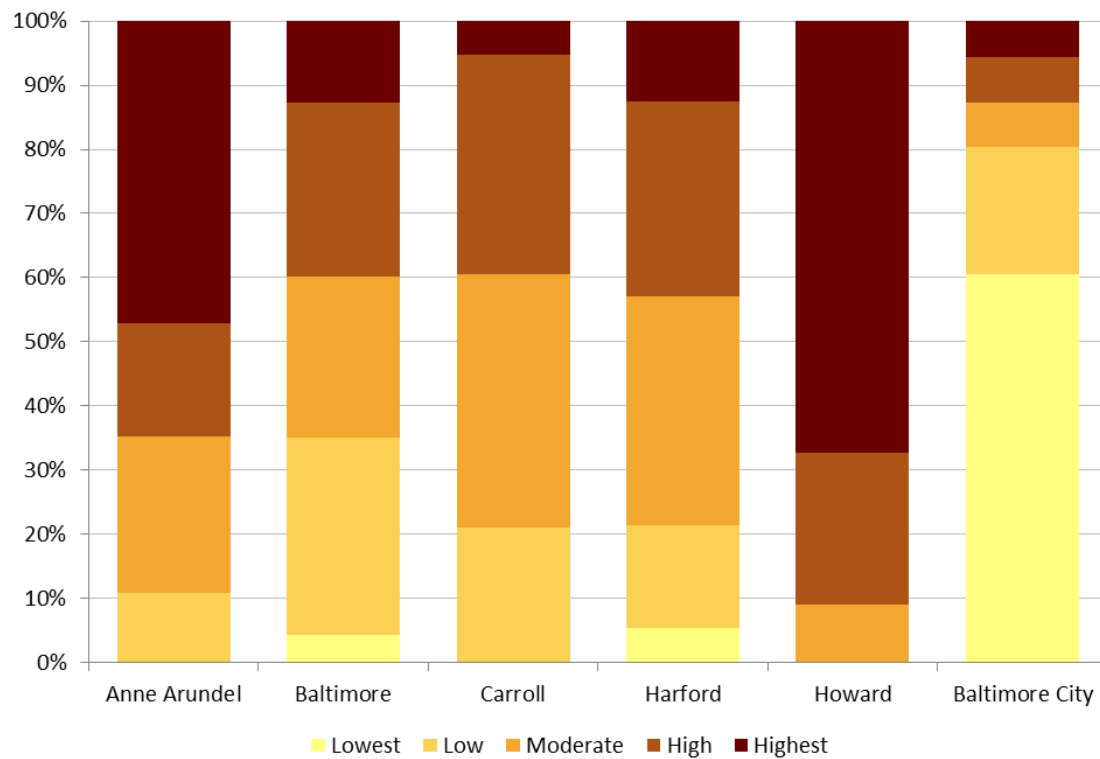
Index Map

OMAP Housing & Neighborhood Quality Index

Lowest Opportunity

Moderate Opportunity

Highest Opportunity

Excluded CTs

No data

Miles
0   5   10

Source: NCSG 2013
Geography: Census Tract 2010

NCSG

Opportunity Index

SOCIAL CAPITAL

Below is a list of the 13 social capital indicators that were selected by the OMAP to be included in a composite index and the weights that were assigned to each.

Subcategory	Indicator Title	Weight
N/A	Access to Civic, Social, Community & Religious Organizations	8.8%
	Access to Public Institutions	7.2%
	Percent Population Aged 25 to 44	5.5%
	Racial Diversity Index	11.3%
	Percent Population Having High School Diploma or Greater	5.8%
	Percent Population Having Bachelor's Degree or Greater	10.2%
	Median Income	9.0%
	Percent of Households in Poverty	9.8%
	Labor Force Participation Rate - Ages 16-64	5.8%
	Percent of Labor Force Unemployed	7.4%
	Population Density	6.6%
	Percentage of Owner Occupied Housing Units	10.2%
	Percent Single Parent Households	2.6%
		100.0%

In the social capital category, the OMAP placed the highest weight on racial diversity, higher education levels and homeownership. As a result, there are more higher opportunity tracts recognized in Baltimore than seen with education and housing. Approximately 28 percent of the city's 198 tracts were identified as having high or highest social opportunity, most of them around the inner harbor, in the Mount Washington neighborhood and the northern region between Interstate 83 and York Road. On average, however, the City's tracts still rank the lowest at the 26th percentile, and Howard County's tracts rank the highest at the 91st percentile. As with the housing index, the average tract social capital index scores for Anne Arundel County (59th percentile), Baltimore City and Howard County are all significantly different from the average scores of every other jurisdiction in the region. The average scores for Baltimore, Carroll and Harford Counties are not statistically different from each other.

Average Tract Index Score

| | Average Score | Percentile Rank | Statistically different from… | | | | | |
			Howard	Anne Arundel	Harford	Baltimore	Carroll	Baltimore City
Howard	0.502	91st	N/A	**	**	**	**	**
Anne Arundel	0.125	59th	**	N/A	*	**	**	**
Harford	0.033	48th	**	*	N/A			**
Baltimore	0.022	47th	**	**		N/A		**
Carroll	-0.036	42nd	**	**			N/A	**
Baltimore City	-0.230	26th	**	**	**	**	**	N/A

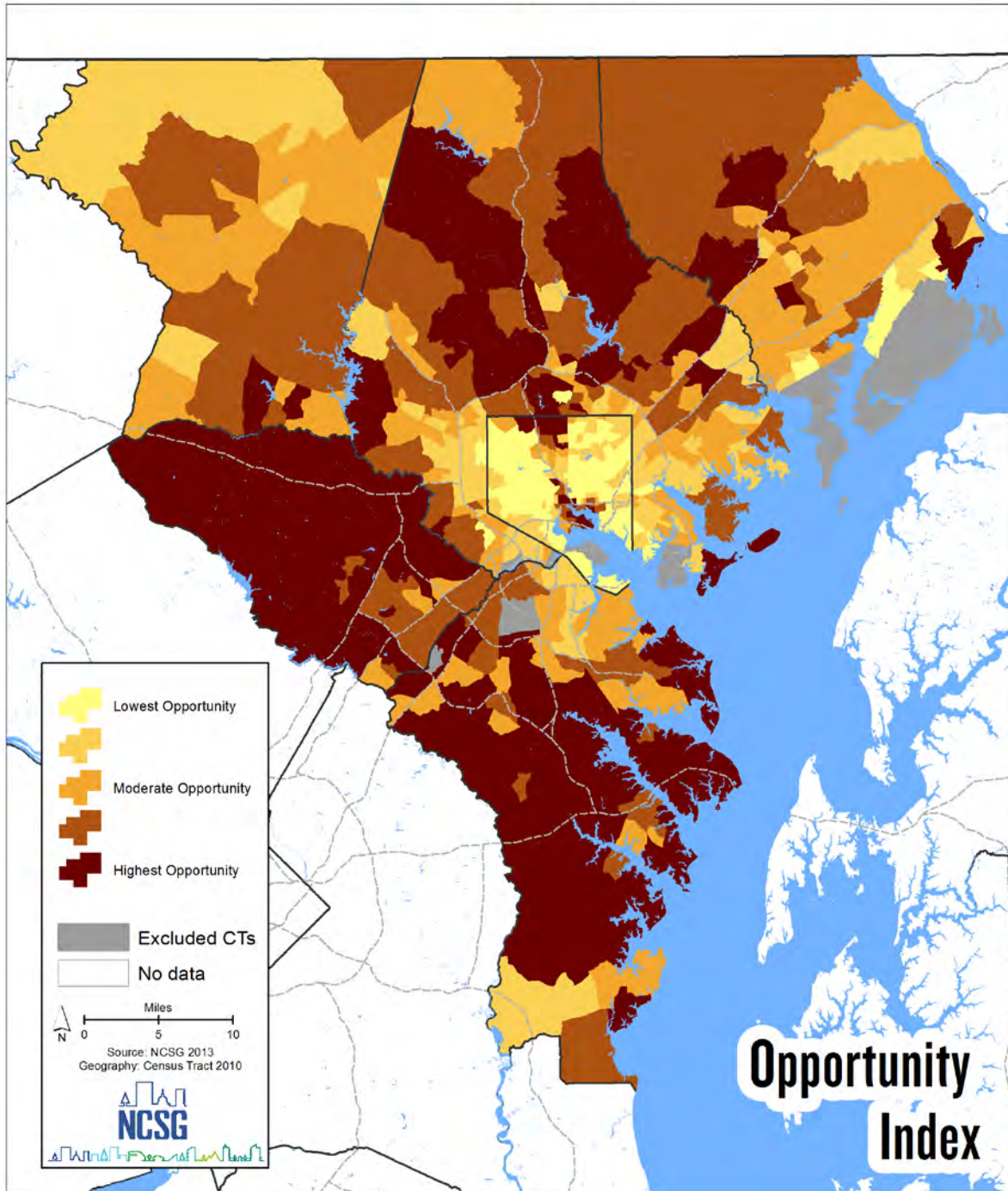* significant at the 5% level   ** significant at the 1% level

Quintile Limits

Minimum	-1.712	3rd Quintile	0.140
1st Quintile	-0.330	4th Quintile	0.335
2nd Quintile	-0.051	Maximum	1.096

Histogram
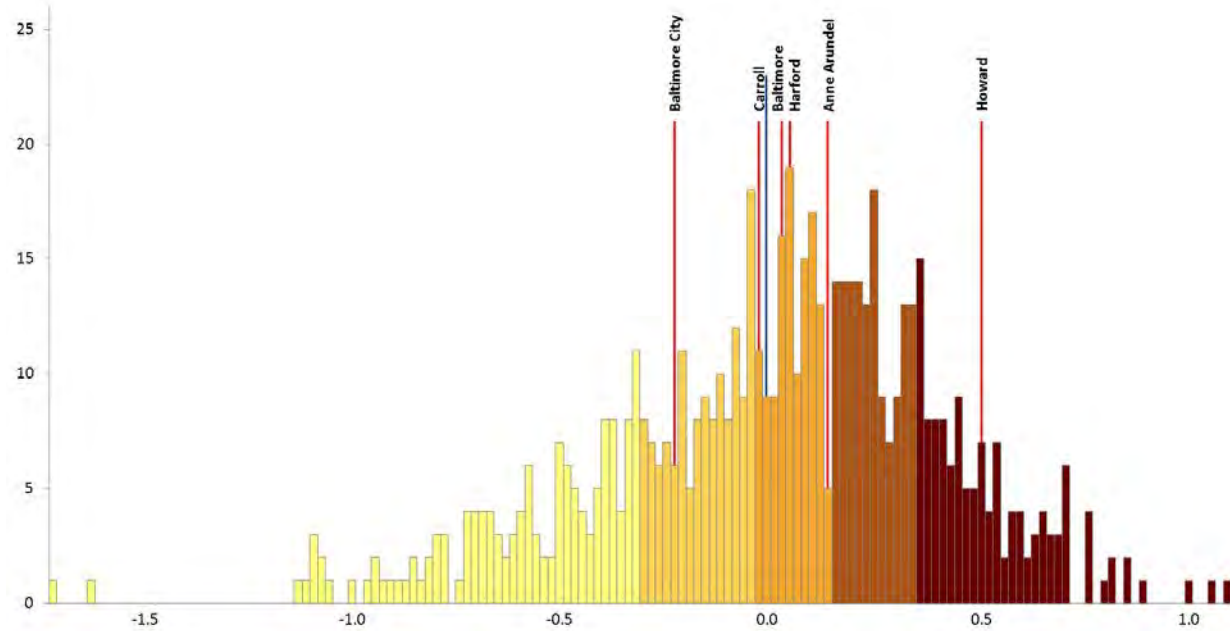
Tracts in Each Opportunity Category
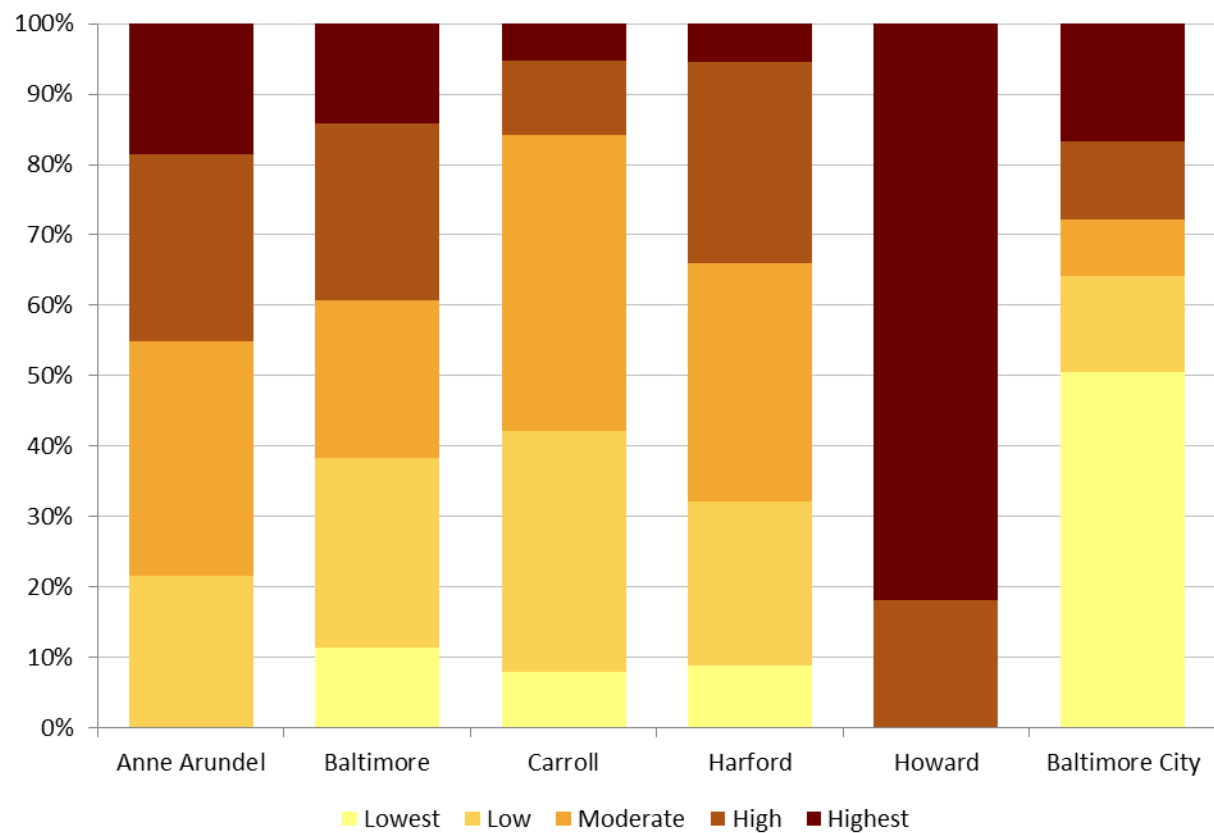
Index Map

OMAP Social Capital Index

Legend:
- Lowest Opportunity
- Moderate Opportunity
- Highest Opportunity
- Excluded CTs
- No data

Miles
0   5   10

Source: NCSG 2013
Geography: Census Tract 2010

NCSG

Opportunity Index
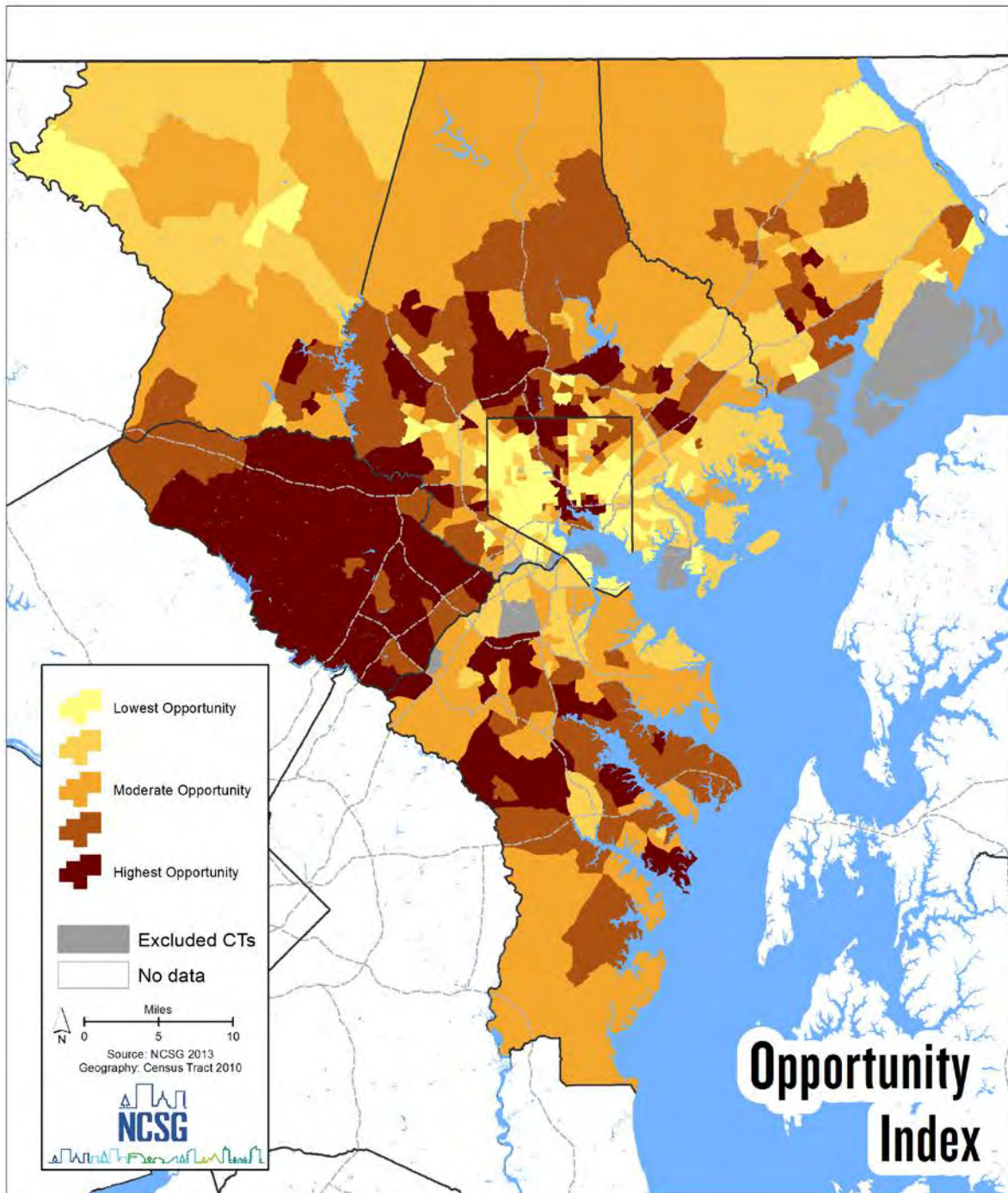
PUBLIC HEALTH AND SAFETY

Below is a list of the 18 public health and safety indicators that were selected by the OMAP to be included in a composite index and the weights that were assigned to each.

Subcategory	Indicator Title	Weight
Public Health	Cancer Risk	1.8%
	Neurological Disease Risk	2.4%
	Respiratory Disease Risk	5.3%
	Infant Mortality Rates	6.7%
	Teen Birth Rates	4.2%
	Percent of Births to Women Receiving Late or No Prenatal Care	2.6%
	Rate of Low Birth Weight	16.5%
	Access to Emergency Services	2.6%
	Emergency Services Coverage Areas	3.6%
	Access to Social Services	2.6%
	Access to Hospitals	2.9%
	Access to Freestanding Ambulatory Surgical and Emergency Centers	0.5%
	Access to All Other Outpatient Care Centers	2.4%
	Access to Food Swamps	6.5%
Environment	Watershed Failure	3.2%
	Access to Parks	11.1%
	Percent Park	5.1%
Crime	Crime Risk Index: Total Crime	20.0%
		100.0%

The OMAP placed the largest emphasis on crime, low birth weight and access to greenspace when constructing the public health and safety index. Consequently, the less urban Carroll County received the highest tract average score for this index, rank in the 84th percentile. Less than 3 percent of the tracts in Carroll had an index score below the moderate opportunity level. Baltimore City was the only jurisdiction to have an average tract score below the 50th percentile. For this index however, only Baltimore City's (17th percentile) and Baltimore County's (51st percentile) average tract scores were significantly different from every other jurisdiction. The average scores for Anne Arundel, Harford and Howard Counties are not statistically different from each other.

Average Tract Index Score

	Average Score	Percentile Rank	Statistically different from…					
			Carroll	Howard	Harford	Anne Arundel	Baltimore	Baltimore City
Carroll	0.284	84th	N/A			*	**	**
Howard	0.207	72nd		N/A			**	**
Harford	0.193	70th			N/A		**	**
Anne Arundel	0.151	63rd	*			N/A	**	**
Baltimore	0.081	51st	**	**	**	**	N/A	**
Baltimore City	-0.331	17th	**	**	**	**	**	N/A

* significant at the 5% level   ** significant at the 1% level

Quintile Limits

Minimum	-1.317	3rd Quintile	0.128
1st Quintile	-0.265	4th Quintile	0.252
2nd Quintile	-0.009	Maximum	1.552

Histogram
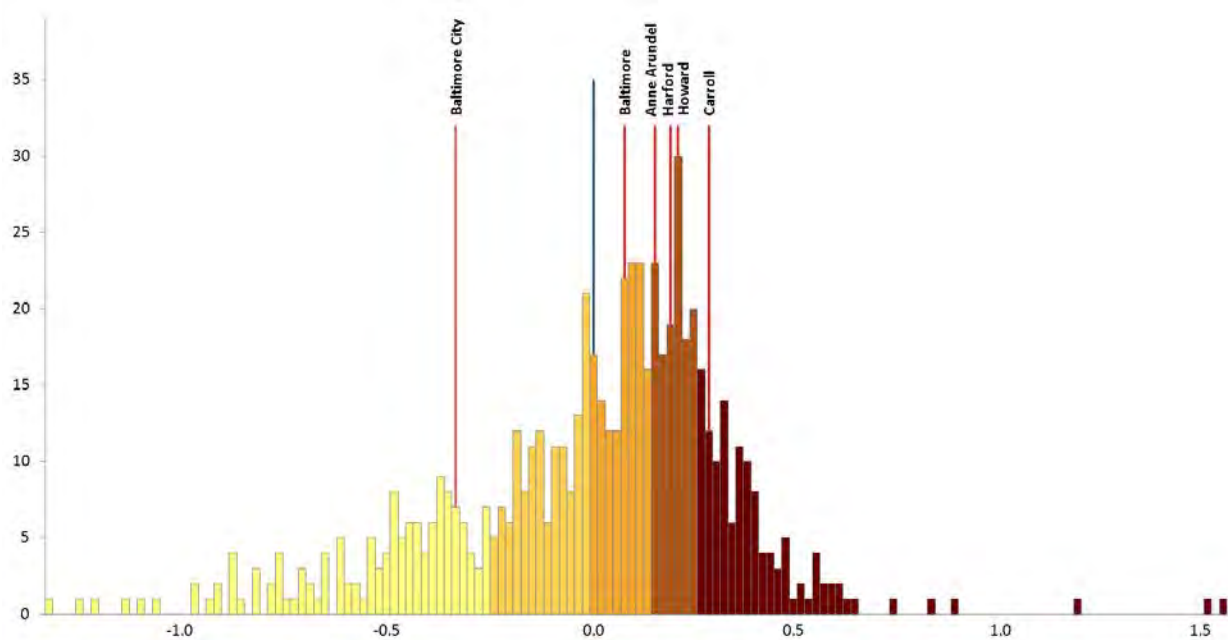
Tracts in Each Opportunity Category
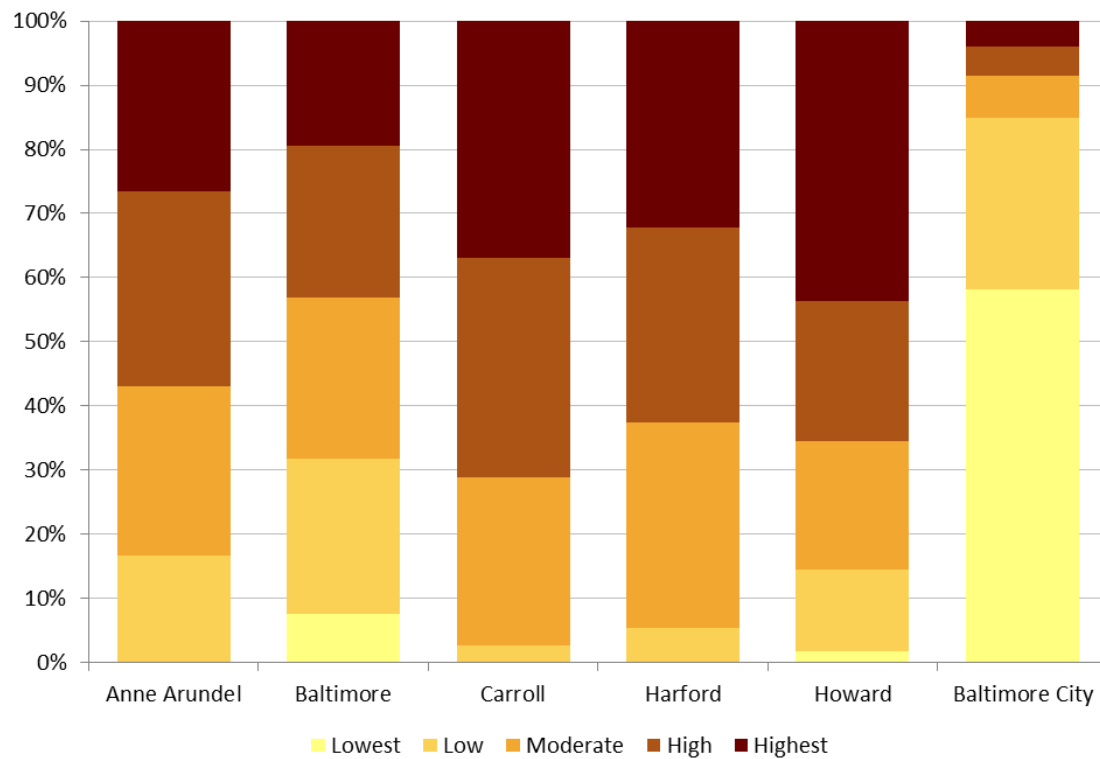
Index Map
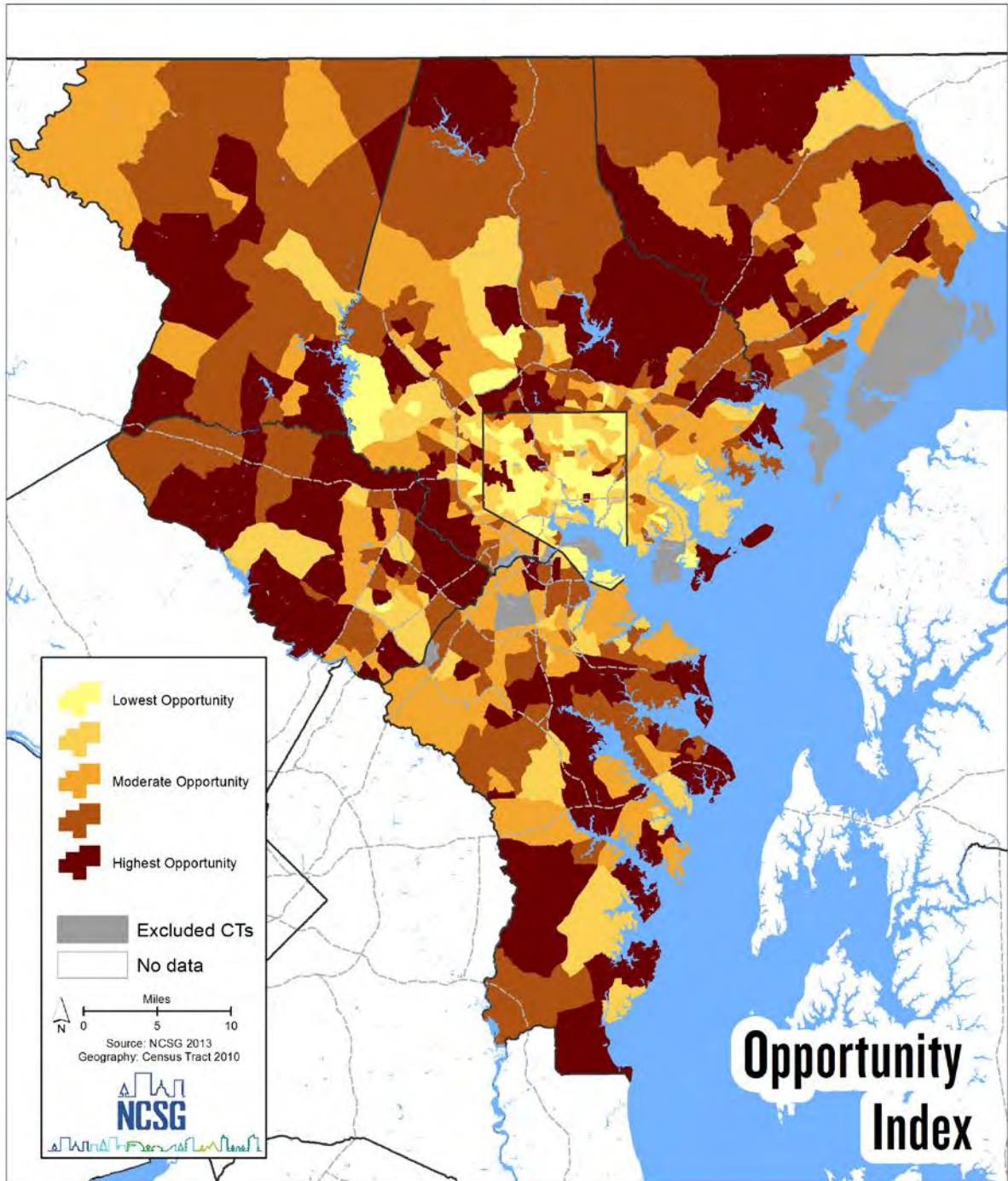
EMPLOYMENT AND WORKFORCE

Below is a list of the 12 employment and workforce indicators that were selected by the OMAP to be included in a composite index and the weights that were assigned to each.

Subcategory	Indicator Title	Weight
Jobs	Total Job Density	10.0%
	Total Jobs Accessible by Auto	13.8%
	Total Jobs Accessible by Transit	16.3%
	Accessibility Gap between Transit and Auto	7.9%
	Percent Change in Total Jobs (2002-2010)	12.0%
Workforce	Low Skill Workers	3.0%
	Middle Skill Workers	3.0%
	High Skill Workers	3.0%
	Percent Low Skill Workers	7.6%
	Percent Middle Skill Workers	7.2%
	Percent High Skill Workers	6.7%
	Job Access Ratio	9.5%
		100.0%

The employment and workforce index created by the OMAP was heavily weight toward the supply of and access to jobs. Jobs accessible within a 45 minute transit commute, jobs accessible within a 30 minute auto commute, growth in jobs and total job density combined for over 52 percent of the index. The indicators selected for this index—and their respective weights—resulted in Baltimore City earning the highest average tract index score at the 81st percentile. Baltimore County was the only other jurisdiction to rank, on average, in the top half of scores. For this index every combination of jurisdictions produced a statistically significantly different tract average, with one exception. Howard County's average tract score was not significantly different from Harford County's.

Average Tract Index Score

	Average Score	Percentile Rank	Baltimore City	Baltimore	Anne Arundel	Howard	Harford	Carroll
					Statistically different from…			
Baltimore City	0.408	81st	N/A	**	**	**	**	**
Baltimore	0.035	52nd	**	N/A	**	**	**	**
Anne Arundel	-0.220	37th	**	**	N/A	**	**	**
Howard	-0.406	22nd	**	**	**	N/A		**
Harford	-0.429	20th	**	**	**		N/A	**
Carroll	-0.510	10th	**	**	**	**	**	N/A

* significant at the 5% level   ** significant at the 1% level

Quintile Limits

Minimum	-0.925	3rd Quintile	0.147
1st Quintile	-0.434	4th Quintile	0.402
2nd Quintile	-0.161	Maximum	2.776

Histogram
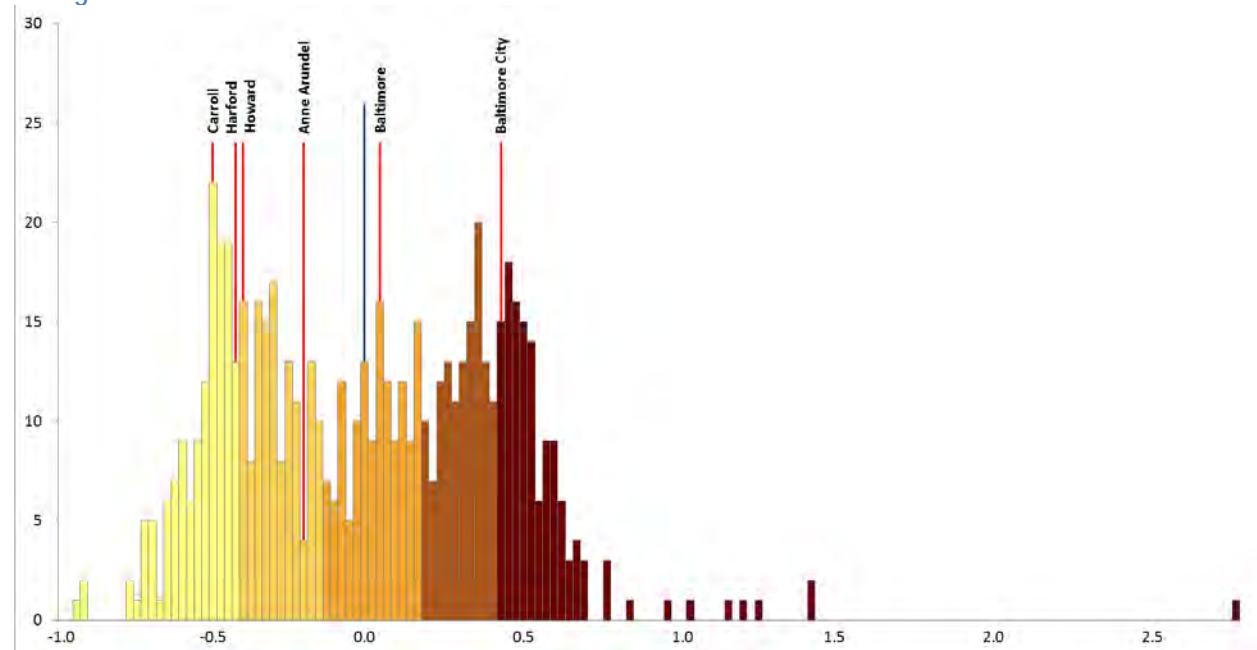
Tracts in Each Opportunity Category
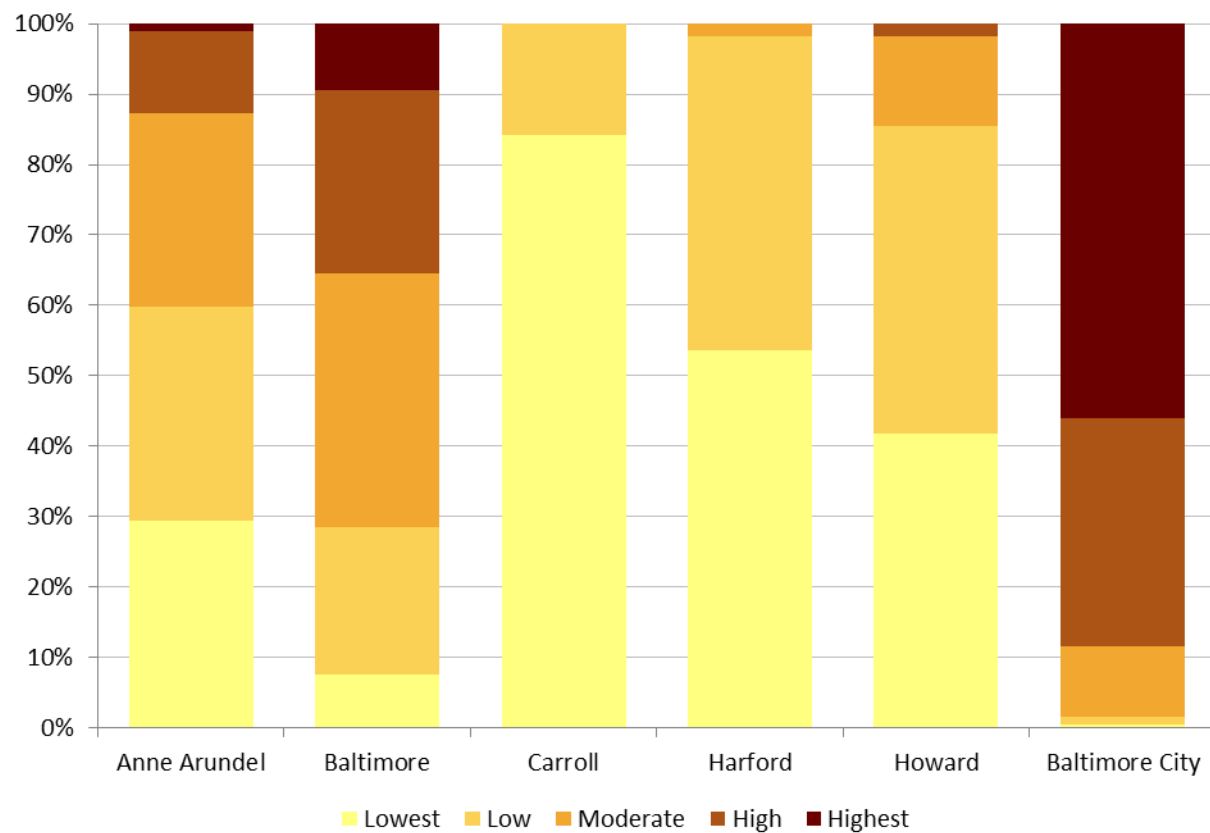
Index Map

OMAP Employment & Workforce Index — Opportunity Index
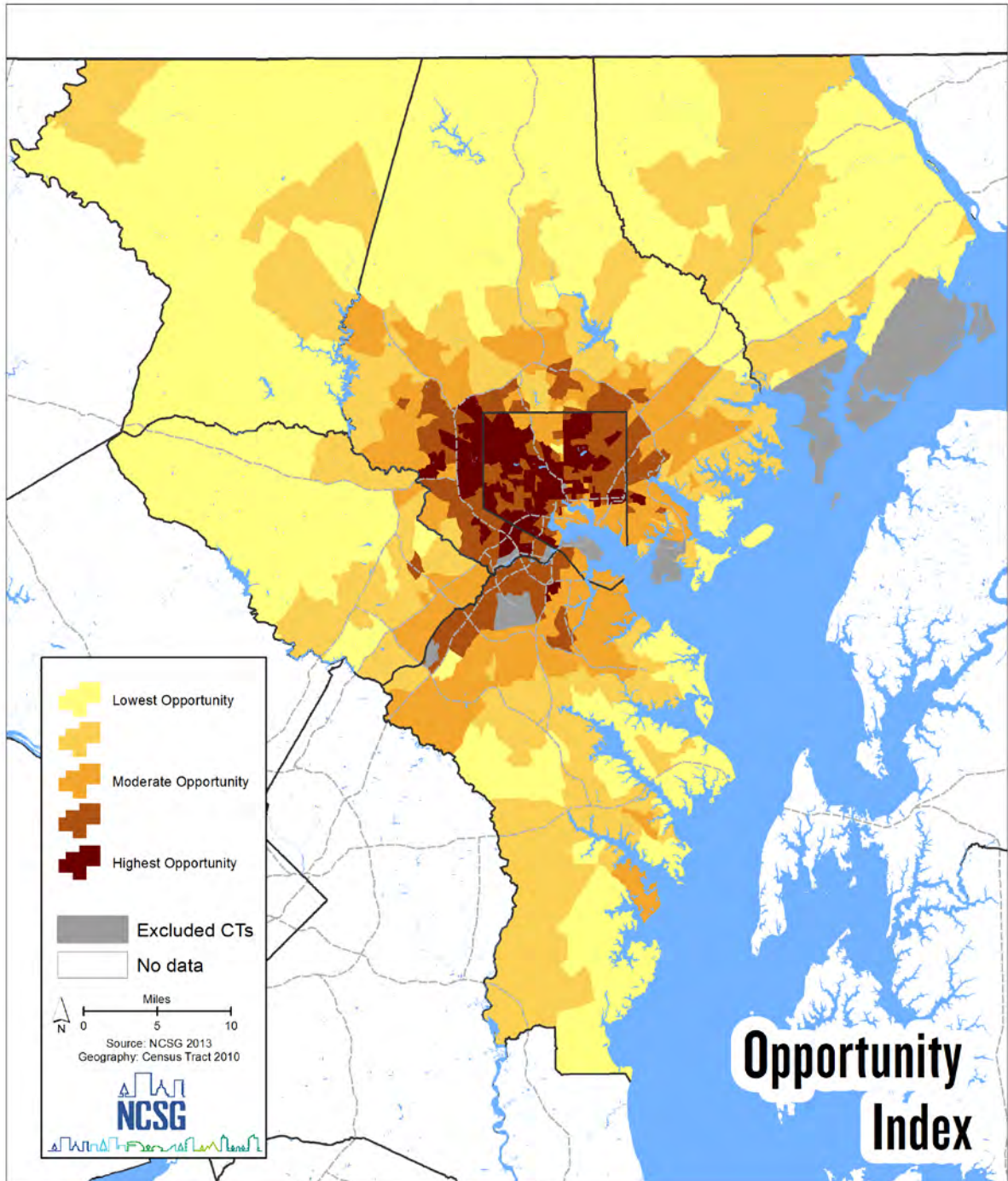
TRANSPORTATION AND MOBILITY

Below is a list of the nine transportation and mobility category indicators that were selected by the OMAP to be included in a composite index and the weights that were assigned to each.

Subcategory	Indicator Title	Weight
N/A	Travel Time Index	7.3%
	Driving Commuters: Percent Driving Less Than 30 Minutes	24.4%
	Commuters: Percent Taking Transit Less Than 45 Minutes	28.8%
	Transit Access	10.7%
	Transit Connectivity Index	4.3%
	Walk Score	14.7%
	Transportation Trail Miles	1.3%
	Per Capita VMT for Home-Based Trips	0.9%
	Per Capita VHT for Home-Based Trips	7.7%
		100.0%

The OMAP's transportation and mobility index weighs heavily on transit and non-motorized forms of transportation. It includes measures of transit use, transit access, transit connectivity, walk score, and transportation trail miles, which result in Baltimore City attaining the highest average tract score at the 86th percentile. Carroll County, with limited transit service, low walk scores, and longer commute times, ranks last at the 9th percentile. All of Carroll's 38 tracts fall in the region's lowest or low opportunity levels for transportation and mobility. In contrast, over 94 percent of Baltimore City's 198 tracts are in the high or highest opportunity levels for this index.

Average Tract Index Score

	Average Score	Percentile Rank	Baltimore City	Baltimore	Anne Arundel	Howard	Harford	Carroll
					Statistically different from…			
Baltimore City	0.670	86th	N/A	**	**	**	**	**
Baltimore	-0.170	43rd	**	N/A		**	**	**
Anne Arundel	-0.217	40th	**		N/A	*	**	**
Howard	-0.353	30th	**	**	*	N/A	**	**
Harford	-0.502	19th	**	**	**	**	N/A	**
Carroll	-0.716	9th	**	**	**	**	**	N/A

* significant at the 5% level   ** significant at the 1% level

Quintile Limits

Minimum	-1.238
1st Quintile	-0.497
2nd Quintile	-0.209
3rd Quintile	0.049
4th Quintile	0.422
Maximum	3.409

Histogram
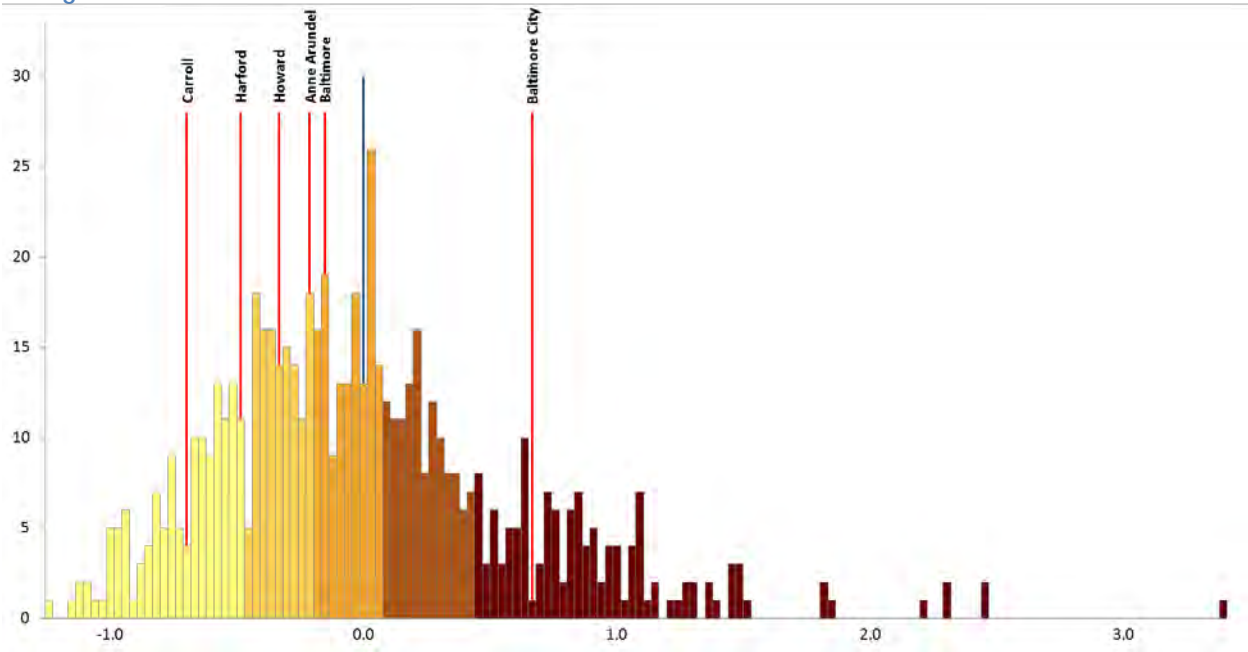
Tracts in Each Opportunity Category
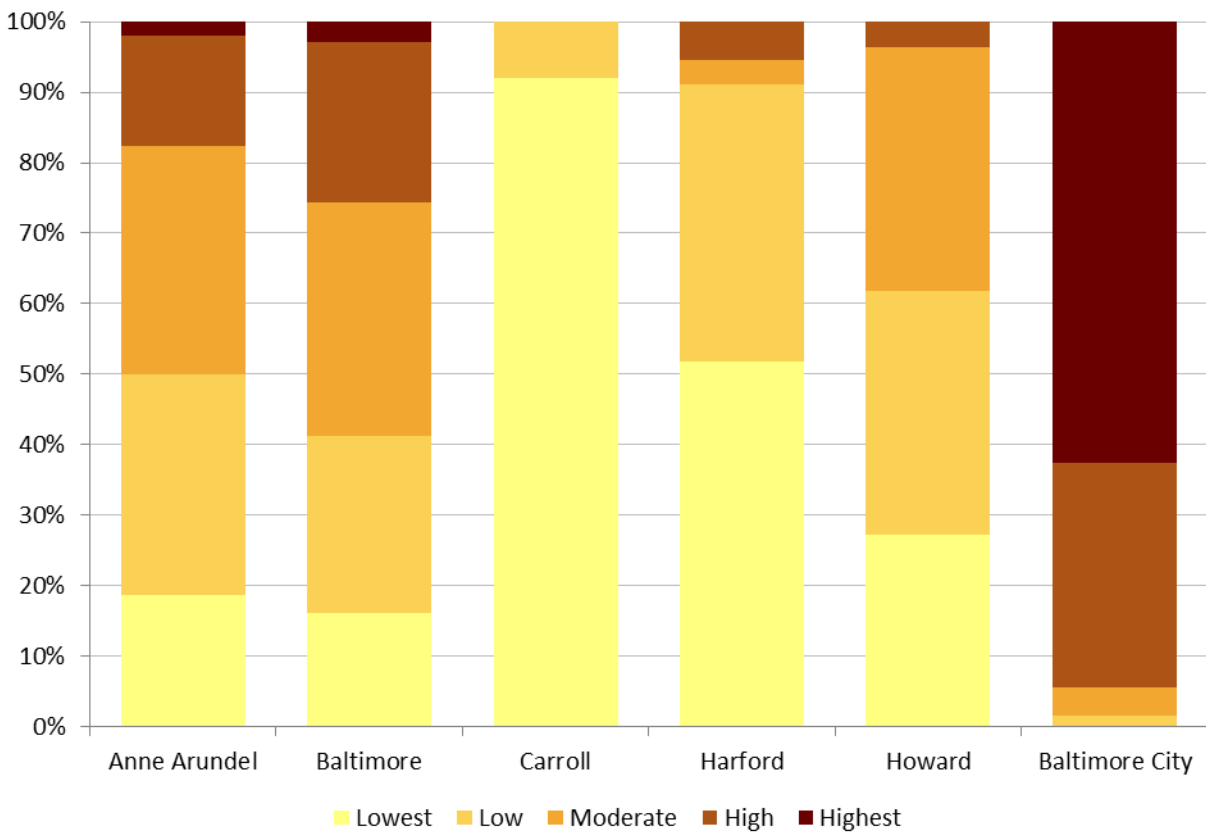
Index Map

OMAP Transportation & Mobility Index

Legend:
- Lowest Opportunity
- Moderate Opportunity
- Highest Opportunity
- Excluded CTs
- No data

Miles
0   5   10

Source: NCSG 2013
Geography: Census Tract 2010

NCSG
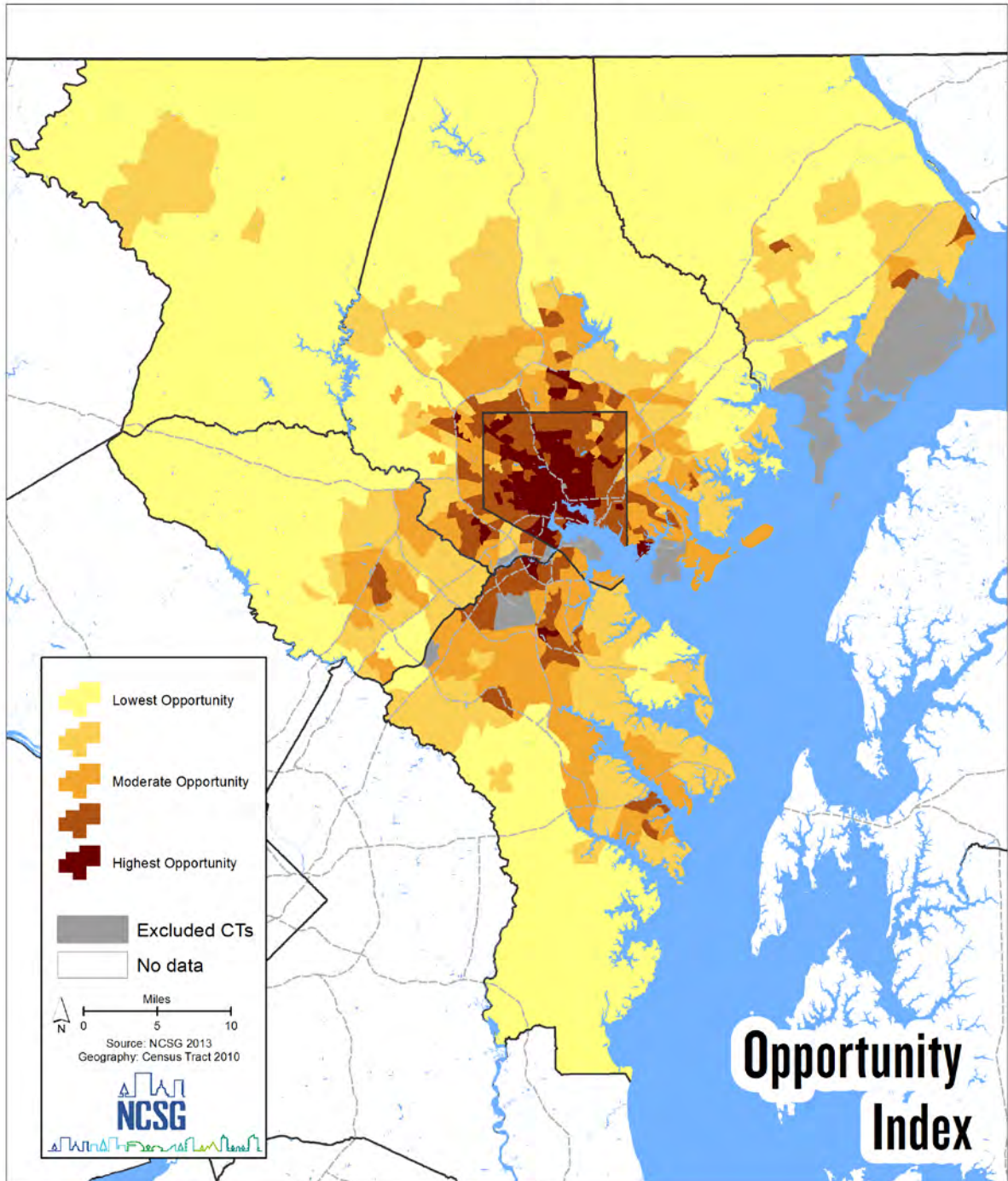
Opportunity Index

COMPOSITE OPPORTUNITY MAPS

OMAP COMPOSITE OPPORTUNITY MAP (EQUAL CATEGORY WEIGHTS)

The following are the results of combining the OMAP's six category indices together to create a single composite opportunity index map. In this case, all category indices have been weighted equally. This combination of 92 indicators, across the six categories, has resulted in Howard County receiving the highest average opportunity score (83rd percentile), followed by Anne Arundel (67th), Baltimore (58th), Harford (41st) and Carroll (34th) Counties. Baltimore City has the lowest average opportunity score (24th percentile). All combinations of jurisdictions produced a statistically significantly different tract average, with one exception. Carroll County's average tract score was not significantly different from Harford County's.

Average Tract Index Score

	Average Score	Percentile Rank	Statistically different from…					
			Howard	Anne Arundel	Baltimore	Harford	Carroll	Baltimore City
Howard	0.155	83rd	N/A	**	**	**	**	**
Anne Arundel	0.067	67th	**	N/A	*	**	**	**
Baltimore	0.033	58th	**	*	N/A	**	**	**
Harford	-0.068	41st	**	**	**	N/A		**
Carroll	-0.097	34th	**	**	**		N/A	**
Baltimore City	-0.158	24th	**	**	**	**	**	N/A

* significant at the 5% level   ** significant at the 1% level

Quintile Limits

Minimum	-0.560
1st Quintile	-0.183
2nd Quintile	-0.071
3rd Quintile	0.040
4th Quintile	0.137
Maximum	0.416

Histogram
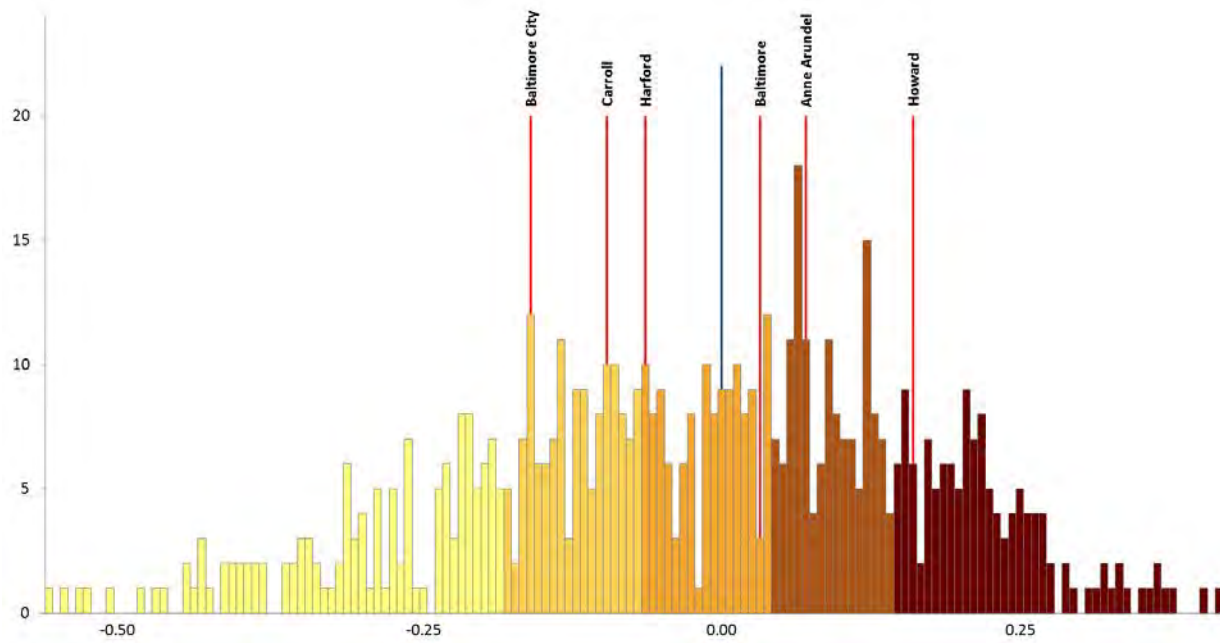
Tracts in Each Opportunity Category
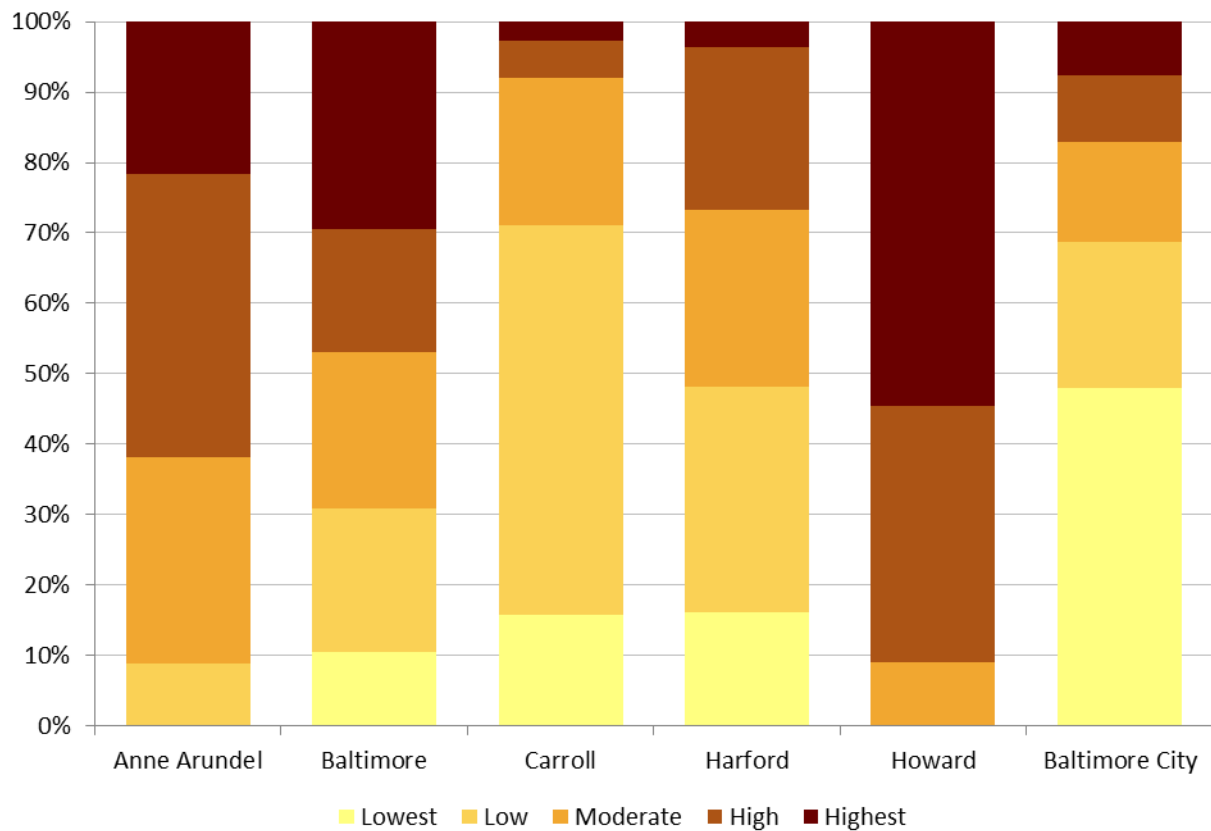
Index Map

OMAP Composite Opportunity Index

Lowest Opportunity

Moderate Opportunity

Highest Opportunity

Excluded CTs

No data

Miles
0   5   10

Source: NCSG 2013
Geography: Census Tract 2010

NCSG
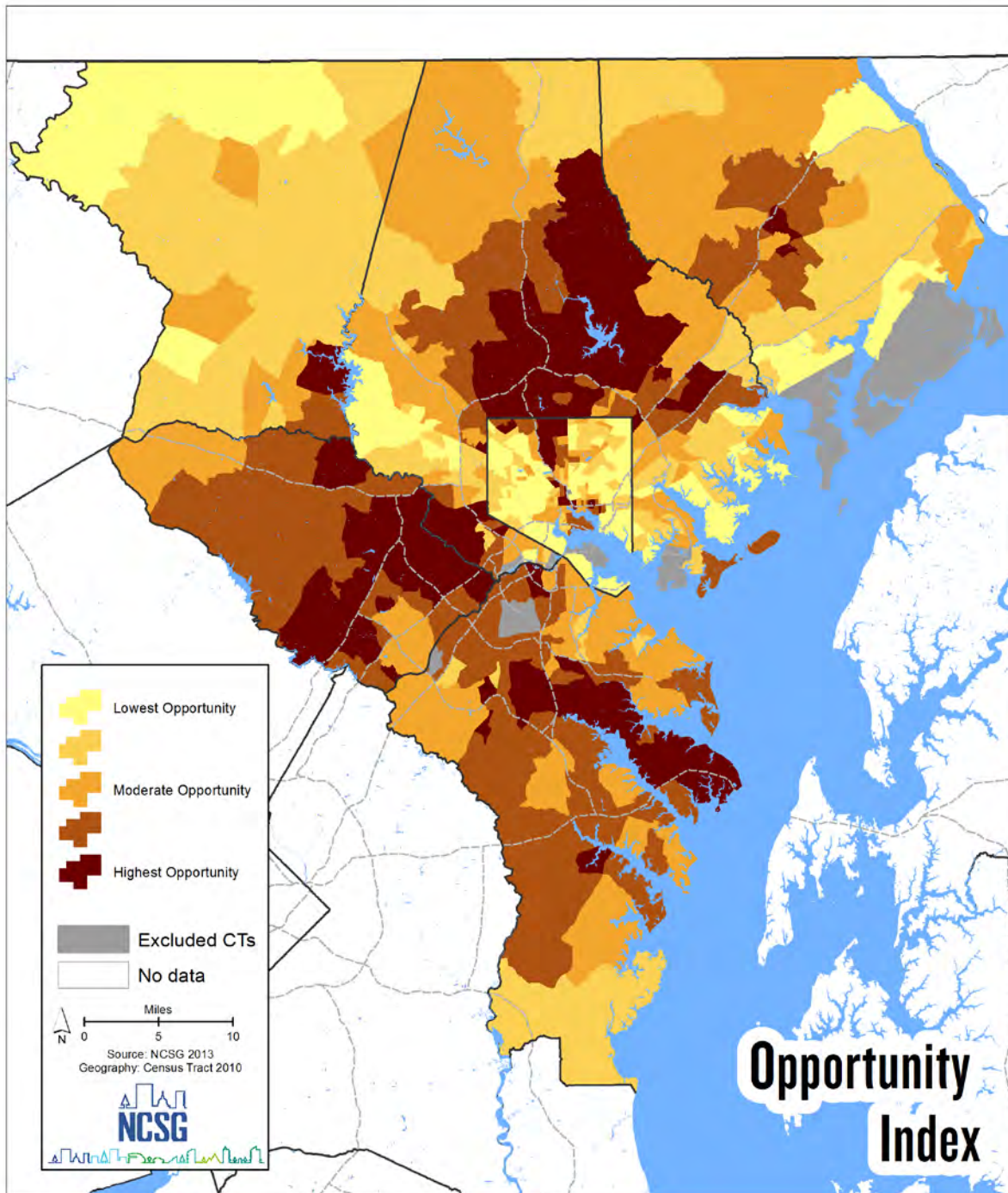
Opportunity Index

NCSG COMPOSITE OPPORTUNITY MAP

On September 3, 2013, Baltimore Opportunity Collaborative staff requested that we create a separate composite opportunity index map that would ideally incorporate about 30 indicators total from across the six categories of indicators. Drawing upon our knowledge of the determinants of opportunity, a review of what previous opportunity mapping efforts from across the country, and the valuable opinions and feedback we received through the OMAP process, we created an index that included 32 indicators. The table below lists these indicators, which were all equally weight (thus, each indicator represented 3.1 percent of the composite index):

Category	Subcategory	Indicator Title
EDUCATION	Elementary School	Student Performance (Elementary School)
	Middle School	Student Performance (Middle School)
	High School	Student Performance (High School)
		High School Dropout
	Adult Workforce Development	Access to Work Force Investment Area Training Programs
HOUSING AND NEIGHBORHOOD QUALITY	Housing Burden/Affordability	High Cost Loan Rate
	Housing Market	Foreclosure Rate
		Vacant Units Abandoned
SOCIAL CAPITAL	N/A	Access to Combined Civic, Social, Community & Religious Organizations
		Percent Population Aged 25 to 44
		Racial Diversity Index
		Percent Population Having Bachelor's Degree or Greater
		Median Income
		Percent of Households in Poverty
		Percent of Labor Force Unemployed
		Population Density
		Percentage of Owner Occupied Housing Units
		Percent Single Parent Households
PUBLIC HEALTH AND SAFETY	Public Health	Infant Mortality Rates
		Teen Birth Rates
		Rate of Low Birth Weight
		Access to Hospitals
	Environment	Access to Parks
	Crime	Crime Risk Index: Total Crime
EMPLOYMENT AND WORKFORCE	Jobs	Total Jobs Accessible by Auto
		Total Jobs Accessible by Transit
		Accessibility Gap between Transit and Auto
		Change in Job Density (2002-2010)
	Workforce	Job Access Ratio
TRANSPORTATION AND MOBILITY	N/A	Transit Access (1/4 Buffer from Transit Stops)
		Transit Connectivity Index
		Walk Score

Since this index was created by weighting all indicators equally, the relative weight of each category is based on the number of indicators chosen in the category. With ten indicators, the social capital indicators contribute the most (31.3 percent) to the NCSG composite opportunity index. The housing and neighborhood quality category and the transportation and mobility category contribute the least (9.4 percent) with only three indicators chosen from each.

The results of this index are similar to the composite index created by the OMAP. Over 61 percent of the 660 tracts in the region scored in the same opportunity level in both composite indices. Of

those that did have different opportunity levels in the two indices, nearly 92 percent only changed by one level. Similar to the OMAP composite index, Howard County was ranked at the top (85th percentile) and Baltimore City is ranked at the bottom (22nd percentile) in terms of average tract opportunity score. Only Harford County did not have any tracts score in the region's highest opportunity category.

Average Tract Index Score

	Average Score	Percentile Rank	Statistically different from…					
			Howard	Baltimore	Anne Arundel	Carroll	Harford	Baltimore City
Howard	0.036	85th	N/A	**	**	**	**	**
Baltimore	0.008	59th	**	N/A		**	**	**
Anne Arundel	0.002	55th	**		N/A	**	**	**
Carroll	-0.010	44th	**	**	**	N/A		**
Harford	-0.018	36th	**	**	**		N/A	**
Baltimore City	-0.037	22nd	**	**	**	**	**	N/A

* significant at the 5% level   ** significant at the 1% level

Quintile Limits

Minimum	-0.157
1st Quintile	-0.040
2nd Quintile	-0.013
3rd Quintile	0.009
4th Quintile	0.030
Maximum	0.133

Histogram
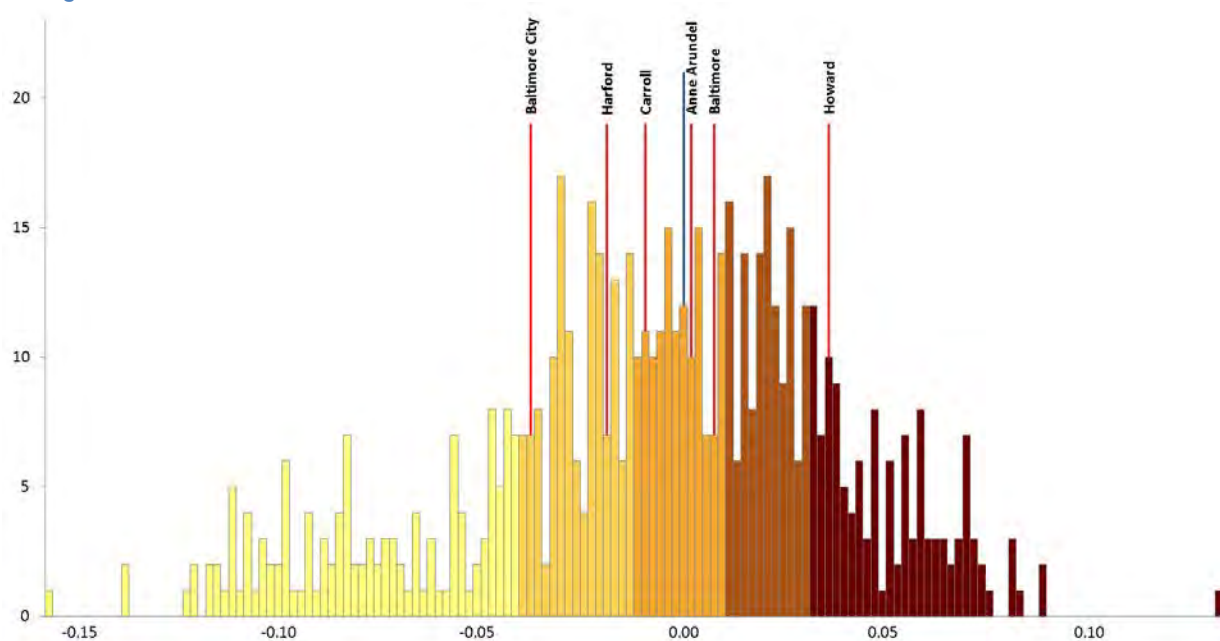
Tracts in Each Opportunity Category
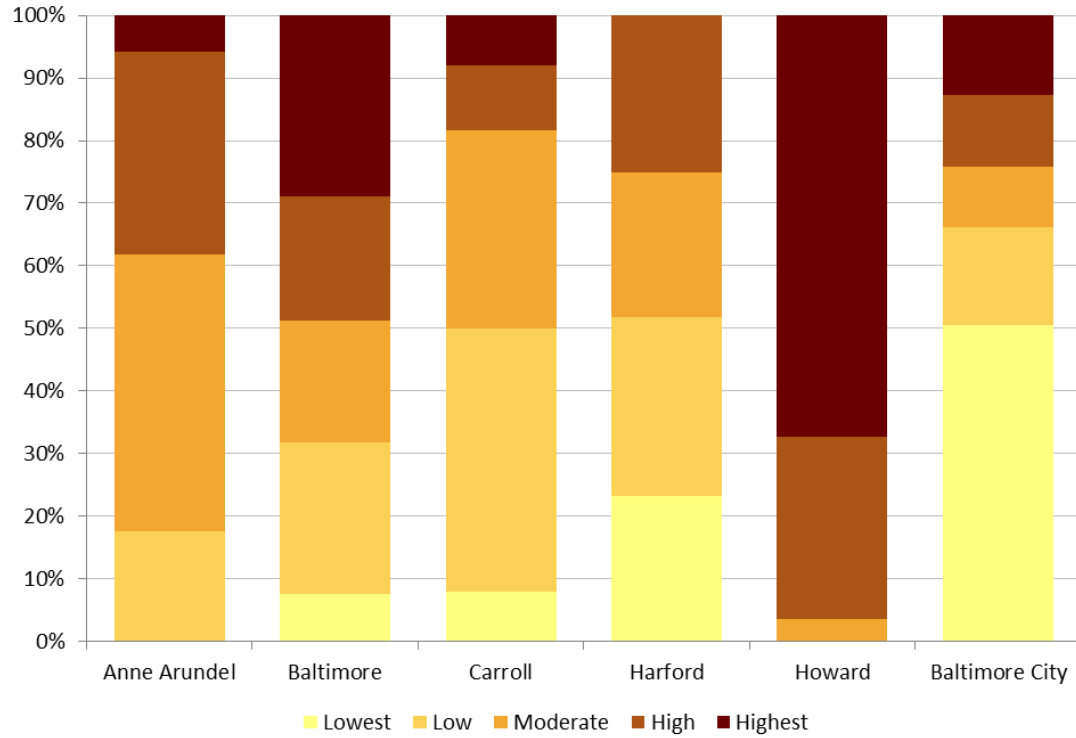
Index Map

NCSG Composite Opportunity Index

Lowest Opportunity

Moderate Opportunity

Highest Opportunity

Excluded CTs

No data

Miles
0   5   10
N

Source: NCSG 2013
Geography: Census Tract 2010

NCSG
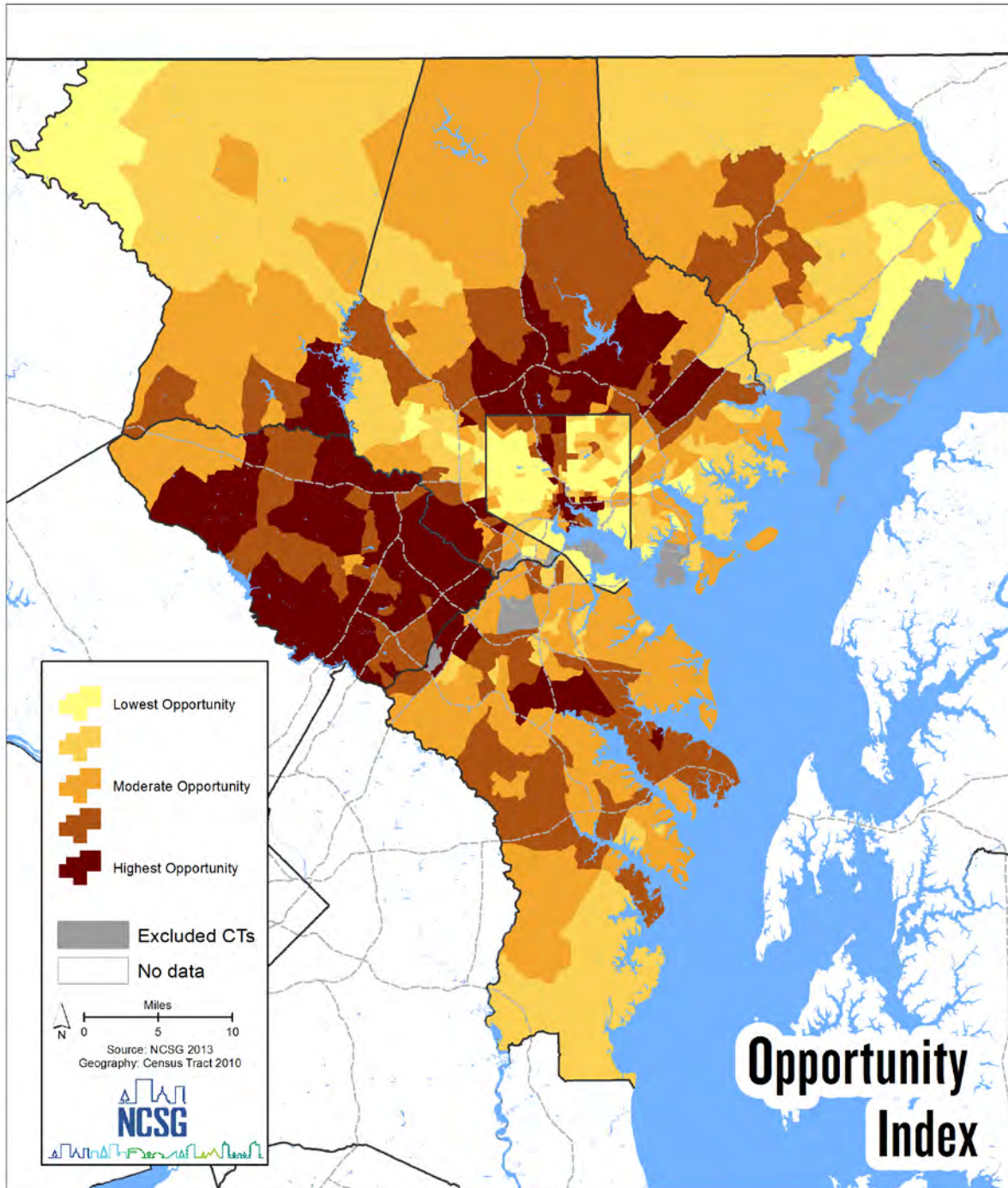
Opportunity
Index

APPENDIX A: DATA DOCUMENTATION

GEOGRAPHIC SCOPE AND SCALE

The NCSG's opportunity mapping efforts encompass the entire Baltimore Metropolitan Council (BMC) region, which includes Baltimore City and Anne Arundel, Baltimore, Carroll, Harford, and Howard Counties. As applicable and as data are available, jobs and amenities that exist outside the boundaries of the BMC region are included in our accessibility measures.[2] Table 1 below provides summary statistics for the region and its jurisdictions.

	Land Area (sq. miles)	Census Tracts	Population, 2012 est.	Jobs, 2011	Income, 2012 (per capita)
Anne Arundel	416	104	550,488	363,368	$39,537
Baltimore	599	214	817,455	509,119	$32,726
Carroll	449	38	167,217	83,126	$34,138
Harford	440	57	248,622	118,208	$33,703
Howard	252	55	299,430	196,220	$44,670
Baltimore City	81	200	621,342	390,754	$22,754
Region	2,237	668	2,704,554	1,660,795	$33,289
Maryland	12,407		5,884,563	3,395,660	$34,500

Table 1. Summary Statistics for the BMC Region and its Jurisdictions.

The data gathered for this exercise are associated with various geographic units, including census tracts, school service areas, and point locations. We used standard GIS methods, which are explained below, of aggregating and disaggregating the data, however, to consistently use 2010 census tracts as our unit of analysis for the opportunity maps. Although the sizes of census tracts vary across the region in terms of land area, they are intended to be "relatively homogeneous units with respect to population characteristics, economic status, and living conditions."[3]

Exceptions and Outliers

In total, the region includes 668 census tracts, distributed across the six jurisdictions as shown in Table 1Table 1. There were eight unique census tracts, however, that we chose to exclude from our analysis because their data were dependably anomalous. In some cases, data for these tracts were missing for many of our indicators. In other cases, the data for these tracts were consistently extreme. In most cases these are not areas where someone could chose to live. Although we have removed these tracts from our maps, any jobs and amenities that exist in these tracts are included in our accessibility analyses. Below are descriptions of these eight tracts that provide an explanation for their exclusion:

- *Anne Arundel County Tract 7404.* This tract is one square mile and has a population of 4,140, but has no housing units and not a single dollar of income for its residents. More than one third of our indicators are missing data for this tract, which consists entirely of a correctional facility.

---

[2] For example, jobs located in Montgomery County that are accessible from Anne Arundel or Howard Counties are included in our employment access measures.

[3] Source: U.S. Census Bureau. See http://factfinder2.census.gov/help/en/glossary/c/census_tract.htm.

- *Anne Arundel County Tract 9800.* This 5.1 square mile tract has a population of 5, but no housing units or income. More than half of our indicators are missing data for this tract, which is home to BWI Thurgood Marshall Airport.
- *Baltimore County Tract 9800.* There is no population, there are no housing units, and there is not a single dollar in income associated with this 4.8 square mile tract. More than half of our indicators have NULL values for this tract.
- *Baltimore County Tract 9801.* There is no population, there are no housing units, and there's not a single dollar in income in this tract with a total land area of 0.6 square miles. More than half of our indicators are missing data for this tract.
- *Baltimore County Tract 9802.* There is no population, there are no housing units, and there's not a single dollar in income in this tract with a total land area of 0.6 square miles. More than half of our indicators are missing data for this tract.
- *Baltimore City Tract 1003.* This tract, in downtown Baltimore, has a land area of 0.1 square miles. Its population is 4,009, but there are no housing units and not a single dollar in income associated with the tract. The tract is home to a state penitentiary.
- *Baltimore City Tract 2506.* This tract covers the Wagner's Point area of Baltimore City. Environmental concerns have led this industrial tract to have no population, no housing units, and not a single dollar in personal income. This 2.2 square mile tract is also home to the Patapsco Wastewater Treatment Plant. More than half of our indicators are missing data for this tract.
- *Harford County Tract 3065.* At 59.0 square miles, this census tract is the largest tract in the region and is nearly three quarters the size of Baltimore City. The tract is largely comprised of the U.S. Army's Aberdeen Proving Ground. Due to its large size and relatively small population (only 2,216 people according to the 2010 Census), this tract often appeared as an outlier in our data.

In the maps that we created and present in this memo (see memo and Appendix D), these eight census tracts appear in a gray tone. In contrast, census tracts that have no data for a particular indicator appear white in the maps.

INDICATOR SELECTION

On October 26, 2012, the NCSG presented a preliminary set of approximately 50 indicator maps[4] to the Opportunity Collaborative's Nexus Committee. Absent the tools or ability to broadly engage community members in identifying the region's key determinants of opportunity, the Opportunity Collaborative's Nexus Committee agreed to the establishment of an Opportunity Mapping Advisory Panel (OMAP) to both expand and refine the set of indicator maps and to create a series of composite index maps. OMAP participants included members of the Collaborative, people recommended by the Nexus Committee, members of the Housing and Workforce Development workgroups (including their respective consultants hired by the Collaborative), and other subject matter experts invited to participate as we addressed specific categories of indicators.

The OMAP advised the NCSG team on data sources, data transformation, and data mapping, as well as which maps to use in calculating composite opportunity indices. The OMAP was convened for

---

[4] We use the term "indicator map" to refer to any map that displays one measure (e.g., median household income, access to employment, etc.). A "composite index map" is one which displays multiple standardized indicators merged into a single index. Opportunity mapping includes both indicator and composite index maps, as well as the overlaying of additional data on top of those maps to understand their interaction with other measures (e.g. the location of minority households relative to areas of higher or lower opportunity).

the first time on November 27, 2012. Over the next eight months, the OMAP met a total of 14 times for approximately 30 total hours. Nearly 70 people participated in these discussions. In general, we met twice for each of six categories of indicators. Below is a schedule of the 14 OMAP meetings:

Meeting Date	Meeting Topic
November 27, 2012	Education Indicators I
January 15, 2013	Education Indicators II
January 29, 2013	Workforce and Workforce Development Indicators[5]
February 12, 2013	Housing and Neighborhood Quality Indicators I
February 26, 2013	Housing and Neighborhood Quality Indicators II
March 12, 2013	Social Capital Indicators I
March 26, 2013	Social Capital Indicators II
April 9, 2013	Public Health and Safety Indicators I
April 25, 2013	Public Health and Safety Indicators II
May 7, 2013	Employment and Workforce Indicators I
May 21, 2013	Employment and Workforce Indicators II
June 4, 2013	Transportation and Mobility Indicators I
June 18, 2013	Transportation and Mobility Indicators II
July 8, 2013	Complete Indicator Review

In the first of the two meetings for each category, the NCSG team presented preliminary data and indicator maps and OMAP participants commented on the validity and utility of the maps, while offering suggestions for new maps and data. In the second meeting, the OMAP reviewed new and updated maps and attempted to come to a consensus on which maps to use for a composite category index. During these second topic meetings, OMAP participants were asked to individually apply weights to the indicators that were discussed in the meeting. These weights were averaged across all participants to create cumulative weights for the creation of composite category index maps. The original intention was to review the maps that these cumulative weights produced, further debate the inclusion of particular indicators, and negotiate modifications to the cumulative weights. In reality, there was only one topic area for which we had enough time to conduct this additional discourse (Education). As a result, the OMAP met one final time in July to review and modify the cumulative weights.

Appendix D includes the 92 indicators that were selected by the OMAP to be included in opportunity indices.[6] When we met with the Opportunity Mapping Advisory Panel, we asked participants to review indicator maps that displayed the actual data values for an individual measure. In addition to the maps, we provided the OMAP with histograms that showed the distribution of the data, correlation matrices that highlighted any relationship between the various indicators, regional and county averages for the indicators, and in some cases statewide or national comparisons or context. Most of this information is included with the maps in the Appendix D. Also provided are definitions of the indicators and brief explanations of the methods used to calculate

---

[5] The OMAP met once in January to begin discussion on workforce and workforce development indicator data. This meeting helped guide the NCSG team's preparation for the Employment and Workforce meetings held later in May.

[6] The appendix actually includes 93 indicator maps. On September 3, 2013, BMC staff asked the NCSG team to create its own composite opportunity index using approximately 30 measures from across the six categories of indicators. In doing so, we added one more indicator—Change in Job Density from 2002 to 2010—that the OMAP did not include in an index.

and map the data. The correlation coefficients are presented separately in Appendix C. Additional data calculations and methods are explained below and others (such as the conversion of industry level employment data to skill level and the calculation of Walk Score) were fully explained in the appendix to our previous memo, dated October 26, 2012.

INDICATOR DATA SOURCES

We have culled our data for this mapping effort from a variety of public and private sources. Specific data sources are identified for each indicator map in Appendix D, and include, but are not limited to the following:

- Applied Geographic Systems
- Baltimore City Public Schools
- Baltimore County Public Schools
- Carroll County Public Schools
- Center for Neighborhood Technology
- ESRI
- Harford County Public Schools
- Howard County Public Schools
- Job Opportunities Task Force Maryland Department of Labor, Licensing and Regulation
- Maryland Department of Health and Mental Hygiene
- Maryland Department of Natural Resources
- Maryland Department of Planning
- Maryland Department of Transportation
- Maryland Higher Education Commission
- Maryland State Department of Education
- Maryland Transit Administration
- RealtyTrac
- U.S. Census Bureau
- U.S. Department of Housing and Urban Development
- U.S. Environmental Protection Agency

CONVERSION OF DATA TO CENSUS TRACTS

Most of the data used in this effort are polygon level data, meaning that the data are associated with a particular geography such as a census tract, a transportation analysis zone, a school service area, or a county. For the most part, these data are easily converted to census tracts in GIS by intersecting the two geographies and proportionally allocating values from the source geography to census tracts.

We have several data sources, however, that are associated with specific addresses. These point level data include the location of firms, workforce training programs, community colleges, hospitals, churches and other community amenities. In many cases we wanted to measure access to these locations and calculate values that could be associated with census tracts to be included in an opportunity index. To do this this we used three different approaches, depending on the nature of the indicator: Euclidean proximity, kernel density, and service coverage area.

Euclidean Proximity

We applied the proximity method (or "Euclidean Distance" method in ArcGIS10) to calculate how close each census tract is to the nearest point of interest. To create a value for a census tract, a 0.15 mile raster grid is first laid over the map of the region. A Euclidean—or straight line—distance is

then calculated between the centroid of each grid to the centroid of the grid with the nearest point location for the data being mapped. For each census tract, the grid Euclidean distance values are averaged to determine a value for the tract. We used the proximity method when access to multiple instances of the amenity was unimportant and when the attributes of the amenity were not used to weight its attraction.

Kernel Density

Unlike the proximity measure, which calculates the distance to the single nearest amenity, the GIS kernel density calculation is a distance decay function that is weighted by the number of amenities within a particular search area. It also allows us to further weight the calculated value by an attribute of the point location (e.g., the number of beds at a hospital, size of park, etc.). To calculate a kernel density value for a census tract, GIS first creates a raster grid over the map (in this case each grid cell represented approximately 1.6 acres). Each grid receives a value if it falls with a designated search radius[7] of each point location for the data being mapped. The value assigned is calculated through a distance decay function that can be weighted by an attribute of the point location:

$$\sum_{j = 1 \text{ to } m} (a * w_j) / f(r_i)$$

$$f(r_i) = r_i^{\,t}$$

Where,

   a: constant
   w_j weight for each feature
   r_i :   distance between two cells
   f(r_i): function of distance
   t: travel impedance factor

Grid cells that fall within the search radii of multiple point locations receive higher values. For each census tract, we summed the grid values divided by the tract's land area to determine a value for the tract.

Service Coverage Area

Another option for converting point data to census tract data was to calculate the percent of a census tract that fell within a particular radius of the point. In some cases we used actual distances (e.g., the percent of a tract that falls within a ¼ mile of a transit station), in other cases we used the street network to calculate a travel time buffer (e.g., the percent of a tract that falls with a 10 minute drive from an emergency ambulance service provider). In general, we use this method when access to multiple point locations was unimportant. In some cases, however, we compounded coverage area intersections with the tracts to generate higher values for tracts with access to multiple point locations (in these cases, a tract could get a value higher than 1, indicating that it is more than 100% covered, even if there were parts of the tract not located within the buffer of any point location).

SCHOOL CHOICE IN BALTIMORE CITY

Several years ago, Baltimore City Public Schools enacted a policy that provides 8th grade students with the opportunity to attend high school anywhere in the city. Students can identify up to five

---

[7] The search area used for each of these indicators was based on feedback we received from the OMAP in its last meeting, when we asked participants to identify that distance at which they believe a person no longer receives the benefits of a particular amenity.

schools they would want to attend, and where they are admitted depends on a number of school dependent criteria and, potentially, a lottery system. Since student enrollment in a city high school is not based on a student's residence within a given service area boundary, we needed to identify another method for allocating school performance data across the city. The school choice program was intended to provide equal opportunity to all students in the city regardless of where they live in the city. With support of the OMAP, we decided to give all census tracts in Baltimore City the same value for each high school indicator. The value given to the tracts was the average of all values for all schools in the city, weighted by enrollment. The school choice program also now applies to middle schools. The OMAP, however, did not decide to similarly adjust the middle school indicator scores, believing the middle school program is not as widely used as the high school program.

COMPOSITE INDEX CALCULATION

To create opportunity index maps that combine multiple indicators with different units or scales into a single index, we needed to standardize the data into a single unit. Our approach was to standardize the data at the census tract level across the region by calculating z-scores. A z-score is a statistical measure that captures the relative distance between an indicator's value for an individual census tract and the mean value of the indicator across all census tracts in the region. The z-score is reported in terms of standard deviations from the mean, where standard deviation is a measure of the data's dispersion. A census tract with a positive z-score for an indicator means that its value for that indicator is greater than the mean value of all census tracts. Conversely, a negative z-score signifies an indicator value that is less than the mean. For example, the median household income has a mean of $68,770 among the 660 census tracts included in this mapping exercise. The measure's standard deviation is $31,676. A census tract with a median household income of $100,446 ($68,770 plus $31,676), would therefore be one standard deviation above the mean and have a z-score of 1.00 for the median household income measure.

Once the data have been standardized, we can combine indicators within a category to form indices of opportunity. Positive z-scores will increase a tract's index scores and the highest scores represent the tracts with the highest relative opportunity.[8] The indicators within each index can be weighted to give more or less importance to specific indicators. In general, previous opportunity mapping efforts, including those by the Kirwan Institute for the Study of Race and Ethnicity at The Ohio State University—often considered the pioneer of opportunity mapping—have weighted all contributing indicators equally. The weighting of indicators—or even the decision to include or exclude an indicator from an index—is largely a value-based judgment and can offer policy makers the opportunity engage the public in conversations about priorities for growth in the region.

Finally, category index maps can be further weighted (or not weighted) and combined to create a composite opportunity index.

---

[8] Census tracts that are missing a value for a particular indicator receive z-scores of zero for that indicator. Therefore, the indicator is treated as if the tract had the mean value for the indicator and has no impact whatsoever on the calculation of the index score.

APPENDIX B: OMAP PARTICIPANTS

Meeting Participants
Chelsea Arkin, Green & Healthy Homes Initiative
Uri Avin, Planning & Design Center at the NCSG
Charles Baber, Baltimore Metropolitan Council
Caryn Bell, Johns Hopkins School of Public Health
Jeff Bronow, Howard County Planning & Zoning
Dunbar Brooks, Baltimore Metropolitan Council
Jim Bunch, Sabra-Wang
Ken Choi, Maryland Department of Planning
Lyn Farrow Collins, Baltimore Metropolitan Council
Peter Conrad, Maryland Department of Planning
Jackie Cornish, Baltimore County Department of Planning
Keith Davis, Baltimore City Health Department
Chancy Edwards, RDA Global
Ruthie Fesahazion, Baltimore City Health Department
Allison Forbes, Maryland Department of Housing and Community Development
Mark Goldstein, Maryland Department of Planning
Scott Hansen, Maryland Department of Planning
Jamie Harding, Johns Hopkins School of Public Health
Robert Hellauer, Greater Baltimore Committee
Seema Iyer, The Jacob France Institute, University of Baltimore
Nancy Jones, Baltimore Neighborhood Indicators Alliance
Matthew Kachura, Baltimore Neighborhood Indicators Alliance
Eli Knaap, National Center for Smart Growth
Gerrit Knaap, National Center for Smart Growth
Milena Kornyl, Baltimore Mayor's Office of Employment Development
Jill Lemke, Baltimore City Planning Department
Chao Liu, National Center for Smart Growth
Ting Ma, National Center for Smart Growth
Patrick Maier, Innovative Housing Institute
Stephanie Martins, Maryland Department of Planning
Carmen Morosan, Baltimore City
Jamie Nash, Baltimore City Food Policy Initiative
Bert Nixon, Howard County Environmental Health
Sandi Olek, Maryland Department of Natural Resources
Brian O'Malley, Central Maryland Transportation Alliance
Jim Palma, Maryland Department of Business and Economic Development
Travis Pate, Baltimore City Planning Department
Dolores Paunil, Maryland Department of Labor, Licensing and Regulation
Graham Petto, Maryland Department of Planning
Ben Pickar, Howard County Planning & Zoning
Dan Pontious, Baltimore Metropolitan Council
Glenn Robinson, Morgan State University
Barbara Samuels, Maryland ACLU
Jason Sartori, Integrated Planning Consultants, LLC

Marty Schwartz, Vehicles for Change
Chris Seals, RDA Global
Al Sundara, Maryland Department of Planning
Kate Sylvester, Maryland Department of Transportation
Joe Tassone, Maryland Department of Planning
Fran Trout, Howard County Office of Workforce Development
Michael Walk, Maryland Transit Administration
Liz Williams
Kaitlyn _____, unknown

Consulted Resources
Raquel Beverly, Maryland Department of Labor, Licensing and Regulation
Casey Dawkins, National Center for Smart Growth
Ellen Flowers-Fields, Maryland Department of Labor, Licensing and Regulation
Mary Gable, Maryland State Department of Education
David Goshorn, Maryland Department of Natural Resources
Ron Hartman, Veolia
Samantha Luckhardt, Baltimore City Health Department
Matt O'Connell, Sabra-Wang
John Powell, Howard County Planning & Zoning
Matt Schmid, Maryland Department of Business and Economic Development
Brian Schwartz, Johns Hopkins School of Public Health
Paul Silberman, Sabra-Wang
Mary Jo Yeisley, Maryland Department of Labor, Licensing and Regulation
Rachel Yong, Baltimore City Food Policy Initiative

APPENDIX C: CORRELATION COEFFICIENTS

	Student Performance (Elementary School)	3rd Grade Reading	3rd Grade Math	5th Grade Reading	5th Grade Math	Percent of Teachers Highly Qualified (Elementary School)	Student Performance (Middle School)	Percent of Teachers Highly Qualified (Middle School)	Student Performance (High School)	Advanced Placement Course Enrollment	Advanced Placement Exam Scores	SAT Scores	High School Dropout	Percent of Teachers Highly Qualified (High School)	Access to Work Force Investment Area Training Programs	Proximity to Community Colleges	Proximity to Private Career Schools
	Elementary School						Middle School		High School						Adult Workforce		
Student Performance (Elementary School)	1.00	0.92	0.89	0.94	0.91	0.65	0.80	0.68	0.82	0.55	0.72	0.81	-0.63	0.61	-0.60	0.43	0.33
3rd Grade Reading	0.92	1.00	0.88	0.84	0.82	0.60	0.75	0.64	0.78	0.52	0.69	0.76	-0.59	0.56	-0.54	0.34	0.24
3rd Grade Math	0.89	0.88	1.00	0.81	0.77	0.50	0.68	0.57	0.71	0.46	0.61	0.69	-0.53	0.51	-0.53	0.34	0.25
5th Grade Reading	0.94	0.84	0.81	1.00	0.88	0.60	0.74	0.65	0.77	0.48	0.65	0.74	-0.57	0.54	-0.58	0.40	0.33
5th Grade Math	0.91	0.82	0.77	0.88	1.00	0.62	0.75	0.61	0.74	0.49	0.65	0.73	-0.55	0.54	-0.53	0.38	0.30
Percent of Teachers Highly Qualified (Elementary School)	0.65	0.60	0.50	0.60	0.62	1.00	0.61	0.65	0.61	0.40	0.54	0.61	-0.46	0.53	-0.41	0.33	0.24
Student Performance (Middle School)	0.80	0.75	0.68	0.74	0.75	0.61	1.00	0.69	0.81	0.55	0.75	0.81	-0.68	0.65	-0.62	0.41	0.29
Percent of Teachers Highly Qualified (Middle School)	0.68	0.64	0.57	0.65	0.61	0.65	0.69	1.00	0.75	0.42	0.70	0.75	-0.63	0.65	-0.54	0.41	0.36
Student Performance (High School)	0.82	0.78	0.71	0.77	0.74	0.61	0.81	0.75	1.00	0.67	0.89	0.98	-0.78	0.75	-0.74	0.47	0.38
Advanced Placement Course Enrollment	0.55	0.52	0.46	0.48	0.49	0.40	0.55	0.42	0.67	1.00	0.63	0.69	-0.56	0.59	-0.40	0.22	0.12
Advanced Placement Exam Scores	0.72	0.69	0.61	0.65	0.65	0.54	0.75	0.70	0.89	0.63	1.00	0.94	-0.85	0.72	-0.71	0.37	0.31
SAT Scores	0.81	0.76	0.69	0.74	0.73	0.61	0.81	0.75	0.98	0.69	0.94	1.00	-0.81	0.76	-0.71	0.45	0.37
High School Dropout	-0.63	-0.59	-0.53	-0.57	-0.55	-0.46	-0.68	-0.63	-0.78	-0.56	-0.85	-0.81	1.00	-0.73	0.57	-0.46	-0.40
Percent of Teachers Highly Qualified (High School)	0.61	0.56	0.51	0.54	0.54	0.53	0.65	0.65	0.75	0.59	0.72	0.76	-0.73	1.00	-0.46	0.32	0.29
Access to Work Force Investment Area Training Programs	-0.60	-0.54	-0.53	-0.58	-0.53	-0.41	-0.62	-0.54	-0.74	-0.40	-0.59	-0.71	0.57	-0.46	1.00	-0.64	-0.63
Proximity to Community Colleges	0.43	0.34	0.34	0.40	0.38	0.33	0.41	0.41	0.47	0.22	0.37	0.45	-0.46	0.32	-0.64	1.00	0.67
Proximity to Private Career Schools	0.33	0.24	0.25	0.33	0.30	0.24	0.29	0.36	0.38	0.12	0.31	0.37	-0.40	0.29	-0.63	0.67	1.00
Median Housing Value	0.64	0.60	0.56	0.57	0.60	0.43	0.65	0.49	0.63	0.57	0.61	0.66	-0.56	0.51	-0.48	0.35	0.27
Median Gross Rent	0.43	0.45	0.40	0.38	0.38	0.30	0.43	0.31	0.42	0.38	0.38	0.44	-0.34	0.34	-0.30	0.09	0.07
Percent Change of Total Housing Units (2000-2010)	0.22	0.22	0.19	0.20	0.21	0.14	0.20	0.17	0.22	0.15	0.21	0.23	-0.19	0.14	-0.25	0.17	0.13
Percent Change of Total Occupied Housing Units (2000-2010)	0.26	0.26	0.23	0.24	0.25	0.18	0.24	0.20	0.26	0.17	0.24	0.27	-0.23	0.16	-0.30	0.20	0.16
Percent Change of Owner-Occupied Housing Units (2000-2010)	0.04	0.02	0.05	0.03	0.06	0.02	0.00	0.05	0.04	-0.01	0.00	0.03	0.00	0.06	-0.07	0.15	0.18
Percent Change of Renter-Occupied Housing Units (2000-2010)	0.05	0.03	0.04	0.03	0.07	0.01	0.02	0.00	0.02	0.01	0.01	0.03	0.03	0.04	0.04	0.04	0.07
Percent of Single Family Housing Units (Attached)	-0.60	-0.56	-0.53	-0.58	-0.55	-0.46	-0.53	-0.51	-0.59	-0.36	-0.50	-0.58	0.41	-0.43	0.52	-0.38	-0.33
Percent of Single Family Housing Units (Detached)	0.63	0.55	0.54	0.61	0.57	0.52	0.58	0.56	0.62	0.35	0.50	0.60	-0.42	0.47	-0.56	0.49	0.42
Percent of Multi-Family Housing Units	-0.23	-0.16	-0.19	-0.23	-0.20	-0.23	-0.24	-0.25	-0.25	-0.09	-0.16	-0.21	0.15	-0.20	0.26	-0.34	-0.30
Selected Monthly Owner Costs as Percentage of Income	-0.31	-0.29	-0.23	-0.26	-0.29	-0.26	-0.30	-0.27	-0.31	-0.27	-0.31	-0.32	0.27	-0.27	0.12	-0.04	-0.02
Gross Rent as Percentage of Income	-0.21	-0.20	-0.19	-0.17	-0.20	-0.13	-0.24	-0.13	-0.21	-0.12	-0.16	-0.20	0.18	-0.13	0.23	-0.17	-0.13
Ratio of Median Gross Rent to FMR	0.42	0.43	0.38	0.37	0.37	0.30	0.41	0.29	0.40	0.37	0.33	0.40	-0.31	0.33	-0.20	0.11	0.07
Owner Cost Burden	-0.36	-0.35	-0.30	-0.33	-0.33	-0.24	-0.37	-0.31	-0.38	-0.26	-0.36	-0.38	0.33	-0.31	0.22	-0.11	-0.07
Renter Cost Burden	-0.16	-0.16	-0.14	-0.13	-0.15	-0.13	-0.17	-0.09	-0.12	-0.16	-0.14	-0.10	0.10	0.21	-0.11	-0.11	-0.09
Severe Owner Cost Burden	-0.33	-0.33	-0.31	-0.30	-0.28	-0.21	-0.32	-0.29	-0.34	-0.22	-0.31	-0.34	0.31	-0.27	0.21	-0.16	-0.11
Severe Renter Cost Burden	-0.07	-0.07	-0.06	-0.05	-0.07	-0.02	-0.11	-0.06	-0.09	-0.01	-0.04	-0.08	0.04	-0.04	0.12	-0.11	0.00
Housing Affordability Index	-0.39	-0.36	-0.32	-0.31	-0.37	-0.28	-0.30	-0.25	-0.40	-0.40	-0.40	-0.43	0.34	-0.38	0.20	-0.20	-0.22
Housing + Transportation Index (local base)	-0.60	-0.56	-0.56	-0.58	-0.56	-0.41	-0.55	-0.48	-0.53	-0.32	-0.46	-0.52	0.43	-0.39	0.45	-0.34	-0.28
Housing + Transportation Index (AMI base)	0.67	0.63	0.60	0.62	0.60	0.46	0.68	0.55	0.66	0.50	0.63	0.68	-0.58	0.49	-0.59	0.40	0.29
High Cost Loan Rate	-0.74	-0.70	-0.64	-0.63	-0.71	-0.50	-0.72	-0.55	-0.69	-0.53	-0.67	-0.72	0.61	-0.59	0.63	-0.38	-0.30
Foreclosure Rate	-0.78	-0.73	-0.67	-0.67	-0.73	-0.52	-0.75	-0.59	-0.76	-0.55	-0.72	-0.77	0.64	-0.61	0.58	-0.48	-0.40
Vacant Units Abandoned	-0.54	-0.52	-0.50	-0.52	-0.55	-0.31	-0.52	-0.40	-0.49	-0.26	-0.40	-0.47	0.32	-0.29	0.46	-0.24	-0.20
Housing Capacity per Acre	-0.49	-0.43	-0.45	-0.53	-0.47	-0.30	-0.45	-0.37	-0.40	-0.31	-0.38	-0.38	0.25	-0.24	0.39	-0.23	-0.21
Access to Combined Civic, Social, Community & Religious Organizations	-0.65	-0.58	-0.60	-0.69	-0.58	-0.46	-0.60	-0.57	-0.61	-0.30	-0.49	-0.58	0.41	-0.38	0.63	-0.40	-0.39
Access to Public Institutions	-0.71	-0.65	-0.65	-0.72	-0.65	-0.49	-0.66	-0.60	-0.69	-0.34	-0.54	-0.66	0.45	-0.42	0.70	-0.44	-0.39
Percent Population Aged 25 to 44	-0.22	-0.16	-0.16	-0.23	-0.21	-0.26	-0.15	-0.24	-0.19	-0.15	-0.18	-0.20	0.12	-0.10	0.08	-0.16	-0.16
Racial Diversity Index	0.01	0.04	0.02	0.02	0.06	-0.12	0.07	-0.09	0.03	0.01	0.05	0.03	0.04	-0.10	-0.09	-0.15	-0.17
Percent Population Having High School Diploma or Greater	0.66	0.65	0.59	0.63	0.60	0.48	0.62	0.54	0.61	0.43	0.58	0.62	-0.55	0.44	-0.45	0.31	0.24
Percent Population Having Bachelor's Degree or Greater	0.50	0.51	0.44	0.41	0.48	0.31	0.50	0.32	0.41	0.46	0.52	0.47	-0.48	0.36	-0.19	0.07	0.01
Median Income	0.68	0.64	0.61	0.62	0.62	0.48	0.68	0.55	0.65	0.51	0.63	0.67	-0.58	0.49	-0.53	0.39	0.30
Percent of Households in Poverty	-0.67	-0.63	-0.63	-0.66	-0.60	-0.46	-0.62	-0.53	-0.61	-0.35	-0.50	-0.59	0.46	-0.41	0.53	-0.35	-0.26
Labor Force Participation Rate - Ages 16-64	0.45	0.41	0.45	0.44	0.39	0.29	0.43	0.33	0.41	0.21	0.32	0.38	-0.29	0.27	-0.38	0.24	0.19
Percent of Labor Force Unemployed	-0.62	-0.58	-0.54	-0.57	-0.59	-0.41	-0.58	-0.48	-0.55	-0.35	-0.50	-0.55	0.46	-0.44	0.64	-0.30	-0.23
Population Density	-0.67	-0.61	-0.59	-0.64	-0.61	-0.49	-0.59	-0.57	-0.63	-0.34	-0.53	-0.61	0.46	-0.43	0.64	-0.46	-0.42
Percentage of Owner Occupied Housing Units	0.60	0.53	0.54	0.59	0.54	0.50	0.55	0.53	0.55	0.28	0.45	0.52	-0.41	0.40	-0.45	0.45	0.35
Single Parent Households	-0.56	-0.53	-0.50	-0.51	-0.55	-0.40	-0.49	-0.44	-0.44	-0.31	-0.39	-0.44	0.35	-0.37	0.29	-0.23	-0.16
Cancer Risk	-0.67	-0.58	-0.58	-0.65	-0.59	-0.51	-0.60	-0.65	-0.68	-0.39	-0.58	-0.69	0.63	-0.52	0.75	-0.70	-0.66
Neurological Disease Risk	-0.40	-0.34	-0.32	-0.39	-0.34	-0.29	-0.40	-0.37	-0.40	-0.34	-0.45	-0.41	0.39	-0.30	0.09	-0.38	-0.37
Respiratory Disease Risk	-0.75	-0.67	-0.65	-0.75	-0.66	-0.56	-0.68	-0.70	-0.77	-0.43	-0.66	-0.77	0.66	-0.54	0.79	-0.63	-0.60
Infant Mortality Rates	-0.44	-0.41	-0.39	-0.37	-0.41	-0.26	-0.35	-0.27	-0.37	-0.27	-0.37	-0.38	0.29	-0.26	0.43	-0.27	-0.24
Teen Birth Rates	-0.55	-0.53	-0.45	-0.47	-0.49	-0.35	-0.56	-0.39	-0.51	-0.31	-0.49	-0.53	0.44	-0.39	0.43	-0.27	-0.24
Percent of Births to Women Receiving Late or No Prenatal Care	-0.28	-0.29	-0.26	-0.26	-0.24	-0.20	-0.27	-0.23	-0.28	-0.20	-0.21	-0.27	0.23	-0.22	0.24	-0.20	-0.18
Rate of Low Birth Weight	-0.37	-0.35	-0.33	-0.32	-0.34	-0.25	-0.33	-0.32	-0.35	-0.20	-0.30	-0.34	0.25	-0.31	0.27	-0.20	-0.18
Access to Emergency Services	-0.74	-0.67	-0.64	-0.71	-0.65	-0.54	-0.72	-0.70	-0.84	-0.45	-0.72	-0.83	0.71	-0.60	0.90	-0.66	-0.60
Emergency Services Coverage Areas	-0.70	-0.64	-0.62	-0.71	-0.62	-0.52	-0.69	-0.68	-0.77	-0.43	-0.66	-0.76	0.65	-0.55	0.81	-0.61	-0.56
Access to Social Services	-0.59	-0.50	-0.54	-0.63	-0.50	-0.41	-0.53	-0.51	-0.52	-0.24	-0.40	-0.55	0.36	-0.34	0.57	-0.40	-0.37
Access to Hospitals	-0.50	-0.41	-0.41	-0.46	-0.44	-0.42	-0.44	-0.56	-0.57	-0.24	-0.49	-0.59	0.57	-0.49	0.69	-0.73	-0.73
Access to Freestanding Ambulatory Surgical and Emergency Centers	-0.74	-0.68	-0.66	-0.72	-0.66	-0.55	-0.73	-0.71	-0.84	-0.47	-0.74	-0.83	0.74	-0.60	0.89	-0.65	-0.59
Access to All Other Outpatient Care Centers	-0.69	-0.62	-0.61	-0.67	-0.61	-0.50	-0.68	-0.65	-0.82	-0.44	-0.65	-0.78	0.64	-0.55	0.94	-0.65	-0.59
Access to Food Swamps	-0.46	-0.36	-0.43	-0.50	-0.38	-0.38	-0.37	-0.39	-0.39	-0.19	-0.31	-0.37	0.28	-0.24	0.40	-0.31	-0.30
Watershed Failure	-0.10	-0.07	-0.01	-0.10	-0.08	-0.15	-0.11	-0.02	-0.04	-0.11	-0.10	-0.07	0.09	-0.07	0.00	0.00	-0.03
Access to Parks	-0.08	-0.09	-0.07	-0.08	-0.09	-0.03	-0.07	-0.09	-0.11	-0.04	-0.08	-0.11	0.06	-0.07	0.09	0.02	-0.02
Percent Park	-0.01	0.00	0.02	-0.01	-0.03	-0.01	-0.02	-0.06	-0.04	0.01	-0.03	-0.02	0.01	0.02	0.04	-0.07	-0.07
Crime Risk Index: Total Crime	-0.67	-0.64	-0.58	-0.63	-0.59	-0.45	-0.64	-0.61	-0.78	-0.39	-0.62	-0.75	0.53	-0.49	0.74	-0.45	-0.40
Total Job Density	-0.33	-0.24	-0.30	-0.39	-0.30	-0.27	-0.32	-0.33	-0.29	-0.12	-0.23	-0.27	0.19	-0.18	0.30	-0.24	-0.22
Total Jobs Accessible by Auto	-0.56	-0.48	-0.49	-0.52	-0.49	-0.44	-0.51	-0.60	-0.61	-0.30	-0.52	-0.61	0.56	-0.56	0.73	-0.71	-0.66
Total Jobs Accessible by Transit	-0.68	-0.61	-0.60	-0.64	-0.60	-0.49	-0.66	-0.56	-0.80	-0.40	-0.66	-0.78	0.65	-0.56	0.85	-0.64	-0.58
Accessibility Gap between Transit and Auto	0.49	0.40	0.40	0.46	0.44	0.36	0.48	0.50	0.62	0.28	0.54	0.61	-0.51	0.42	-0.62	0.60	0.53
Change in Job Density (2002-2010)	0.05	0.04	0.05	0.09	0.05	-0.04	0.08	0.05	0.03	-0.01	0.02	0.03	-0.02	-0.01	-0.08	0.04	0.04
Percent Change in Total Jobs (2002-2010)	-0.06	-0.04	-0.05	-0.06	-0.07	-0.08	-0.06	-0.06	-0.10	-0.10	-0.10	-0.10	0.10	-0.14	0.10	0.05	0.02
Low Skill Workers	-0.15	-0.19	-0.15	-0.09	-0.15	-0.09	-0.15	-0.05	-0.09	-0.15	-0.22	-0.14	0.21	-0.08	0.10	0.11	0.12
Middle Skill Workers	0.30	0.28	0.26	0.33	0.25	0.21	0.27	0.28	0.32	0.18	0.20	0.23	-0.23	0.18	-0.42	0.30	0.27
High Skill Workers	0.51	0.51	0.44	0.45	0.48	0.31	0.52	0.35	0.46	0.46	0.52	0.51	-0.48	0.38	-0.33	0.17	0.10
Percent Low Skill Workers	-0.58	-0.59	-0.52	-0.51	-0.54	-0.37	-0.56	-0.39	-0.49	-0.46	-0.55	-0.54	0.53	-0.40	0.29	-0.15	-0.08
Percent Middle Skill Workers	0.09	0.09	0.10	0.15	0.04	0.11	0.05	0.12	0.12	-0.11	-0.05	0.05	0.01	0.09	-0.23	0.10	0.08
Percent High Skill Workers	0.50	0.51	0.44	0.42	0.49	0.30	0.50	0.32	0.40	0.46	0.52	0.47	-0.48	0.35	-0.18	0.07	0.00
Job Access Ratio	0.31	0.31	0.24	0.26	0.30	0.22	0.33	0.22	0.27	0.35	0.34	0.32	-0.33	0.24	-0.11	0.02	0.00
Travel Time Index	-0.12	-0.09	-0.12	-0.11	-0.12	-0.17	-0.11	-0.11	-0.10	0.00	-0.06	-0.10	0.11	-0.13	0.13	-0.08	-0.08
Driving Commuters: Percent Driving Less Than 30 Minutes	-0.18	-0.16	-0.15	-0.19	-0.11	-0.21	-0.22	-0.29	-0.28	-0.09	-0.24	-0.25	0.33	-0.11	0.40	-0.51	-0.41
Commuters: Percent Taking Transit Less Than 45 Minutes	-0.66	-0.64	-0.61	-0.64	-0.60	-0.46	-0.60	-0.53	-0.62	-0.32	-0.50	-0.59	0.42	-0.41	0.55	-0.35	-0.31
Transit Access	-0.66	-0.59	-0.57	-0.63	-0.58	-0.50	-0.63	-0.62	-0.71	-0.39	-0.56	-0.68	0.57	-0.53	0.74	-0.60	-0.55
Transit Connectivity Index	-0.16	-0.11	-0.15	-0.20	-0.11	-0.14	-0.14	-0.16	-0.13	-0.09	-0.10	-0.13	0.10	-0.07	0.16	-0.12	-0.11
Walk Score	-0.62	-0.54	-0.55	-0.65	-0.53	-0.49	-0.53	-0.56	-0.59	-0.29	-0.47	-0.56	0.41	-0.37	0.58	-0.41	-0.38
Transportation Trail Miles	0.14	0.17	0.13	0.14	0.11	0.10	0.17	0.16	0.21	0.12	0.30	0.26	-0.25	0.23	-0.04	0.08	0.04
Per Capita VMT for Home-Based Trips	0.31	0.29	0.27	0.27	0.27	0.20	0.30	0.24	0.31	0.21	0.28	0.31	-0.21	0.23	-0.36	0.24	0.24
Per Capita VHT for Home-Based Trips	0.25	0.25	0.22	0.21	0.23	0.16	0.27	0.22	0.25	0.10	0.32	0.27	-0.27	0.14	-0.31	0.25	0.20

	Housing Characteristics									Housing Burden/Affordability										Housing Market			Policy
	Median Housing Value	Median Gross Rent	Percent Change of Total Housing Units (2000-2010)	Percent Change of Total Occupied Housing Units (2000-2010)	Percent Change of Owner-Occupied Housing Units (2000-2010)	Percent Change of Renter-Occupied Housing Units (2000-2010)	Percent of Single Family Housing Units (Attached)	Percent of Single Family Housing Units (Detached)	Percent of Multi-Family Housing Units	Selected Monthly Owner Costs as Percentage of Income	Gross Rent as Percentage of Income	Ratio of Median Gross Rent to FMR	Owner Cost Burden	Renter Cost Burden	Severe Owner Cost Burden	Severe Renter Cost Burden	Housing Affordability Index	Housing + Transportation Index (local base)	Housing + Transportation Index (AMI base)	High Cost Loan Rate	Foreclosure Rate	Vacant Units Abandoned	Housing Capacity per Acre
Student Performance (Elementary School)	0.64	0.43	0.22	0.26	0.04	0.05	-0.60	0.63	-0.23	-0.31	-0.21	0.42	-0.36	-0.16	-0.33	-0.07	-0.39	-0.60	0.67	0.76	-0.78	-0.54	-0.49
3rd Grade Reading	0.60	0.45	0.22	0.26	0.02	0.03	-0.56	0.55	-0.16	-0.29	-0.20	0.43	-0.35	-0.16	-0.33	-0.07	-0.36	-0.56	0.63	0.70	-0.73	-0.52	-0.43
3rd Grade Math	0.56	0.40	0.19	0.23	0.05	0.04	-0.53	0.54	-0.19	-0.23	-0.19	0.38	-0.30	-0.14	-0.31	-0.06	-0.32	-0.56	0.60	0.64	-0.67	-0.50	-0.45
5th Grade Reading	0.57	0.38	0.20	0.24	0.03	0.03	-0.58	0.61	-0.23	-0.26	-0.17	0.37	-0.33	-0.13	-0.30	-0.05	-0.31	-0.58	0.62	0.63	-0.67	-0.52	-0.53
5th Grade Math	0.60	0.38	0.21	0.25	0.06	0.07	-0.55	0.57	-0.20	-0.29	-0.20	0.37	-0.33	-0.15	-0.28	-0.07	-0.37	-0.56	0.60	0.71	-0.73	-0.55	-0.47
Percent of Teachers Highly Qualified (Elementary School)	0.43	0.30	0.14	0.18	0.02	0.01	-0.46	0.52	-0.23	-0.26	-0.13	0.30	-0.24	-0.13	-0.21	-0.02	-0.28	-0.41	0.46	-0.50	-0.52	-0.31	-0.30
Student Performance (Middle School)	0.65	0.43	0.20	0.24	0.00	0.02	-0.53	0.58	-0.24	-0.30	-0.24	0.41	-0.37	-0.18	-0.32	-0.11	-0.30	-0.55	0.68	0.72	-0.75	-0.52	-0.45
Percent of Teachers Highly Qualified (Middle School)	0.49	0.31	0.17	0.20	0.05	0.00	-0.51	0.56	-0.25	-0.27	-0.13	0.29	-0.24	-0.11	-0.29	-0.06	-0.25	-0.48	0.55	-0.55	-0.59	-0.40	-0.37
Student Performance (High School)	0.63	0.42	0.22	0.26	0.04	0.02	-0.59	0.62	-0.25	-0.31	-0.21	0.40	-0.38	-0.17	-0.34	-0.09	-0.40	-0.51	0.66	0.69	-0.76	-0.49	-0.40
Advanced Placement Course Enrollment	0.57	0.38	0.15	0.17	-0.01	0.01	-0.36	0.35	-0.09	-0.27	-0.12	0.37	-0.32	-0.12	-0.31	-0.04	-0.40	-0.40	0.53	0.53	-0.55	-0.36	-0.20
Advanced Placement Exam Scores	0.61	0.38	0.21	0.24	0.00	0.01	-0.50	0.50	-0.16	-0.31	-0.16	0.33	-0.36	-0.12	-0.31	-0.04	-0.40	-0.46	0.63	-0.67	-0.72	-0.40	-0.31
SAT Scores	0.66	0.44	0.23	0.27	0.03	0.03	-0.58	0.60	-0.21	-0.31	-0.20	0.40	-0.38	-0.16	-0.34	-0.08	-0.39	-0.52	0.68	0.72	-0.77	-0.47	-0.38
High School Dropout	-0.56	-0.34	-0.19	-0.23	0.00	0.03	0.41	-0.42	0.15	0.27	0.18	-0.31	0.33	0.14	0.31	0.03	0.34	0.43	-0.58	0.61	0.64	0.32	0.25
Percent of Teachers Highly Qualified (High School)	0.51	0.34	0.14	0.16	0.06	0.04	-0.43	0.47	-0.20	-0.27	-0.13	0.33	-0.31	-0.10	-0.27	-0.04	-0.38	-0.39	0.48	0.59	-0.61	-0.29	-0.24
Access to Work Force Investment Area Training Programs	-0.48	-0.30	-0.25	-0.30	-0.07	-0.05	0.52	-0.56	0.26	0.12	0.23	-0.28	0.22	0.21	0.23	0.12	0.29	0.45	-0.59	0.50	0.58	0.46	0.39
Proximity to Community Colleges	0.35	0.09	0.17	0.20	0.15	0.04	-0.38	0.49	-0.34	-0.04	-0.17	0.10	-0.11	0.01	-0.16	-0.01	-0.20	-0.34	0.40	-0.38	-0.40	-0.24	-0.23
Proximity to Private Career Schools	0.27	0.07	0.13	0.16	0.18	0.07	-0.33	0.42	-0.30	-0.02	-0.13	0.08	-0.07	-0.09	-0.11	0.00	-0.22	-0.28	0.29	-0.30	-0.32	-0.20	-0.21
Median Housing Value	1.00	0.50	0.18	0.22	0.06	0.08	-0.59	0.63	-0.23	-0.31	-0.20	0.48	-0.33	-0.17	-0.34	-0.03	-0.52	-0.63	0.79	0.76	-0.78	-0.43	-0.32
Median Gross Rent	0.50	1.00	0.22	0.26	0.03	0.09	-0.19	0.29	-0.21	-0.11	-0.03	0.98	-0.12	-0.06	-0.10	-0.02	-0.22	-0.43	0.52	-0.47	-0.51	-0.29	-0.27
Percent Change of Total Housing Units (2000-2010)	0.18	0.22	1.00	0.99	0.39	0.30	-0.16	0.08	0.07	0.06	-0.05	0.22	0.04	-0.07	0.03	-0.06	-0.22	-0.17	0.23	-0.25	-0.26	-0.17	-0.13
Percent Change of Total Occupied Housing Units (2000-2010)	0.22	0.26	0.99	1.00	0.38	0.31	-0.20	0.11	0.06	0.06	-0.06	0.26	0.03	-0.08	0.02	-0.06	-0.22	-0.22	0.28	-0.29	-0.31	-0.22	-0.15
Percent Change of Owner-Occupied Housing Units (2000-2010)	0.06	0.03	0.39	0.38	1.00	0.45	-0.12	0.08	0.00	0.05	-0.09	0.03	-0.01	-0.10	-0.02	-0.10	-0.24	-0.22	-0.13	-0.15	-0.14	-0.06	0.03
Percent Change of Renter-Occupied Housing Units (2000-2010)	0.08	0.09	0.30	0.31	0.45	1.00	-0.05	0.04	-0.02	0.13	0.00	0.09	0.19	0.06	0.27	0.02	-0.11	-0.02	-0.05	-0.10	-0.11	-0.06	-0.04
Percent of Single Family Housing Units (Attached)	-0.59	-0.19	-0.16	-0.20	-0.12	-0.05	1.00	-0.77	-0.04	0.16	0.12	-0.18	0.18	0.08	0.16	-0.01	0.46	0.36	-0.51	0.57	0.60	0.49	0.34
Percent of Single Family Housing Units (Detached)	0.63	0.29	0.08	0.11	0.08	0.04	-0.77	1.00	-0.60	-0.19	-0.08	0.29	-0.21	-0.03	-0.20	0.09	-0.29	-0.53	0.63	-0.52	-0.56	-0.38	-0.37
Percent of Multi-Family Housing Units	-0.23	-0.21	0.07	0.06	0.00	-0.02	-0.04	-0.60	1.00	0.09	-0.01	-0.22	0.10	-0.05	0.11	-0.11	-0.13	0.37	-0.33	0.10	0.12	0.13	0.14
Selected Monthly Owner Costs as Percentage of Income	-0.31	-0.11	0.06	0.06	0.05	0.13	0.16	-0.19	0.09	1.00	0.07	-0.10	0.74	0.06	0.56	0.04	0.19	0.31	-0.21	0.34	0.31	0.13	0.14
Gross Rent as Percentage of Income	-0.20	-0.03	-0.05	-0.06	-0.09	0.00	0.12	-0.08	-0.01	0.07	1.00	-0.02	0.11	0.87	0.08	0.30	-0.20	0.27	0.28	0.25	0.26		
Ratio of Median Gross Rent to FMR	0.48	0.98	0.22	0.26	0.03	0.09	-0.18	0.29	-0.22	-0.10	-0.02	1.00	-0.10	-0.05	-0.08	-0.01	-0.23	-0.41	0.49	-0.46	-0.48	-0.27	-0.26
Owner Cost Burden	-0.33	-0.12	0.04	0.03	-0.01	0.19	0.18	-0.21	0.10	0.74	0.11	-0.10	1.00	0.12	0.78	0.11	0.14	0.40	-0.27	0.38	0.37	0.23	0.22
Renter Cost Burden	-0.17	-0.06	-0.07	-0.08	-0.05	0.06	0.08	-0.03	-0.05	0.06	0.87	-0.05	0.12	1.00	0.16	0.78	0.04	0.26	0.18	0.21	0.21	0.17	0.12
Severe Owner Cost Burden	-0.34	-0.10	0.03	0.02	-0.02	0.27	0.16	-0.20	0.11	0.56	0.17	-0.08	0.78	0.15	1.00	0.16	0.14	0.45	-0.30	0.34	0.33	0.27	0.19
Severe Renter Cost Burden	-0.03	-0.02	-0.06	-0.06	-0.10	0.02	-0.01	0.09	-0.11	0.04	0.76	-0.01	0.11	0.78	0.16	1.00	-0.04	0.23	-0.06	0.09	0.09	0.17	0.09
Housing Affordability Index	-0.52	-0.22	-0.22	-0.22	-0.24	-0.11	0.46	-0.29	-0.13	0.19	0.08	-0.23	0.14	0.04	0.14	-0.04	1.00	0.23	-0.26	0.51	0.53	0.29	0.12
Housing + Transportation Index (local base)	-0.63	-0.43	-0.17	-0.22	-0.22	-0.02	0.36	-0.53	0.37	0.31	0.30	-0.41	0.40	0.26	0.45	0.23	0.23	1.00	-0.56	0.61	0.63	0.47	0.43
Housing + Transportation Index (AMI base)	0.79	0.52	0.23	0.28	-0.13	-0.05	-0.51	0.63	-0.33	-0.21	-0.20	0.49	-0.27	0.18	-0.30	-0.06	-0.26	-0.56	1.00	-0.68	-0.68	-0.47	-0.40
High Cost Loan Rate	-0.76	-0.47	-0.25	-0.29	-0.15	-0.10	0.57	-0.52	0.10	0.34	0.27	-0.46	0.38	0.20	0.34	0.09	0.51	0.61	-0.64	1.00	0.98	0.58	0.40
Foreclosure Rate	-0.78	-0.51	-0.26	-0.31	-0.14	-0.11	0.60	-0.56	0.12	0.31	0.28	-0.48	0.37	0.21	0.33	0.09	0.53	0.63	-0.68	0.98	1.00	0.55	0.40
Vacant Units Abandoned	-0.43	-0.29	-0.17	-0.22	-0.06	-0.06	0.49	-0.38	0.10	0.13	0.25	-0.27	0.23	0.21	0.27	0.17	0.29	0.47	-0.47	0.53	0.55	1.00	0.77
Housing Capacity per Acre	-0.32	-0.27	-0.13	-0.15	0.03	-0.04	0.34	-0.37	0.16	0.14	0.15	-0.26	0.22	0.12	0.19	0.09	0.12	0.45	-0.40	0.37	0.40	0.77	1.00
Access to Combined Civic, Social, Community & Religious Organizations	-0.38	-0.34	-0.17	-0.21	0.01	-0.05	0.42	-0.54	0.34	0.12	0.16	-0.33	0.20	0.12	0.20	0.09	0.08	0.52	-0.56	0.39	0.44	0.62	0.73
Access to Public Institutions	-0.45	-0.35	-0.20	-0.24	-0.02	-0.05	0.54	-0.60	0.28	0.14	0.21	-0.34	0.22	0.18	0.24	0.13	0.21	0.54	-0.60	0.48	0.54	0.72	0.70
Percent Population Aged 25 to 44	-0.18	0.09	0.06	0.07	-0.06	-0.12	0.37	-0.45	0.25	0.23	-0.14	0.08	0.05	-0.17	-0.01	-0.23	0.18	0.04	-0.06	0.09	0.08	-0.01	0.06
Racial Diversity Index	0.01	0.13	0.08	0.10	-0.01	0.02	-0.01	-0.21	0.34	0.15	-0.15	0.09	0.02	-0.17	-0.01	-0.19	0.04	-0.04	0.06	-0.10	-0.27	-0.16	
Percent Population Having High School Diploma or Greater	0.68	0.49	0.25	0.30	0.07	-0.06	-0.54	0.50	-0.08	-0.25	-0.23	0.47	-0.32	-0.19	-0.34	-0.13	-0.41	-0.67	0.69	-0.68	-0.70	-0.56	-0.45
Percent Population Having Bachelor's Degree or Greater	0.74	0.49	0.19	0.23	0.03	-0.01	-0.34	0.26	0.03	-0.34	-0.24	0.53	-0.38	-0.21	-0.38	-0.06	-0.31	-0.68	0.73	-0.71	-0.68	-0.42	-0.30
Median Income	0.87	0.56	0.21	0.26	0.04	0.01	-0.49	0.68	-0.44	-0.34	-0.24	0.53	-0.38	-0.21	-0.38	-0.08	-0.32	-0.73	0.86	-0.72	-0.74	-0.44	-0.30
Percent of Households in Poverty	-0.57	-0.49	-0.18	-0.22	-0.09	0.03	0.44	-0.58	0.37	0.25	0.30	-0.48	0.33	0.25	0.40	0.24	0.17	0.84	-0.67	0.58	0.62	0.58	0.55
Labor Force Participation Rate - Ages 16-64	0.30	0.27	0.14	0.17	0.10	-0.10	-0.24	0.30	-0.16	-0.16	-0.27	0.25	-0.15	-0.08	-0.25	-0.07	-0.04	-0.66	0.43	-0.41	-0.42	-0.49	-0.43
Percent of Labor Force Unemployed	-0.56	-0.37	-0.22	-0.26	-0.08	-0.05	0.47	-0.43	0.08	0.17	0.24	-0.36	0.22	0.20	0.26	0.16	0.32	0.57	-0.57	0.67	0.69	0.55	0.41
Population Density	-0.50	-0.30	-0.21	-0.25	-0.11	-0.08	0.60	-0.65	0.28	0.14	0.16	-0.29	0.15	0.14	0.18	0.06	0.28	0.44	-0.57	0.50	0.54	0.48	0.44
Percentage of Owner Occupied Housing Units	0.50	0.36	0.14	0.18	0.10	-0.01	-0.40	0.78	-0.73	-0.21	-0.10	0.36	-0.25	-0.05	-0.30	-0.03	-0.08	-0.67	0.62	-0.48	-0.51	-0.37	-0.43
Single Parent Households	-0.53	-0.33	-0.18	-0.21	-0.11	-0.08	0.47	-0.49	0.16	0.28	0.17	-0.33	0.24	0.14	0.23	0.04	0.29	0.52	-0.48	0.66	0.65	0.40	0.34
Cancer Risk	-0.56	-0.33	-0.22	-0.02	-0.02	0.01	0.54	-0.63	0.33	0.14	0.18	-0.34	0.20	0.16	0.22	0.05	0.37	0.50	-0.65	0.54	0.59	0.48	0.47
Neurological Disease Risk	-0.44	-0.31	-0.16	-0.19	0.16	0.07	0.37	-0.37	0.11	0.06	0.05	-0.29	0.12	-0.02	0.12	-0.09	0.28	0.28	-0.56	0.37	0.39	0.26	0.26
Respiratory Disease Risk	-0.57	-0.36	-0.23	-0.28	-0.01	0.00	0.60	-0.66	0.30	0.17	0.19	-0.36	0.24	0.17	0.26	0.06	0.36	0.54	-0.69	0.56	0.57	0.56	0.55
Infant Mortality Rates	-0.35	-0.22	-0.11	-0.14	-0.07	0.00	0.30	-0.28	0.07	0.20	0.11	-0.22	0.29	0.09	0.21	-0.01	0.20	0.32	-0.32	0.46	0.45	0.27	0.23
Teen Birth Rates	-0.53	-0.41	-0.35	-0.37	-0.12	-0.05	0.42	-0.32	0.07	0.05	0.13	-0.21	0.10	0.13	0.19	0.08	0.16	0.51	-0.50	0.64	0.64	0.50	0.35
Percent of Births to Women Receiving Late or No Prenatal Care	-0.24	-0.20	-0.09	-0.12	-0.09	-0.02	0.23	-0.23	0.08	0.05	0.13	-0.21	0.10	0.13	0.19	0.08	0.16	0.33	-0.30	0.33	0.33	0.30	0.19
Rate of Low Birth Weight	-0.24	-0.13	-0.12	-0.14	-0.02	-0.04	0.20	-0.21	0.09	0.08	0.12	-0.17	0.24	0.11	0.25	0.40	0.27	-0.27	0.29	0.29	0.17	0.09	
Access to Emergency Services	-0.60	-0.39	-0.25	-0.31	-0.05	-0.01	0.61	-0.66	0.28	0.19	0.23	-0.37	0.29	0.20	0.30	0.12	0.36	0.55	-0.70	0.62	0.69	0.53	0.45
Emergency Services Coverage Areas	-0.57	-0.40	-0.23	-0.28	-0.04	-0.02	0.59	-0.65	0.34	0.15	0.21	-0.38	0.24	0.18	0.26	0.09	0.36	0.55	-0.67	0.55	0.61	0.56	0.53
Access to Social Services	-0.32	-0.29	-0.11	-0.13	0.04	-0.04	0.30	-0.51	0.46	0.15	0.11	-0.29	0.20	0.08	0.16	0.04	0.01	0.44	-0.50	0.29	0.34	0.42	0.62
Access to Hospitals	-0.43	-0.20	-0.16	-0.20	-0.04	-0.02	0.45	-0.52	0.28	0.14	0.15	-0.21	0.19	0.11	0.13	0.03	0.32	0.33	-0.48	0.47	0.51	0.30	0.27
Access to Freestanding Ambulatory Surgical and Emergency Centers	-0.61	-0.40	-0.25	-0.31	-0.04	-0.01	0.62	-0.65	0.27	0.19	0.24	-0.37	0.26	0.21	0.27	0.13	0.36	0.55	-0.71	0.62	0.69	0.53	0.46
Access to All Other Outpatient Care Centers	-0.54	-0.36	-0.24	-0.29	-0.07	-0.04	0.58	-0.64	0.31	0.16	0.24	-0.34	0.26	0.21	0.27	0.13	0.30	0.52	-0.64	0.56	0.64	0.51	0.44
Access to Food Swamps	-0.21	-0.17	-0.05	-0.06	0.06	-0.01	0.25	-0.42	0.35	0.12	0.02	-0.16	0.15	0.10	0.02	-0.06	0.27	-0.34	0.11	0.17	0.24	0.45	
Watershed Failure	-0.18	-0.02	-0.05	-0.05	-0.02	0.19	-0.09	-0.11	0.03	0.00	-0.05	-0.03	0.02	-0.04	-0.05	0.26	-0.01	-0.09	0.08	0.07	-0.07	-0.06	
Access to Parks	-0.04	-0.04	0.03	0.04	0.06	0.01	0.06	-0.03	0.05	0.14	-0.04	0.06	0.09	0.05	0.13	0.04	0.02	-0.06	0.10	0.06	-0.01		
Percent Park	0.02	-0.01	0.03	0.03	0.03	0.00	0.04	0.02	-0.08	0.03	0.05	0.00	0.00	0.03	0.09	0.03	-0.06	0.02	0.00	0.02	-0.04	-0.12	
Crime Risk Index: Total Crime	-0.49	-0.33	-0.21	-0.25	-0.03	0.02	0.58	-0.49	0.06	0.18	0.22	-0.31	0.29	0.20	0.28	0.14	0.34	0.39	-0.55	0.55	0.61	0.60	0.45
Total Job Density	-0.17	-0.14	-0.06	-0.07	-0.01	-0.06	0.18	-0.31	0.27	0.04	-0.13	0.15	0.03	0.06	0.05	-0.05	0.26	-0.28	0.09	0.13	0.24	0.41	
Total Jobs Accessible by Auto	-0.50	-0.29	-0.24	-0.23	-0.06	0.02	0.44	-0.54	0.31	0.14	0.19	-0.29	0.20	0.17	0.23	0.08	0.33	0.45	-0.55	0.50	0.55	0.38	0.34
Total Jobs Accessible by Transit	-0.56	-0.37	-0.22	-0.27	-0.07	-0.02	0.50	-0.58	0.31	0.16	0.25	-0.34	0.31	0.22	0.30	0.15	0.33	0.56	-0.63	0.60	0.66	0.47	0.41
Accessibility Gap between Transit and Auto	0.36	0.14	0.16	0.19	0.14	0.06	-0.39	0.47	-0.27	-0.16	-0.20	0.10	-0.25	-0.17	-0.23	-0.11	-0.11	-0.37	0.42	-0.47	-0.52	-0.29	-0.24
Change in Job Density (2002-2010)	0.03	0.04	0.07	0.06	-0.01	0.04	-0.02	0.03	-0.04	-0.04	-0.04	0.04	-0.08	0.07	-0.03	-0.03	-0.04	0.11	-0.04				
Percent Change in Total Jobs (2002-2010)	-0.07	0.01	0.04	0.04	0.04	0.03	0.06	0.06	-0.05	0.00	0.11	0.05	0.01	0.12	0.04	0.06	-0.04	0.06	0.04	0.12	0.11	0.01	-0.04
Low Skill Workers	-0.36	-0.21	-0.04	-0.07	0.05	0.05	0.07	-0.04	-0.04	0.05	-0.07	-0.18	0.13	0.04	0.12	-0.02	0.22	0.14	-0.20	0.32	0.09	-0.08	
Middle Skill Workers	0.10	0.21	0.12	0.17	0.04	0.02	-0.23	0.42	-0.07	-0.12	-0.12	0.06	-0.04	-0.16	-0.26	0.31	-0.11	-0.16	-0.33	-0.30			
High Skill Workers	0.65	0.49	0.19	0.25	0.04	0.07	-0.34	0.28	0.02	-0.23	-0.21	0.45	-0.28	-0.20	-0.26	-0.16	-0.30	-0.49	0.69	0.62	-0.62	-0.39	-0.25
Percent Low Skill Workers	-0.74	-0.54	-0.22	-0.27	-0.02	0.04	0.40	-0.33	-0.01	0.28	0.25	-0.50	0.34	0.22	0.36	0.14	0.40	0.71	-0.69	0.72	0.71	0.48	0.34
Percent Middle Skill Workers	-0.22	-0.01	0.05	0.06	-0.02	-0.09	-0.09	0.11	-0.07	0.10	-0.03	0.02	0.05	-0.01	-0.08	0.07	-0.04	0.00	0.20	0.16	-0.15	-0.19	
Percent High Skill Workers	0.75	0.50	0.18	0.23	0.03	-0.01	-0.34	0.26	0.04	-0.29	-0.22	0.45	-0.33	-0.19	-0.32	-0.10	-0.39	-0.71	0.73	-0.71	-0.71	-0.39	-0.25
Job Access Ratio	0.52	0.35	0.11	0.13	-0.08	-0.02	-0.12	0.14	-0.05	-0.28	-0.11	0.31	-0.27	-0.10	-0.22	-0.27	0.45	-0.39	-0.38	-0.12	-0.06		
Travel Time Index	-0.10	-0.05	0.08	0.09	-0.14	-0.08	0.11	-0.16	0.10	0.08	0.03	-0.04	0.06	0.02	0.08	0.00	0.07	0.15	-0.04	0.15	0.14	0.08	0.08
Driving Commuters: Percent Driving Less Than 30 Minutes	-0.19	-0.07	-0.10	-0.12	0.12	0.19	-0.32	0.27	-0.20	-0.22	-0.31	0.14	0.16	0.06	0.11								
Commuters: Percent Taking Transit Less Than 45 Minutes	-0.49	-0.38	-0.20	-0.25	-0.10	-0.03	0.50	-0.51	0.19	0.17	0.23	-0.37	0.26	0.19	0.30	0.15	0.26	0.62	-0.55	0.60	0.64	0.61	0.55
Transit Access	-0.55	-0.37	-0.22	-0.27	-0.09	-0.07	0.54	-0.66	0.37	0.17	0.20	-0.39	0.24	0.16	0.24	0.06	0.33	0.52	-0.61	0.53	0.58	0.48	0.44
Transit Connectivity Index	-0.06	-0.02	0.10	0.12	0.21	0.07	0.00	-0.15	0.24	0.19	0.01	-0.01	0.01	0.02	0.06	0.00	-0.09	0.08	-0.12	0.00	0.01	0.02	0.32
Walk Score	-0.32	-0.24	-0.14	-0.17	0.04	-0.01	0.45	-0.52	0.32	0.27	0.04	-0.23	0.16	0.07	0.13	0.03	0.15	0.37	-0.47	0.27	0.34	0.44	0.50
Transportation Trail Miles	0.21	0.20	0.07	0.09	0.04	0.04	-0.11	0.09	-0.06	-0.06	-0.04	0.08	-0.03	-0.03	-0.15	0.25	-0.04	-0.21	-0.14	-0.11			
Per Capita VMT for Home-Based Trips	0.35	0.18	0.23	0.24	0.11	0.08	-0.33	0.36	-0.17	-0.04	-0.08	0.16	-0.09	-0.05	-0.11	-0.09	-0.17	-0.18	0.33	-0.31	-0.30	-0.20	-0.17
Per Capita VHT for Home-Based Trips	0.27	0.10	0.29	0.30	0.11	0.02	-0.26	0.26	-0.09	-0.03	-0.08	0.07	-0.06	-0.05	-0.09	-0.01	-0.17	-0.18	0.33	-0.26	-0.28	-0.17	-0.11

Correlation matrix. Column groups: demographic/access indicators (columns 1–13), Public Health (columns 14–27), Environment (columns 28–30), Crime (column 31).

Columns:
1. Access to Combined Civic, Social, Community & Religious Organizations
2. Access to Public Institutions
3. Percent Population Aged 25 to 44
4. Racial Diversity Index
5. Percent Population Having High School Diploma or Greater
6. Percent Population Having Bachelor's Degree or Greater
7. Median Income
8. Percent of Households in Poverty
9. Labor Force Participation Rate - Ages 16-64
10. Percent of Labor Force Unemployed
11. Population Density
12. Percentage of Owner Occupied Housing Units
13. Single Parent Households
14. Cancer Risk
15. Neurological Disease Risk
16. Respiratory Disease Risk
17. Infant Mortality Rates
18. Teen Birth Rates
19. Percent of Births to Women Receiving Late or No Prenatal Care
20. Rate of Low Birth Weight
21. Access to Emergency Services
22. Emergency Services Coverage Areas
23. Access to Social Services
24. Access to Hospitals
25. Access to Freestanding Ambulatory Surgical and Emergency Centers
26. Access to All Other Outpatient Care Centers
27. Access to Food Swamps
28. Watershed Failure
29. Access to Parks
30. Percent Park
31. Crime Risk Index: Total Crime

Indicator	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Student Performance (Elementary School)	-0.65	-0.71	-0.22	0.01	0.66	0.50	0.68	-0.67	0.45	-0.62	-0.67	0.60	-0.56	-0.67	-0.40	-0.75	-0.44	-0.55	-0.28	-0.37	-0.74	-0.70	-0.59	-0.50	0.74	-0.69	-0.46	-0.10	-0.08	-0.01	-0.67
3rd Grade Reading	-0.58	-0.65	-0.16	0.04	0.65	0.51	0.64	-0.63	0.43	-0.54	-0.61	0.53	-0.53	-0.58	-0.34	-0.67	-0.41	-0.53	-0.29	-0.35	-0.67	-0.64	-0.50	-0.41	0.68	-0.62	-0.36	-0.07	-0.09	0.00	-0.64
3rd Grade Math	-0.60	-0.65	-0.16	0.02	0.59	0.44	0.61	-0.63	0.45	-0.54	-0.59	0.54	-0.50	-0.58	-0.32	-0.65	-0.39	-0.45	-0.26	-0.33	-0.64	-0.62	-0.54	-0.41	0.65	-0.61	-0.43	-0.01	-0.07	0.02	-0.58
5th Grade Reading	-0.69	-0.72	-0.23	0.02	0.63	0.41	0.62	-0.66	0.44	-0.57	-0.64	0.59	-0.51	-0.65	-0.39	-0.75	-0.47	-0.26	-0.32	-0.71	-0.71	-0.63	-0.46	-0.72	0.67	-0.63	-0.50	-0.10	-0.08	-0.01	-0.63
5th Grade Math	-0.58	-0.65	-0.21	0.06	0.60	0.48	0.62	-0.60	0.39	-0.59	-0.61	0.54	-0.55	-0.59	-0.34	-0.66	-0.41	-0.49	-0.24	-0.34	-0.65	-0.62	-0.50	-0.44	0.66	-0.61	-0.38	-0.08	-0.09	-0.03	-0.59
Percent of Teachers Highly Qualified (Elementary School)	-0.46	-0.49	-0.26	-0.12	0.48	0.31	0.48	-0.46	0.29	-0.41	-0.49	0.50	-0.40	-0.51	-0.29	-0.56	-0.26	-0.35	-0.20	-0.25	-0.54	-0.52	-0.41	-0.42	0.55	-0.50	-0.38	-0.15	-0.03	-0.01	-0.45
Student Performance (Middle School)	-0.60	-0.66	-0.15	0.07	0.62	0.50	0.68	-0.62	0.43	-0.58	-0.59	0.55	-0.49	0.60	-0.40	-0.68	-0.35	-0.56	-0.27	-0.33	-0.72	-0.69	-0.53	-0.44	0.73	-0.68	-0.37	-0.11	-0.07	-0.02	-0.64
Percent of Teachers Highly Qualified (Middle School)	-0.57	-0.60	-0.24	-0.09	0.54	0.32	0.55	-0.53	0.33	-0.48	-0.57	0.53	-0.44	0.65	-0.37	-0.70	-0.27	-0.39	-0.23	-0.32	-0.70	-0.68	-0.51	-0.56	0.71	-0.65	-0.39	-0.02	-0.09	-0.06	-0.61
Student Performance (High School)	-0.61	-0.69	-0.19	0.03	0.61	0.41	0.65	-0.61	0.41	-0.55	-0.63	0.55	-0.44	0.68	-0.40	-0.77	-0.37	-0.51	-0.28	-0.35	-0.84	-0.77	-0.53	-0.57	0.84	-0.82	-0.39	-0.04	-0.11	-0.04	-0.78
Advanced Placement Course Enrollment	-0.30	-0.34	-0.15	0.01	0.43	0.46	0.51	-0.35	0.21	-0.35	-0.34	0.28	-0.31	-0.39	-0.34	-0.43	-0.27	-0.31	-0.20	-0.20	-0.45	-0.43	-0.27	-0.24	0.47	-0.41	-0.19	-0.11	-0.04	0.02	-0.39
Advanced Placement Exam Scores	-0.49	-0.54	-0.18	0.05	0.58	0.52	0.63	-0.50	0.32	-0.50	-0.53	0.45	-0.39	-0.58	-0.45	-0.66	-0.37	-0.49	-0.21	-0.30	-0.72	-0.66	-0.41	-0.49	0.74	-0.65	-0.31	-0.10	-0.08	0.01	-0.62
SAT Scores	-0.58	-0.66	-0.20	0.03	0.62	0.47	0.67	-0.59	0.38	-0.55	-0.61	0.52	-0.44	0.69	-0.45	-0.77	-0.38	-0.51	-0.26	-0.34	-0.83	-0.76	-0.50	-0.59	0.83	-0.78	-0.37	-0.07	-0.11	-0.03	-0.75
High School Dropout	0.41	0.45	0.12	0.04	-0.55	-0.48	-0.58	0.46	-0.29	0.46	0.46	-0.41	0.35	0.63	0.41	0.66	0.29	0.44	0.23	0.25	0.71	0.65	0.36	0.57	0.73	0.62	0.28	0.09	0.06	-0.02	0.53
Percent of Teachers Highly Qualified (High School)	-0.38	-0.42	-0.19	-0.10	0.46	0.36	0.49	-0.41	0.27	-0.40	-0.43	0.40	-0.37	0.52	-0.39	-0.54	-0.26	-0.39	-0.22	-0.31	-0.60	-0.55	-0.34	-0.49	0.60	-0.55	-0.24	-0.05	-0.07	-0.09	-0.49
Access to Work Force Investment Area Training Programs	0.63	0.70	0.07	-0.08	-0.45	-0.19	-0.53	0.53	-0.38	0.43	0.64	-0.46	0.23	0.75	0.40	0.79	0.27	0.43	0.24	0.27	0.80	0.81	0.57	0.69	0.85	0.86	0.40	0.00	0.09	0.02	0.74
Proximity to Community Colleges	-0.40	-0.44	-0.16	-0.19	0.31	0.07	0.39	-0.35	0.24	-0.30	-0.46	0.45	-0.23	0.70	-0.38	-0.63	-0.19	-0.27	-0.27	-0.20	-0.66	-0.61	-0.40	-0.72	0.65	-0.65	-0.31	0.00	0.02	0.04	-0.45
Proximity to Private Career Schools	-0.37	-0.39	-0.16	-0.17	0.24	0.01	0.30	-0.29	0.19	-0.23	-0.42	0.35	-0.16	0.66	-0.37	-0.60	-0.16	-0.24	-0.22	-0.18	-0.60	-0.56	-0.37	-0.75	0.59	-0.59	-0.30	-0.03	-0.02	0.02	-0.40
Median Housing Value	-0.38	-0.45	-0.18	0.01	0.68	0.74	0.87	-0.57	0.30	-0.56	-0.50	0.50	-0.53	0.56	-0.44	-0.57	-0.35	-0.53	-0.24	-0.24	-0.60	-0.57	-0.32	0.43	-0.61	-0.54	-0.21	-0.18	-0.04	0.02	-0.49
Median Gross Rent	-0.34	-0.35	0.09	0.13	0.49	0.49	0.56	-0.49	0.27	-0.37	-0.30	0.36	-0.33	-0.33	-0.31	-0.36	-0.22	-0.41	-0.20	-0.13	-0.39	-0.40	-0.29	-0.20	0.40	-0.36	-0.17	-0.05	-0.04	0.03	-0.33
Percent Change of Total Housing Units (2000-2010)	-0.17	-0.20	0.06	0.08	0.25	0.19	0.21	-0.18	0.14	-0.22	-0.21	0.14	-0.18	-0.22	-0.16	-0.23	-0.11	-0.35	-0.09	-0.12	-0.25	-0.23	-0.11	-0.06	0.24	-0.05	-0.05	-0.05	0.03	0.03	-0.21
Percent Change of Total Occupied Housing Units (2000-2010)	-0.21	-0.24	0.07	0.10	0.30	0.23	0.26	-0.22	0.17	-0.26	-0.25	0.18	-0.21	-0.26	-0.19	-0.28	-0.14	-0.37	-0.12	-0.14	-0.31	-0.28	-0.13	-0.20	0.31	-0.29	-0.06	-0.05	-0.04	0.03	-0.25
Percent Change of Owner-Occupied Housing Units (2000-2010)	0.01	-0.02	-0.06	-0.01	0.07	0.03	0.04	-0.09	0.10	-0.08	-0.04	0.09	-0.11	0.01	0.07	0.00	-0.05	-0.02	-0.04	-0.01	-0.02	-0.04	0.02	-0.01	0.04	-0.07	-0.01	-0.05	0.06	0.03	-0.03
Percent Change of Renter-Occupied Housing Units (2000-2010)	-0.05	-0.05	-0.12	0.02	-0.06	-0.01	0.01	0.03	-0.10	-0.05	-0.08	-0.01	-0.08	0.01	0.00	-0.05	-0.04	-0.01	-0.02	-0.04	0.02	-0.01	-0.04	-0.01	0.05	0.06	0.03	-0.02	0.01	0.00	0.02
Percent of Single Family Housing Units (Attached)	0.42	0.54	0.37	-0.01	-0.54	-0.34	-0.49	0.44	-0.24	0.47	0.60	-0.44	0.47	0.54	0.42	0.23	0.20	0.63	0.55	0.19	0.06	0.04	0.58	0.62	-0.56?	0.25	0.19	0.06	0.04	0.58
Percent of Single Family Housing Units (Detached)	-0.54	-0.60	-0.45	-0.21	0.50	0.26	0.68	-0.58	0.30	-0.43	-0.65	0.78	-0.49	-0.63	-0.37	-0.66	-0.28	-0.32	-0.23	-0.21	-0.65	-0.65	-0.51	-0.52	0.65	-0.64	-0.42	-0.09	-0.03	0.02	-0.49
Percent of Multi-Family Housing Units	0.34	0.28	0.25	0.34	-0.08	0.04	-0.44	0.37	-0.16	0.08	0.28	-0.73	0.41	0.33	0.11	0.30	0.07	0.08	0.09	0.28	0.30	0.44	0.28	0.27	0.31	0.35	0.15	0.11	-0.03	-0.08	0.06
Selected Monthly Owner Costs as Percentage of Income	0.12	0.14	0.23	0.11	-0.25	-0.29	-0.34	0.25	-0.16	0.17	0.14	-0.21	0.28	0.14	0.06	0.17	0.20	0.17	0.05	0.15	0.19	0.15	0.15	0.14	0.19	0.16	0.13	0.03	0.05	0.03	0.18
Gross Rent as Percentage of Income	0.16	0.21	-0.14	-0.15	-0.23	-0.22	-0.24	0.30	-0.27	0.24	0.16	-0.10	0.17	0.08	0.05	0.19	0.11	0.28	0.13	0.06	0.23	0.24	0.02	0.00	0.14	0.15	0.12	0.05	-0.04	0.04	0.22
Ratio of Median Gross Rent to FMR	-0.33	-0.34	0.08	0.09	0.47	0.44	0.53	-0.48	0.25	-0.36	-0.29	0.36	-0.33	-0.34	-0.29	-0.36	-0.22	-0.39	-0.21	-0.12	-0.37	-0.38	-0.29	-0.21	0.37	-0.34	-0.16	-0.05	-0.04	0.00	-0.31
Owner Cost Burden	0.20	0.22	0.05	0.02	-0.32	-0.32	-0.38	0.33	-0.31	0.22	0.15	-0.25	0.24	0.20	0.12	0.24	0.29	0.28	0.10	0.17	0.29	0.24	0.20	0.19	0.29	0.26	0.13	0.03	0.02	0.03	0.28
Renter Cost Burden	0.12	0.18	-0.17	-0.17	-0.19	-0.20	-0.21	0.25	-0.26	0.20	0.14	-0.05	0.14	0.16	0.05	0.17	0.09	0.26	0.13	0.04	0.20	0.18	0.08	0.08	0.12	0.12	0.02	0.09	0.03	0.05	0.18
Severe Owner Cost Burden	0.20	0.24	-0.01	-0.01	-0.34	-0.31	-0.38	0.40	-0.38	0.26	0.18	-0.30	0.23	0.22	0.12	0.26	0.21	0.31	0.11	0.14	0.30	0.27	0.16	0.19	0.30	0.27	0.10	-0.04	0.05	0.03	0.28
Severe Renter Cost Burden	0.09	0.13	-0.23	-0.19	-0.12	-0.13	-0.12	0.08	-0.24	0.19	0.06	0.03	0.04	0.05	0.00	0.11	0.00	0.24	0.08	0.04	0.12	0.09	0.04	0.05	0.13	-0.02	-0.05	0.13	0.09	0.14	0.34
Housing Affordability Index	0.08	0.21	0.18	0.04	-0.41	-0.40	-0.32	0.17	-0.04	0.32	0.08	-0.08	0.29	0.37	0.22	0.36	0.20	0.29	0.16	0.11	0.36	0.31	0.01	0.32	0.36	0.30	0.06	0.26	0.04	0.03	0.34
Housing + Transportation Index (local base)	0.52	0.54	0.04	-0.04	-0.67	-0.55	-0.73	0.84	-0.66	0.57	0.44	-0.47	0.52	0.51	0.33	0.31	0.55	0.55	0.44	0.38	0.55	0.58	0.35	0.25	0.29	0.47	0.58	0.01	0.02	-0.06	0.39
Housing + Transportation Index (AMI base)	-0.56	-0.60	-0.06	0.06	0.69	0.63	0.86	-0.67	0.43	-0.57	-0.57	0.62	-0.48	-0.65	-0.56	-0.69	-0.32	-0.50	-0.27	-0.15	-0.70	-0.67	-0.50	-0.48	0.71	-0.64	-0.34	-0.09	-0.06	0.02	-0.55
High Cost Loan Rate	0.39	0.48	0.09	-0.09	-0.68	-0.73	-0.72	0.58	-0.41	0.67	0.50	-0.48	0.66	0.54	0.37	0.56	0.46	0.30	0.40	0.62	0.58	0.51	0.30	0.53	0.61	0.56	0.11	0.08	0.00	0.02	0.61
Foreclosure Rate	0.44	0.54	0.08	-0.10	-0.70	-0.71	-0.74	0.62	-0.42	0.69	0.54	-0.51	0.65	0.59	0.39	0.62	0.45	0.64	0.33	0.40	0.69	0.61	0.34	0.51	0.69	0.64	0.17	0.07	0.10	0.02	0.61
Vacant Units Abandoned	0.62	0.72	-0.01	-0.27	-0.56	-0.38	-0.44	0.58	-0.49	0.55	0.48	-0.37	0.40	0.47	0.26	0.55	0.23	0.35	0.19	0.27	0.72	0.66	0.42	0.65	0.72	0.64	0.45	-0.06	-0.06	-0.04	0.68
Housing Capacity per Acre	0.73	0.70	0.06	-0.16	-0.45	-0.24	-0.38	0.55	-0.43	0.41	0.44	-0.43	0.34	0.47	0.26	0.55	0.23	0.35	0.19	0.27	0.45	0.53	0.62	0.27	0.46	0.44	0.45	-0.04	-0.01	-0.12	0.45
Access to Combined Civic, Social, Community & Religious Organizations	1.00	0.92	0.15	-0.06	-0.51	-0.18	-0.51	0.69	-0.50	0.44	0.70	-0.58	0.30	0.69	0.39	0.80	0.26	0.35	0.21	0.25	0.70	0.76	0.90	0.45	0.70	0.70	0.64	-0.02	0.00	-0.09	0.63
Access to Public Institutions	0.91	1.00	0.14	-0.15	-0.57	-0.22	-0.54	0.71	-0.52	0.53	0.72	-0.57	0.33	0.73	0.39	0.84	0.29	0.45	0.29	0.27	0.77	0.82	0.81	0.50	0.78	0.77	0.58	-0.04	-0.08	-0.02	0.73
Percent Population Aged 25 to 44	0.15	0.14	1.00	0.44	-0.01	0.05	-0.15	0.03	0.16	0.00	0.28	-0.38	0.29	0.22	0.06	0.22	0.05	-0.04	-0.03	0.13	0.17	0.20	0.16	0.14	0.11	0.25	0.21	-0.06	-0.08	-0.08	0.02
Racial Diversity Index	-0.06	-0.15	0.44	1.00	0.18	0.03	-0.07	0.15	-0.17	-0.01	-0.25	0.02	0.17	-0.06	-0.15	0.16	0.04	0.05	0.00	0.07	0.19	-0.03	0.04	0.13	-0.11	-0.13	-0.09	-0.16
Percent Population Having High School Diploma or Greater	-0.51	-0.57	-0.01	0.08	1.00	0.74	0.76	-0.73	0.57	-0.64	-0.53	0.50	-0.53	-0.57	-0.49	-0.64	-0.33	-0.56	-0.30	-0.27	-0.66	-0.62	-0.37	-0.59	0.63	-0.54	-0.14	-0.05	0.03	-0.26
Percent Population Having Bachelor's Degree or Greater	-0.18	-0.22	0.05	0.18	0.74	1.00	0.72	-0.49	0.37	-0.55	-0.26	0.32	-0.55	-0.29	-0.39	-0.32	-0.34	-0.54	-0.21	-0.21	-0.33	-0.31	-0.16	-0.16	0.35	-0.21	0.05	-0.19	-0.04	0.04	-0.26
Median Income	-0.51	-0.54	-0.15	-0.03	0.72	0.72	1.00	-0.71	0.44	-0.58	-0.54	0.71	-0.55	-0.60	-0.46	-0.63	-0.36	-0.53	-0.28	-0.25	-0.65	-0.65	-0.46	-0.44	0.66	-0.58	-0.32	-0.11	-0.04	0.04	-0.48
Percent of Households in Poverty	0.69	0.71	0.03	-0.07	-0.73	-0.49	-0.71	1.00	-0.71	0.63	0.57	-0.70	0.56	0.60	0.36	0.66	0.31	0.50	0.34	0.32	0.64	0.67	0.59	0.41	0.64	0.61	0.39	-0.03	-0.02	-0.06	0.51
Labor Force Participation Rate - Ages 16-64	-0.50	-0.52	0.16	0.15	0.57	0.37	0.44	-0.71	1.00	-0.46	-0.34	0.45	-0.34	-0.38	-0.25	-0.44	-0.24	-0.46	-0.31	-0.30	-0.44	-0.45	-0.39	-0.25	0.43	-0.42	-0.22	0.09	-0.05	0.00	-0.42
Percent of Labor Force Unemployed	0.44	0.53	0.00	-0.17	-0.64	-0.55	-0.58	0.63	-0.46	1.00	0.52	-0.44	0.58	0.49	0.34	0.53	0.35	0.57	0.35	0.32	0.54	0.54	0.33	0.35	0.56	0.49	0.17	0.02	0.10	0.01	0.48
Population Density	0.70	0.72	0.28	-0.01	-0.53	-0.26	-0.54	0.57	-0.34	0.52	1.00	-0.55	0.44	0.64	0.40	0.72	0.30	0.42	0.23	0.24	0.70	0.66	0.61	0.51	0.70	0.69	0.46	0.09	0.05	-0.11	0.60
Percentage of Owner Occupied Housing Units	-0.58	-0.57	-0.38	-0.25	0.50	0.32	0.71	-0.70	0.45	-0.44	-0.55	1.00	-0.52	-0.57	-0.31	-0.60	-0.27	-0.27	-0.30	-0.25	-0.56	-0.58	-0.57	-0.43	0.56	-0.53	-0.45	-0.01	0.02	0.09	-0.35
Single Parent Households	0.30	0.33	0.29	0.42	-0.53	-0.55	-0.55	0.56	-0.34	0.58	0.44	-0.52	1.00	0.36	0.23	0.38	0.35	0.41	0.18	0.34	0.38	0.37	0.23	0.28	0.38	0.34	0.07	0.08	0.01	0.01	0.27
Cancer Risk	0.69	0.73	0.22	0.01	-0.57	-0.29	-0.60	0.60	-0.38	0.49	0.64	-0.57	0.36	1.00	0.59	0.96	0.29	0.42	0.32	0.28	0.89	0.85	0.66	0.90	0.83	0.83	0.51	0.10	0.05	-0.01	0.65
Neurological Disease Risk	0.39	0.39	0.06	-0.02	-0.49	-0.39	-0.46	0.36	-0.25	0.34	0.40	-0.31	0.23	0.59	1.00	0.59	0.15	0.30	0.18	0.15	0.54	0.51	0.34	0.50	0.55	0.42	0.33	0.29	0.05	0.05	0.40
Respiratory Disease Risk	0.80	0.84	0.22	0.06	-0.64	-0.32	-0.63	0.66	-0.44	0.53	0.72	-0.60	0.38	0.96	0.59	1.00	0.31	0.47	0.33	0.29	0.93	0.92	0.72	0.94	0.87	0.57	0.12	0.07	-0.01	0.74
Infant Mortality Rates	0.26	0.22	0.08	-0.09	-0.33	-0.34	-0.36	0.31	-0.24	0.35	0.30	-0.27	0.35	0.29	0.15	0.31	1.00	0.34	0.07	0.25	0.32	0.29	0.23	0.23	0.32	0.30	0.07	0.02	0.17	0.01	0.30
Teen Birth Rates	0.35	0.45	-0.15	-0.28	-0.56	-0.54	-0.53	0.50	-0.46	0.57	0.42	-0.27	0.41	0.42	0.30	0.47	0.34	1.00	0.34	0.20	0.52	0.48	0.32	0.52	0.48	0.12	-0.03	0.12	0.04	0.47
Percent of Births to Women Receiving Late or No Prenatal Care	0.21	0.29	-0.04	0.04	-0.30	-0.21	-0.28	0.34	-0.31	0.35	0.23	-0.30	0.18	0.32	0.18	0.33	0.07	0.34	1.00	0.20	0.31	0.30	0.15	0.30	0.31	0.28	-0.13	0.01	0.02	0.23
Rate of Low Birth Weight	0.25	0.27	-0.03	-0.01	-0.27	-0.21	-0.25	0.32	-0.30	0.32	0.24	-0.25	0.34	0.28	0.15	0.29	0.25	0.20	0.20	1.00	0.29	0.29	0.31	0.31	0.10	0.08	0.01	0.03	0.25
Access to Emergency Services	0.70	0.77	0.13	-0.04	-0.62	-0.33	-0.65	0.64	-0.44	0.54	0.70	-0.56	0.38	0.89	0.54	0.92	0.32	0.52	0.31	0.29	1.00	0.99	0.61	0.88	0.90	0.91	0.56	0.02	0.12	0.03	0.86
Emergency Services Coverage Areas	0.76	0.82	0.17	0.00	-0.62	-0.31	-0.63	0.67	-0.45	0.54	0.66	-0.58	0.37	0.85	0.51	0.92	0.29	0.48	0.30	0.29	0.99	1.00	0.68	0.70	0.88	0.90	0.56	0.02	0.12	0.04	0.74
Access to Social Services	0.90	0.81	0.20	0.07	-0.37	-0.16	-0.46	0.59	-0.39	0.33	0.61	-0.57	0.23	0.66	0.34	0.72	0.23	0.24	0.15	0.09	0.61	0.68	1.00	0.44	0.55	0.73	0.40	-0.03	0.13	-0.12	0.52
Access to Hospitals	0.45	0.50	0.16	0.19	-0.39	-0.13	-0.44	0.41	-0.25	0.35	0.51	-0.43	0.28	0.86	0.50	0.79	0.23	0.30	0.30	0.80	0.70	0.44	1.00	0.80	0.75	0.33	-0.03	0.13	0.09	0.56
Access to Freestanding Ambulatory Surgical and Emergency Centers	0.70	0.78	0.14	-0.03	-0.63	-0.35	-0.66	0.64	-0.43	0.56	0.70	-0.56	0.37	0.83	0.55	0.81	0.20	0.48	0.28	0.28	0.90	0.88	0.55	0.80	1.00	0.95	0.43	0.03	0.11	0.03	0.79
Access to All Other Outpatient Care Centers	0.70	0.77	0.11	-0.04	-0.52	-0.21	-0.58	0.61	-0.42	0.49	0.69	-0.53	0.34	0.83	0.42	0.87	0.30	0.48	0.29	0.31	0.90	0.90	0.73	0.75	0.95	1.00	0.45	-0.01	0.11	0.04	0.80
Access to Food Swamps	0.64	0.58	0.25	0.13	-0.24	0.05	-0.32	0.39	-0.22	0.17	0.46	-0.45	0.07	0.51	0.33	0.57	0.07	0.12	0.08	0.10	0.56	0.56	0.40	0.33	0.43	0.45	1.00	-0.07	-0.15	0.41
Watershed Failure	-0.02	-0.04	0.21	0.11	-0.14	-0.19	-0.11	0.03	0.09	0.02	0.09	-0.01	0.08	0.10	0.29	0.12	0.02	-0.13	-0.08	0.02	0.02	0.02	-0.03	-0.03	0.03	-0.01	0.08	1.00	-0.12	-0.14	0.03
Access to Parks	0.00	0.08	-0.08	-0.13	0.05	-0.04	-0.04	0.02	-0.05	0.10	0.05	0.02	0.01	0.05	-0.05	-0.01	0.17	0.12	0.01	0.01	0.12	0.12	0.13	0.13	0.11	0.11	0.03	-0.12	1.00	0.46	0.03
Percent Park	-0.09	-0.02	-0.08	-0.09	0.05	0.04	0.04	-0.06	0.00	0.01	-0.11	0.09	0.01	-0.01	-0.05	-0.01	0.01	0.04	0.02	0.00	0.03	0.03	-0.12	0.09	0.03	0.04	-0.15	-0.14	0.46	1.00	0.03
Crime Risk Index: Total Crime	0.63	0.73	0.02	-0.16	-0.57	-0.25	-0.48	0.51	-0.42	0.48	0.60	-0.35	0.27	0.65	0.40	0.74	0.30	0.47	0.23	0.30	0.80	0.74	0.52	0.56	0.79	0.80	0.41	0.03	0.03	0.03	1.00
Total Job Density	0.55	0.43	0.24	0.09	-0.19	0.00	-0.26	0.34	-0.24	0.16	0.36	-0.35	0.09	0.23	0.12	0.40	0.06	0.12	0.10	0.14	0.38	0.33	0.57	0.22	0.34	0.63	0.04	-0.05	-0.12	0.27
Total Jobs Accessible by Auto	0.53	0.59	0.11	0.13	-0.47	-0.23	-0.52	0.51	-0.32	0.42	0.57	-0.46	0.30	0.88	0.43	0.82	0.30	0.31	0.28	0.36	0.80	0.50	0.90	0.86	0.82	0.33	0.04	0.09	0.05	0.75
Total Jobs Accessible by Transit	0.64	0.70	0.14	0.00	-0.52	-0.27	-0.60	0.60	-0.41	0.49	0.65	-0.51	0.36	0.81	0.37	0.83	0.30	0.48	0.30	0.37	0.82	0.59	0.91	0.93	0.42	-0.13	0.10	0.04	0.75
Accessibility Gap between Transit and Auto	-0.42	-0.45	-0.17	-0.01	0.30	0.14	0.43	-0.37	0.29	-0.32	-0.44	0.44	-0.29	-0.51	-0.32	-0.54	-0.22	-0.34	-0.22	-0.28	-0.65	-0.57	-0.39	-0.55	0.64	0.27	0.14	-0.05	0.03	-0.34
Change in Job Density (2002-2010)	-0.18	-0.13	0.03	0.02	0.07	0.05	0.11	-0.10	0.10	-0.08	-0.09	0.08	-0.08	0.03	0.10	0.02	-0.01	-0.06	0.05	0.06	0.06	0.07	0.19	0.05	0.06	0.06	0.05	-0.04	0.02	-0.04	-0.12
Percent Change in Total Jobs (2002-2010)	-0.01	0.02	0.02	-0.03	-0.03	0.03	-0.05	0.07	-0.04	0.07	0.06	0.06	0.04	0.03	0.10	0.02	0.07	0.10	0.01	0.06	0.06	0.04	0.16	-0.03	-0.05	-0.04	0.12	-0.01	-0.04	-0.04	-0.04
Low Skill Workers	-0.11	-0.11	-0.05	-0.03	-0.34	-0.57	-0.31	0.10	0.10	0.09	0.17	0.06	-0.04	0.26	0.13	0.10	0.15	0.06	0.06	-0.04	0.13	-0.07	-0.11	-0.15	0.13	-0.02	-0.04	-0.03
Middle Skill Workers	-0.42	-0.45	0.09	0.13	0.33	-0.09	0.37	-0.22	0.23	-0.05	-0.12	0.27	-0.20	-0.23	-0.18	-0.24	-0.06	0.08	-0.33	-0.15	-0.47	-0.49	-0.32	-0.04	-0.43	-0.47	-0.49	-0.19	-0.04	0.04	-0.37
High Skill Workers	-0.28	-0.33	0.02	0.21	0.65	0.78	0.66	-0.48	0.38	-0.50	-0.31	0.33	-0.42	-0.38	-0.44	-0.42	-0.26	-0.55	-0.27	-0.25	-0.46	-0.44	-0.18	-0.25	0.48	-0.36	-0.12	-0.19	-0.04	0.04	-0.33
Percent Low Skill Workers	0.32	0.37	-0.09	-0.01	-0.85	-0.93	-0.74	0.61	-0.47	0.60	0.37	-0.37	0.54	0.41	0.47	0.46	0.36	0.57	0.26	0.23	0.46	0.45	0.18	0.25	0.48	0.34	0.08	0.18	0.05	-0.04	0.32
Percent Middle Skill Workers	-0.33	-0.33	0.10	0.02	0.14	-0.38	-0.12	-0.21	0.21	-0.01	-0.21	0.06	0.15	-0.23	-0.09	-0.28	0.03	-0.04	-0.27	-0.24	-0.28	-0.19	-0.35	-0.30	-0.32	0.00	-0.05	0.04	-0.32
Percent High Skill Workers	-0.18	-0.22	0.05	0.18	0.79	0.72	0.80	-0.55	0.26	-0.32	-0.15	0.32	-0.41	-0.20	-0.33	-0.20	-0.31	-0.07	-0.16	-0.35	-0.22	-0.12	-0.10	0.35	-0.12	0.03	-0.16	0.03	0.06	-0.15
Job Access Ratio	-0.10	-0.11	0.03	0.03	0.46	0.66	0.53	-0.25	0.12	-0.23	-0.13	0.17	-0.22	-0.17	-0.23	-0.18	-0.22	-0.42	-0.09	-0.07	-0.20	-0.18	-0.10	-0.10	-0.02	-0.12	-0.03	-0.12	-0.04	-0.03	-0.15
Travel Time Index	0.11	0.11	0.17	0.10	-0.08	-0.03	-0.10	0.11	-0.07	0.09	0.10	-0.16	0.13	0.12	-0.12	0.11	0.03	0.07	0.05	0.06	0.11	0.12	0.11	0.14	0.11	0.11	0.07	-0.09	0.03	0.03	0.07
Driving Commuters: Percent Driving Less Than 30 Minutes	0.28	0.27	0.10	0.10	-0.20	-0.03	-0.26	0.28	-0.19	0.15	0.11	0.07	0.45	0.43	0.28	0.48	0.09	0.30	0.13	0.23	0.32	-0.03	0.00	0.00	0.61
Commuters: Percent Taking Transit Less Than 45 Minutes	0.61	0.67	0.06	-0.17	-0.63	-0.40	-0.55	0.70	-0.52	0.58	0.56	-0.54	0.52	0.54	0.29	0.62	0.33	0.47	0.39	0.63	0.61	0.48	0.41	0.62	0.61	0.33	-0.03	0.10	0.00	0.61
Transit Access	0.66	0.69	0.21	0.01	-0.50	-0.26	-0.61	0.61	-0.38	0.48	0.67	-0.54	0.37	0.81	0.33	0.81	0.26	0.39	0.26	0.26	0.81	0.81	0.63	0.61	0.80	0.81	0.55	0.08	0.01	-0.09	0.67
Transit Connectivity Index	0.28	0.23	0.13	0.13	-0.01	0.09	-0.12	0.13	-0.10	0.01	0.07	-0.20	0.04	0.24	0.15	0.25	0.00	0.17	0.21	0.43	0.13	0.18	0.17	0.56	0.05	-0.04	-0.05	0.15
Walk Score	0.80	0.81	0.01	-0.44	-0.08	-0.42	0.54	-0.32	0.34	0.60	-0.49	0.21	0.68	0.41	0.78	0.19	0.29	0.14	0.16	0.68	0.73	0.77	0.45	0.69	0.66	0.69	0.11	-0.01	0.07	-0.22
Transportation Trail Miles	-0.17	-0.16	0.05	0.21	0.13	0.25	0.23	-0.14	0.11	-0.13	-0.20	0.10	-0.07	-0.05	0.00	-0.05	-0.28	-0.22	-0.08	-0.11	-0.03	-0.08	-0.23	0.05	-0.08	0.01	0.03	0.07	-0.22
Per Capita VMT for Home-Based Trips	-0.27	-0.30	-0.13	0.03	0.16	0.21	0.28	-0.27	0.12	-0.27	-0.43	0.29	-0.25	-0.28	-0.24	-0.26	-0.04	-0.15	-0.22	-0.07	-0.25	-0.25	-0.34	-0.35	-0.18	-0.09	-0.11	-0.04	0.06	-0.28
Per Capita VHT for Home-Based Trips	-0.19	-0.21	-0.09	0.06	0.21	0.21	0.28	-0.20	0.10	-0.26	-0.38	0.22	-0.23	-0.23	-0.24	-0.26	-0.14	-0.22	-0.04	-0.10	-0.30	-0.24	-0.15	-0.22	-0.31	-0.26	-0.09	-0.11	-0.02	0.07	-0.22

	Jobs: Total Job Density	Total Jobs Accessible by Auto	Total Jobs Accessible by Transit	Accessibility Gap between Transit and Auto	Change in Job Density (2002-2010)	Percent Change in Total Jobs (2002-2010)	Workforce: Low Skill Workers	Middle Skill Workers	High Skill Workers	Percent Low Skill Workers	Percent Middle Skill Workers	Percent High Skill Workers	Job Access Ratio	Travel Time Index	Driving Commuters: Percent Driving Less Than 30 Minutes	Commuters: Percent Taking Transit Less Than 45 Minutes	Transit Access	Transit Connectivity Index	Walk Score	Transportation Trail Miles	Per Capita VMT for Home-Based Trips	Per Capita VHT for Home-Based Trips
Student Performance (Elementary School)	-0.33	-0.56	-0.68	0.49	0.05	-0.06	-0.15	0.30	0.51	-0.58	0.09	0.50	0.31	-0.12	-0.18	-0.66	-0.66	-0.16	-0.62	0.14	0.31	0.25
3rd Grade Reading	-0.24	-0.48	-0.61	0.40	0.04	-0.04	-0.19	0.28	0.51	-0.59	0.09	0.51	0.31	-0.09	-0.16	-0.64	-0.59	-0.11	-0.54	0.17	0.29	0.25
3rd Grade Math	-0.30	-0.49	-0.60	0.40	0.05	-0.05	-0.15	0.26	0.44	-0.52	0.10	0.44	0.24	-0.12	-0.15	-0.61	-0.57	-0.15	-0.55	0.13	0.27	0.22
5th Grade Reading	-0.39	-0.52	-0.64	0.46	0.09	-0.06	-0.09	0.33	0.45	-0.51	0.15	0.42	0.26	-0.11	-0.19	-0.64	-0.63	-0.20	-0.65	0.14	0.27	0.21
5th Grade Math	-0.30	-0.49	-0.60	0.44	0.05	-0.07	-0.15	0.25	0.48	-0.54	0.04	0.49	0.30	-0.12	-0.11	-0.60	-0.58	-0.11	-0.53	0.11	0.27	0.23
Percent of Teachers Highly Qualified (Elementary School)	-0.27	-0.44	-0.49	0.36	-0.04	-0.08	-0.09	0.21	0.31	-0.37	0.11	0.30	0.22	-0.17	-0.21	-0.46	-0.50	-0.14	-0.49	0.10	0.20	0.16
Student Performance (Middle School)	-0.32	-0.51	-0.66	0.48	0.08	-0.06	-0.15	0.27	0.52	-0.56	0.05	0.50	0.33	-0.11	-0.22	-0.60	-0.63	-0.14	-0.53	0.17	0.30	0.27
Percent of Teachers Highly Qualified (Middle School)	-0.33	-0.60	-0.66	0.50	0.05	-0.06	-0.05	0.26	0.35	-0.39	0.12	0.32	0.22	-0.11	-0.29	-0.53	-0.62	-0.16	-0.56	0.16	0.24	0.22
Student Performance (High School)	-0.29	-0.61	-0.80	0.62	0.03	-0.10	-0.09	0.32	0.46	-0.49	0.12	0.40	0.27	-0.10	-0.28	-0.62	-0.71	-0.13	-0.59	0.21	0.31	0.25
Advanced Placement Course Enrollment	-0.12	-0.30	-0.40	0.28	-0.01	-0.10	-0.15	0.16	0.46	-0.46	-0.11	0.46	0.35	0.00	-0.09	-0.32	-0.39	-0.09	-0.29	0.12	0.21	0.10
Advanced Placement Exam Scores	-0.23	-0.52	-0.66	0.54	0.02	-0.10	-0.22	0.18	0.52	-0.55	-0.05	0.52	0.34	-0.06	-0.24	-0.50	-0.56	-0.10	-0.47	0.30	0.28	0.32
SAT Scores	-0.27	-0.61	-0.68	0.61	0.03	-0.10	-0.14	0.28	0.51	-0.54	0.05	0.47	0.32	-0.10	-0.25	-0.59	-0.68	-0.13	-0.56	0.26	0.31	0.27
High School Dropout	0.19	0.59	0.65	-0.51	-0.02	0.10	0.21	-0.20	-0.48	0.53	0.01	-0.48	-0.33	0.11	0.33	0.42	0.57	0.10	0.41	-0.25	-0.21	-0.27
Percent of Teachers Highly Qualified (High School)	-0.18	-0.47	-0.56	0.44	-0.01	-0.14	-0.08	0.23	0.38	-0.40	0.03	0.35	0.24	-0.13	-0.18	-0.41	-0.53	-0.07	-0.37	0.13	0.23	0.14
Access to Work Force Investment Area Training Programs	0.30	0.73	0.85	-0.62	-0.08	0.05	-0.10	-0.42	-0.33	0.29	-0.25	-0.18	-0.11	0.15	0.40	0.55	0.76	0.16	0.58	-0.24	-0.36	-0.31
Proximity to Community Colleges	-0.24	-0.71	-0.64	0.60	0.04	-0.06	0.11	0.30	0.17	-0.15	0.18	0.07	0.02	-0.12	-0.51	-0.35	-0.60	-0.12	-0.41	0.08	0.28	0.25
Proximity to Private Career Schools	-0.22	-0.66	-0.58	0.51	0.04	-0.06	0.12	0.27	0.10	-0.08	0.20	0.00	0.00	0.08	-0.41	-0.31	-0.55	-0.11	-0.38	0.07	0.24	0.20
Median Housing Value	-0.17	-0.50	-0.56	0.36	0.03	-0.07	-0.36	0.10	0.65	-0.74	-0.22	0.75	0.52	-0.10	-0.19	-0.49	-0.55	-0.06	-0.32	0.21	0.35	0.27
Median Gross Rent	-0.14	-0.29	-0.37	0.14	0.04	0.01	-0.21	0.21	0.49	-0.54	-0.01	0.50	0.35	-0.05	-0.07	-0.38	-0.37	-0.02	-0.24	0.20	0.18	0.10
Percent Change of Total Housing Units (2000-2010)	-0.06	-0.19	-0.22	0.16	0.07	0.04	-0.07	0.12	0.19	-0.22	0.05	0.18	0.11	0.10	-0.10	-0.20	-0.22	0.10	-0.14	0.07	0.23	0.29
Percent Change of Total Occupied Housing Units (2000-2010)	-0.07	-0.23	-0.27	0.19	0.06	0.04	-0.07	0.17	0.25	-0.27	0.06	0.22	0.13	0.09	-0.12	-0.25	-0.27	0.12	-0.17	0.09	0.24	0.30
Percent Change of Owner-Occupied Housing Units (2000-2010)	-0.01	-0.06	-0.07	0.14	-0.01	-0.03	0.05	0.04	0.04	-0.02	0.03	0.03	0.08	-0.14	0.02	-0.10	-0.09	0.21	0.04	0.04	0.11	0.11
Percent Change of Renter-Occupied Housing Units (2000-2010)	-0.06	0.02	-0.02	0.06	0.04	0.06	0.05	0.02	0.07	0.04	-0.09	-0.01	-0.02	-0.08	0.12	-0.03	-0.07	0.07	-0.01	0.04	0.08	0.02
Percent of Single Family Housing Units (Attached)	0.18	0.44	0.50	-0.39	-0.02	0.06	0.07	-0.23	-0.34	0.40	-0.09	-0.34	-0.12	0.11	0.19	0.50	0.54	0.00	0.45	-0.11	-0.33	-0.26
Percent of Single Family Housing Units (Detached)	-0.31	-0.54	-0.58	0.47	0.03	-0.05	-0.04	0.22	0.28	-0.33	0.11	0.26	0.14	-0.16	-0.32	-0.51	-0.66	-0.15	-0.52	0.09	0.36	0.26
Percent of Multi-Family Housing Units	0.27	0.31	0.31	-0.27	-0.04	0.00	-0.04	-0.07	0.02	-0.01	-0.04	0.04	-0.05	0.10	0.27	0.19	0.37	0.24	0.27	0.00	-0.17	-0.09
Selected Monthly Owner Costs as Percentage of Income	0.10	0.14	0.21	-0.16	-0.04	0.11	0.15	0.04	-0.23	0.28	0.10	-0.29	-0.28	0.08	-0.05	0.17	0.17	0.19	0.14	-0.06	-0.06	-0.03
Gross Rent as Percentage of Income	0.04	0.19	0.25	-0.20	-0.04	0.05	0.07	-0.12	-0.21	0.25	-0.03	-0.22	-0.11	0.03	0.10	0.23	0.20	0.01	0.09	-0.04	-0.06	-0.08
Ratio of Median Gross Rent to FMR	-0.13	-0.29	-0.34	0.10	0.04	0.01	-0.18	0.22	0.45	-0.50	0.02	0.45	0.31	-0.04	-0.07	-0.37	-0.39	-0.01	-0.23	0.08	0.16	0.07
Owner Cost Burden	0.15	0.20	0.31	-0.25	-0.07	0.12	0.13	-0.06	-0.28	0.34	0.05	-0.33	-0.27	0.06	0.02	0.26	0.24	0.15	0.16	-0.09	-0.09	-0.06
Renter Cost Burden	0.03	0.17	0.22	-0.17	-0.03	0.04	0.04	-0.14	-0.20	0.22	-0.03	-0.19	-0.10	0.02	0.07	0.19	0.16	0.02	0.07	-0.04	-0.05	-0.05
Severe Owner Cost Burden	0.06	0.23	0.29	-0.23	-0.04	0.16	0.12	-0.08	-0.26	0.36	-0.01	-0.32	-0.21	0.08	0.09	0.30	0.24	0.06	0.13	-0.09	-0.11	-0.09
Severe Renter Cost Burden	0.05	0.08	0.15	-0.11	-0.08	-0.04	-0.02	-0.16	-0.16	0.14	-0.08	-0.10	-0.06	0.00	0.03	0.23	0.10	-0.03	0.00	-0.01	-0.03	-0.01
Housing Affordability Index	-0.05	0.33	0.30	-0.11	0.04	0.06	0.22	-0.01	-0.30	0.40	0.07	-0.39	-0.22	0.07	0.00	0.26	0.33	-0.09	0.15	-0.03	-0.17	-0.17
Housing + Transportation Index (local base)	0.26	0.45	0.53	-0.37	-0.08	0.06	0.14	-0.26	-0.49	0.61	-0.04	-0.54	-0.27	0.11	0.19	0.62	0.52	0.08	0.37	-0.15	-0.23	-0.18
Housing + Transportation Index (AMI base)	-0.28	-0.55	-0.63	0.42	0.07	-0.04	-0.20	0.31	0.65	-0.69	0.00	0.63	0.45	-0.04	-0.31	-0.55	-0.61	-0.12	-0.47	0.25	0.38	0.33
High Cost Loan Rate	0.09	0.50	0.60	-0.47	-0.03	0.12	0.32	-0.11	-0.62	0.72	0.20	-0.73	-0.39	0.15	0.14	0.60	0.53	0.00	0.27	-0.18	-0.31	-0.28
Foreclosure Rate	0.13	0.55	0.66	-0.52	-0.03	0.11	0.29	-0.16	-0.62	0.71	0.16	-0.71	-0.38	0.14	0.16	0.64	0.58	0.01	0.34	-0.23	-0.33	-0.28
Vacant Units Abandoned	0.24	0.38	0.47	-0.29	-0.14	0.01	-0.01	-0.33	-0.39	0.48	-0.15	-0.39	-0.12	0.06	0.11	0.61	0.48	0.02	0.44	-0.14	-0.20	-0.17
Housing Capacity per Acre	0.41	0.34	0.41	-0.24	-0.30	-0.02	-0.08	-0.30	-0.25	0.34	-0.19	-0.25	-0.06	0.08	0.11	0.55	0.44	0.32	0.50	-0.11	-0.17	-0.11
Access to Combined Civic, Social, Community & Religious Organizations	0.55	0.53	0.64	-0.42	-0.18	-0.01	-0.11	-0.42	-0.28	0.32	-0.33	-0.18	-0.10	0.11	0.28	0.61	0.66	0.28	0.80	-0.17	-0.27	-0.19
Access to Public Institutions	0.43	0.59	0.70	-0.45	-0.13	0.02	-0.11	-0.45	-0.33	0.37	-0.33	-0.22	-0.11	0.11	0.27	0.61	0.81	0.16	0.66	-0.16	-0.30	-0.22
Percent Population Aged 25 to 44	0.12	0.11	0.08	-0.17	0.03	0.02	-0.05	0.09	0.02	-0.09	0.10	0.05	0.03	0.17	0.10	0.06	0.21	0.13	0.27	0.05	-0.13	-0.09
Racial Diversity Index	0.09	0.13	-0.02	-0.01	0.02	-0.03	-0.03	0.13	0.21	-0.21	0.02	0.18	0.03	0.16	-0.17	0.10	0.23	0.13	0.01	0.21	0.03	0.06
Percent Population Having High School Diploma or Greater	-0.19	-0.47	-0.52	0.30	0.07	-0.03	-0.34	0.33	0.65	-0.85	0.14	0.75	0.46	-0.08	-0.20	-0.63	-0.56	-0.01	-0.44	0.21	0.24	0.21
Percent Population Having Bachelor's Degree or Greater	0.00	-0.23	-0.27	0.14	0.02	-0.03	-0.57	-0.03	0.78	-0.93	-0.38	0.99	0.64	-0.03	-0.03	-0.40	-0.26	0.09	-0.08	0.25	0.18	0.21
Median Income	-0.26	-0.52	-0.60	0.43	0.05	-0.05	-0.31	0.19	0.66	-0.74	-0.12	0.72	0.53	-0.10	-0.26	-0.51	-0.61	-0.12	-0.42	0.23	0.34	0.28
Percent of Households in Poverty	0.34	0.51	0.60	-0.37	-0.11	0.03	0.10	-0.38	-0.48	0.61	-0.21	-0.48	-0.25	0.11	0.28	0.70	0.61	0.13	0.54	-0.14	-0.27	-0.20
Labor Force Participation Rate - Ages 16-64	-0.24	-0.32	-0.41	0.29	0.10	-0.07	-0.03	0.37	0.38	-0.47	0.21	0.36	0.22	0.07	-0.19	-0.33	-0.38	-0.10	-0.32	0.11	0.12	0.10
Percent of Labor Force Unemployed	0.16	0.42	0.49	-0.32	-0.08	0.06	0.17	-0.25	-0.50	0.60	-0.01	-0.55	-0.23	0.09	0.15	0.58	0.48	0.01	0.34	-0.13	-0.27	-0.26
Population Density	0.36	0.57	0.65	-0.44	-0.09	0.03	0.06	-0.27	-0.31	0.37	-0.21	-0.26	-0.13	0.10	0.28	0.56	0.67	0.07	0.60	-0.20	-0.43	-0.38
Percentage of Owner Occupied Housing Units	-0.35	-0.46	-0.51	0.44	0.08	-0.01	-0.04	0.23	0.33	-0.37	0.06	0.32	0.17	-0.16	-0.34	-0.54	-0.58	-0.20	-0.49	0.10	0.29	0.22
Single Parent Households	0.09	0.30	0.36	-0.29	-0.08	0.05	0.26	-0.05	-0.42	0.54	0.15	-0.55	-0.22	0.13	0.06	0.52	0.37	-0.04	0.21	-0.07	-0.25	-0.23
Cancer Risk	0.35	0.88	0.81	-0.51	-0.10	0.03	-0.03	-0.42	-0.38	0.41	-0.23	-0.29	-0.17	0.12	0.47	0.54	0.81	0.14	0.51	-0.18	-0.28	-0.23
Neurological Disease Risk	0.21	0.43	0.37	-0.20	-0.06	-0.01	0.10	-0.30	-0.44	0.47	-0.09	-0.40	-0.23	-0.12	0.26	0.29	0.38	0.15	0.41	-0.23	-0.28	-0.24
Respiratory Disease Risk	0.40	0.82	0.83	-0.54	-0.10	0.02	-0.03	-0.46	-0.42	0.46	-0.28	-0.32	-0.26	0.11	0.43	0.62	0.81	0.25	0.78	-0.19	-0.30	-0.26
Infant Mortality Rates	0.06	0.23	0.30	-0.22	0.06	0.07	0.15	-0.08	-0.26	0.36	0.03	-0.34	-0.22	0.03	0.03	0.33	0.26	0.02	0.19	-0.04	-0.17	-0.14
Teen Birth Rates	0.12	0.39	0.48	-0.34	0.03	0.10	0.06	-0.34	-0.55	0.57	-0.04	-0.55	-0.22	0.05	0.11	0.47	0.39	-0.04	0.29	-0.19	-0.22	-0.22
Percent of Births to Women Receiving Late or No Prenatal Care	0.10	0.31	0.30	-0.22	0.02	0.01	-0.06	-0.28	-0.27	0.26	-0.08	-0.21	-0.09	0.05	0.11	0.29	0.26	0.02	0.14	-0.06	-0.11	-0.04
Rate of Low Birth Weight	0.12	0.28	0.35	-0.28	-0.05	0.06	-0.04	-0.19	-0.25	0.23	-0.02	-0.20	-0.07	0.06	0.07	0.35	0.26	0.05	0.16	-0.04	-0.08	-0.05
Access to Emergency Services	0.33	0.86	0.93	-0.65	-0.07	0.06	-0.02	-0.48	-0.46	0.46	-0.27	-0.33	-0.20	0.11	0.45	0.63	0.85	0.17	0.68	-0.28	-0.35	-0.30
Emergency Services Coverage Areas	0.38	0.80	0.85	-0.57	-0.10	0.04	-0.04	-0.49	-0.44	0.45	-0.29	-0.31	-0.18	0.12	0.41	0.61	0.81	0.21	0.73	-0.22	-0.27	-0.24
Access to Social Services	0.57	0.50	0.59	-0.39	-0.19	-0.01	-0.13	-0.34	-0.18	0.18	-0.28	-0.07	-0.07	0.14	0.30	0.43	0.77	0.08	0.75	-0.11	-0.25	-0.22
Access to Hospitals	0.22	0.90	0.78	-0.55	-0.04	0.09	-0.07	-0.33	-0.25	0.25	-0.19	-0.16	-0.10	0.14	0.48	0.41	0.65	0.13	0.45	-0.11	-0.25	-0.22
Access to Freestanding Ambulatory Surgical and Emergency Centers	0.34	0.86	0.92	-0.64	-0.08	0.06	-0.05	-0.47	-0.48	0.48	-0.25	-0.35	-0.22	0.11	0.45	0.61	0.80	0.18	0.69	-0.24	-0.34	-0.31
Access to All Other Outpatient Care Centers	0.34	0.82	0.93	-0.67	-0.08	0.06	-0.11	-0.49	-0.36	0.34	-0.30	-0.20	-0.12	0.11	0.42	0.61	0.81	0.17	0.66	-0.23	-0.35	-0.26
Access to Food Swamps	0.63	0.39	0.42	-0.27	-0.19	-0.05	-0.15	-0.32	-0.12	0.08	-0.32	0.04	-0.03	0.07	0.22	0.33	0.51	0.56	0.69	-0.09	-0.13	-0.11
Watershed Failure	0.04	-0.09	-0.13	0.14	0.01	-0.07	0.13	0.02	-0.19	0.18	0.09	-0.20	-0.12	-0.09	-0.03	-0.03	0.08	0.05	0.11	0.07	-0.09	-0.11
Access to Parks	-0.05	0.09	0.10	-0.05	0.02	0.03	-0.02	-0.09	-0.04	0.05	-0.07	-0.02	-0.04	0.03	0.00	0.10	0.01	-0.04	-0.01	0.03	-0.04	-0.02
Percent Park	-0.12	0.05	0.04	-0.03	0.04	0.04	-0.04	-0.04	0.03	-0.03	-0.04	0.05	-0.03	0.03	0.00	0.00	-0.09	-0.05	-0.07	0.07	0.06	0.07
Crime Risk Index: Total Crime	0.27	0.61	0.75	-0.54	-0.12	0.03	-0.03	-0.43	-0.37	0.41	-0.32	-0.26	-0.15	0.07	0.26	0.61	0.67	0.15	0.58	-0.22	-0.26	-0.22
Total Job Density	1.00	0.27	0.33	-0.24	-0.13	-0.02	-0.16	-0.28	-0.14	0.08	-0.22	0.00	-0.04	0.07	0.14	0.28	0.39	0.27	0.44	-0.09	-0.16	-0.11
Total Jobs Accessible by Auto	0.27	1.00	0.88	-0.52	-0.07	0.06	-0.05	-0.39	-0.33	0.33	-0.23	-0.22	-0.15	0.14	0.52	0.48	0.73	0.16	0.51	-0.18	-0.22	-0.21
Total Jobs Accessible by Transit	0.33	0.88	1.00	-0.74	-0.09	0.07	-0.06	-0.43	-0.40	0.37	-0.22	-0.26	-0.18	0.15	0.43	0.59	0.78	0.15	0.59	-0.16	-0.25	-0.22
Accessibility Gap between Transit and Auto	-0.24	-0.52	-0.74	1.00	0.03	-0.13	0.10	0.29	0.26	-0.17	0.08	0.13	0.08	-0.25	-0.33	-0.41	-0.52	-0.09	-0.40	0.26	0.25	0.22
Change in Job Density (2002-2010)	-0.13	-0.07	-0.09	0.03	1.00	0.16	0.03	0.06	0.05	-0.05	0.04	0.03	0.02	0.15	0.00	0.06	0.01	-0.02	0.00	-0.01	0.03	0.01
Percent Change in Total Jobs (2002-2010)	-0.02	0.06	0.07	-0.13	0.16	1.00	-0.02	-0.01	-0.03	0.01	0.05	-0.03	0.02	0.01	0.04	0.05	0.05	-0.01	0.04	0.05	0.01	-0.01
Low Skill Workers	-0.16	-0.05	-0.06	0.10	0.03	-0.02	1.00	0.58	0.16	0.55	0.20	-0.57	-0.49	0.02	-0.07	0.06	-0.03	0.06	-0.15	-0.08	0.05	0.00
Middle Skill Workers	-0.28	-0.39	-0.43	0.29	0.06	-0.01	0.58	1.00	0.41	-0.17	0.55	-0.04	-0.04	0.04	-0.12	-0.38	-0.34	0.02	-0.24	0.32	0.26	0.28
High Skill Workers	-0.14	-0.33	-0.40	0.26	0.05	-0.03	0.16	0.41	1.00	-0.77	-0.24	0.79	0.53	0.04	-0.12	-0.38	-0.36	0.02	-0.24	0.32	0.26	0.28
Percent Low Skill Workers	0.08	0.33	0.37	-0.17	-0.05	0.01	0.55	-0.17	-0.77	1.00	0.06	-0.94	-0.64	0.00	0.09	0.51	0.38	-0.04	0.21	-0.25	-0.20	-0.21
Percent Middle Skill Workers	-0.22	-0.23	-0.22	0.08	0.04	0.05	0.20	0.55	-0.24	0.06	1.00	-0.40	-0.20	0.00	-0.17	-0.20	-0.27	-0.13	-0.35	-0.07	0.02	-0.03
Percent High Skill Workers	0.00	-0.22	-0.26	0.13	0.03	-0.03	-0.57	-0.04	0.79	-0.94	-0.40	1.00	0.66	0.02	-0.02	-0.40	-0.26	0.08	-0.07	0.25	0.18	0.20
Job Access Ratio	-0.04	-0.15	-0.18	0.08	0.02	-0.02	-0.49	-0.04	0.53	-0.64	-0.20	0.66	1.00	0.02	0.04	-0.16	-0.17	-0.02	-0.11	0.20	0.06	0.06
Travel Time Index	0.07	0.14	0.15	-0.25	-0.02	0.15	0.02	0.03	0.04	0.03	0.00	-0.03	0.02	1.00	0.12	0.15	0.12	0.03	0.03	0.02	0.10	0.15
Driving Commuters: Percent Driving Less Than 30 Minutes	0.14	0.52	0.43	-0.33	-0.05	0.00	-0.07	-0.24	-0.12	0.09	-0.17	-0.02	0.04	0.12	1.00	0.21	0.69	0.23	0.51	-0.16	-0.30	-0.22
Commuters: Percent Taking Transit Less Than 45 Minutes	0.28	0.48	0.59	-0.41	-0.15	0.06	0.06	-0.32	-0.38	0.51	-0.20	-0.40	-0.16	0.15	0.21	1.00	0.57	0.10	0.44	-0.15	-0.25	-0.20
Transit Access	0.39	0.73	0.78	-0.52	-0.09	0.05	-0.03	-0.41	-0.36	0.38	-0.27	-0.26	-0.17	0.12	0.38	0.57	1.00	0.16	0.62	-0.06	-0.31	-0.24
Transit Connectivity Index	0.27	0.16	0.15	-0.09	-0.25	-0.02	-0.06	-0.09	0.02	-0.04	-0.13	0.08	0.02	0.03	0.23	0.10	0.16	1.00	0.30	-0.03	0.02	0.13
Walk Score	0.44	0.51	0.59	-0.40	-0.09	0.00	-0.15	-0.43	-0.24	0.21	-0.35	-0.07	-0.11	0.02	0.07	0.44	0.62	0.30	1.00	-0.13	-0.09	-0.08
Transportation Trail Miles	-0.09	-0.18	-0.28	0.26	-0.03	-0.01	-0.08	0.11	0.32	-0.25	-0.07	0.25	0.20	0.02	-0.07	-0.15	-0.06	-0.03	-0.13	1.00	0.19	0.18
Per Capita VMT for Home-Based Trips	-0.16	-0.22	-0.30	0.25	0.04	0.05	0.05	0.18	0.26	-0.20	0.02	0.18	0.06	0.10	-0.30	-0.25	-0.31	0.02	-0.25	0.19	1.00	0.80
Per Capita VHT for Home-Based Trips	-0.11	-0.21	-0.25	0.22	0.03	-0.01	0.00	0.13	0.28	-0.21	-0.03	0.21	0.06	0.15	-0.15	-0.20	-0.24	0.13	-0.17	0.18	0.80	1.00

APPENDIX D: INDICATOR MAPS

This appendix contains all 93 indicator maps that were included in either the OMAP composite category index maps or the NCSG composite opportunity index map. Along with each map, we provide additional information, including:

- A definition of the indicator;
- The methodology used to derive and map the data;
- Summary statistics of the data by jurisdiction within the Baltimore region;
- Data source(s); and,
- A histogram showing the distribution of the indicator data.

Correlation coefficients between all of these indicators are provided in Appendix C.

Unlike the composite index maps presented in the main text of this memo, these indicator maps are maps of actual data, not z-scores. The data are displayed using 32 equal intervals (the maximum allowed by ArcGIS), compared to the five quintiles used in the index maps. Mapping these data using equal intervals as opposed to quantiles, allows for a more complete understanding of the distribution of the data across the region. If the data are heavily skewed in one direction, this will be evident in the distribution of colors in the map. There were several maps, however, where outliers resulted in maps that showed no variation in the data. To make these maps useful for review and discussion purposes, we often capped the data to shorten the range of values (e.g., the top value becomes "100% or more"). When the data for the map have been capped, we indicate as such in the methodology notes. It is important to note that the data are only capped for mapping of the individual indicators. For the calculation of z-scores and index values, we continue to use the actual data values.

The color schemes in these maps are also different from the yellow-to-brown scheme use in the index maps. For the indicator maps, if the underlying data have a direct relationship with opportunity (meaning that as the value of the indicator increases, so does opportunity), then the map uses a yellow-to-green scheme, where green represents both the higher indicator value and higher opportunity. If the indicator is inversely related to opportunity (meaning that as the value of the indicator increases, opportunity decreases), then the map uses a red-to-yellow scheme, where red identifies the higher indicator values but lower opportunity.

APPENDIX D CONTENTS

EDUCATION INDICATORS

Subcategory	Indicator Title	Description
Elementary School	Student Performance (Elementary School)	Average combined share of 'proficient' and 'advanced' scores on all elementary school Maryland School Assessment (MSA) exams.
	3rd Grade Reading	Average share of 'proficient' or 'advanced' scores on the MSA 3rd grade reading exam.
	3rd Grade Math	Average share of 'proficient' or 'advanced' scores on the MSA 3rd grade math exam.
	5th Grade Reading	Average share of 'proficient' or 'advanced' scores on the MSA 5th grade reading exam.
	5th Grade Math	Average share of 'proficient' or 'advanced' scores on the MSA 5th grade math exam.
	Percent of Teachers Highly Qualified (Elementary School)	Percentage of elementary school teachers with an 'Advanced Professional Certificate.' An Advanced Professional Certificate requires three years of satisfactory professional school-related experience, and a master's degree or a minimum of 36 semester hours of post baccalaureate coursework.
Middle School	Student Performance (Middle School)	Average combined share of 'proficient' and 'advanced' scores on all elementary school MSA exams.
	Percent of Teachers Highly Qualified (Middle School)	Percentage of middle school teachers with an 'Advanced Professional Certificate.' An Advanced Professional Certificate requires three years of satisfactory professional school-related experience, and a master's degree or a minimum of 36 semester hours of post baccalaureate coursework.
High School	Student Performance (High School)	Average combined share of 'proficient' and 'advanced' scores on all elementary school Maryland High School Assessment exams.
	Advanced Placement Course Enrollment	Percentage of high school students currently enrolled in an Advanced Placement (AP) course. AP exams are offered by the College Board in 34 subjects. AP courses offered in high schools follow college-level curricula established by the College Board, and prepare students to take the respective AP exam.
	Advanced Placement Exam Scores	Percent of all high school AP exams with a score of 3, 4, or 5. Scores of 3, 4 or 5 will often earn incoming college students course placement, requirement exemptions, and/or course credit.
	SAT Scores	Average combined scores for the SAT exam. Possible test scores range from 600 to 2400.
	High School Dropout	Percentage of high school students that drop out of school.
	Percent of Teachers Highly Qualified (High School)	Percentage of high school teachers with an 'Advanced Professional Certificate.' An Advanced Professional Certificate requires three years of satisfactory professional school-related experience, and a master's degree or a minimum of 36 semester hours of post baccalaureate coursework.
Adult Workforce Development	Access to Work Force Investment Area Training Programs	A gravity based measure that captures the distance to locations of job training programs.
	Proximity to Community Colleges	Distance to the nearest nonresidential junior college offering courses to local residents.
	Proximity to Private Career Schools	Distance to the nearest private school offering vocational training programs.

Additional education indicators considered by the OMAP include:
- Average Attendance Rate (Elementary School)
- School Progress Index (Elementary School)
- Proximity to Head Start Programs
- Elementary School Poverty: Percent of FARM Students
- School Progress Index (Middle School)
- 8th Grade Math
- School Progress Index (High School)
- SAT Scores (Math)
- SAT Scores (Critical Reading)
- SAT Scores (Writing)
- Student-Teacher Ratio (High School)

Student Performance (Elementary School)
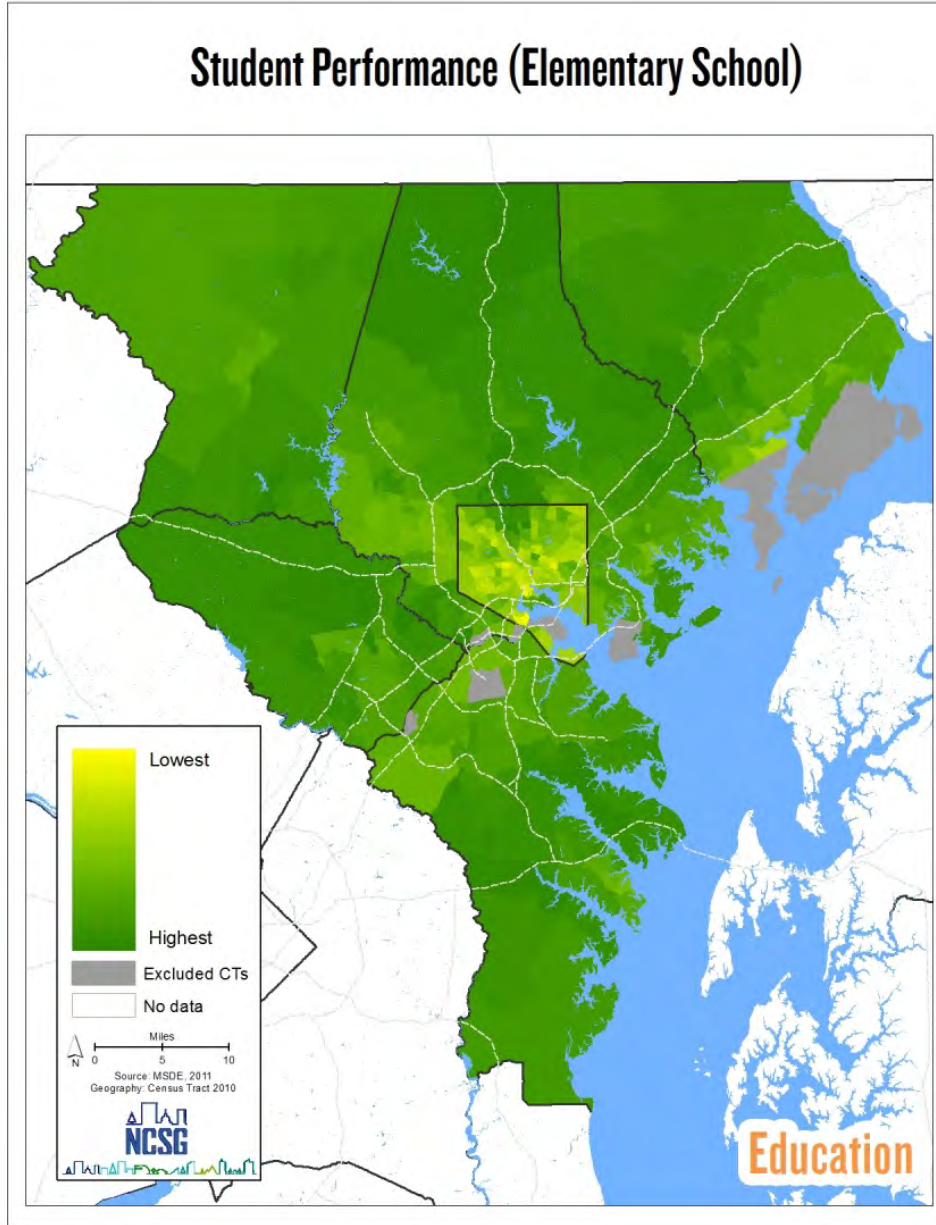
Student Performance (ES)

Average combined share of 'proficient' and 'advanced' scores on all elementary school Maryland School Assessment exams.

METHODOLOGY
School service areas merged to census tract.

SUMMARY DATA*

Region	78.5%
Anne Arundel	77.4%
Baltimore	84.8%
Carroll	87.0%
Harford	76.9%
Howard	87.3%
Baltimore City	68.7%

DATA SOURCE
Maryland State Department of Education, 2011
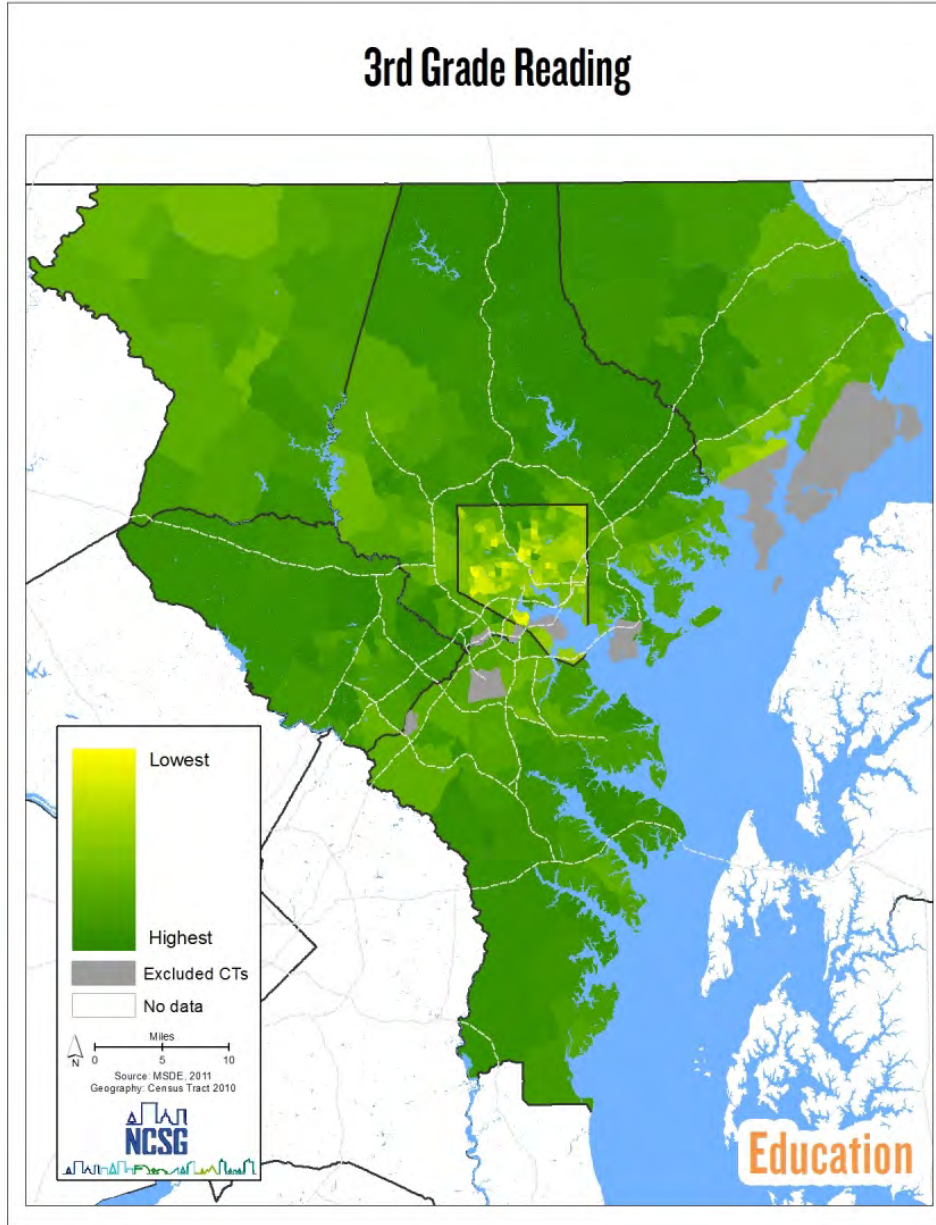
HISTOGRAM

*   Summary data indicate the average of census tract values in each jurisdiction.

3rd Grade Reading

3rd Grade Reading

Average share of 'proficient' or 'advanced' scores on the Maryland School Assessment 3rd grade reading exam.

METHODOLOGY
School service areas merged to census tract.

SUMMARY DATA*

Region	79.6%
Anne Arundel	77.2%
Baltimore	86.4%
Carroll	83.7%
Harford	76.4%
Howard	88.7%
Baltimore City	71.1%

DATA SOURCE
Maryland State Department of Education, 2011

HISTOGRAM
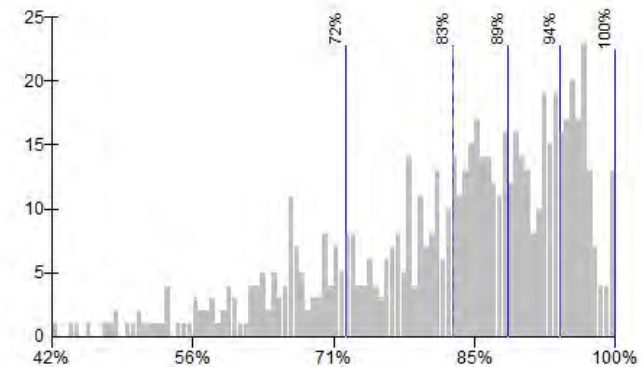
* Summary data indicate the average of census tract values in each jurisdiction.

3rd Grade Math
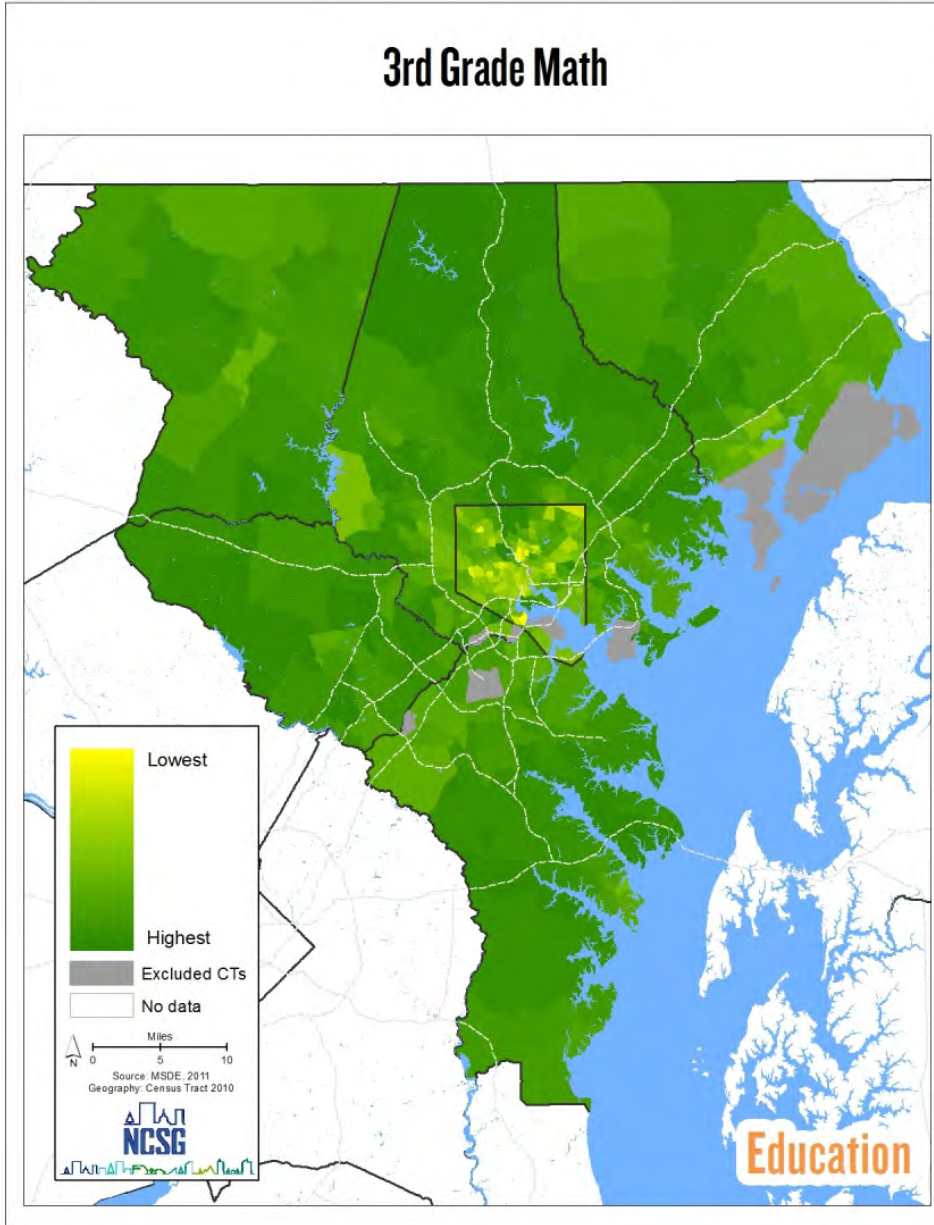
3rd Grade Math

Average share of 'proficient' or 'advanced' scores on the Maryland School Assessment 3rd grade math exam.

METHODOLOGY
School service areas merged to census tract.

SUMMARY DATA*

Region	81.9%
Anne Arundel	79.4%
Baltimore	87.7%
Carroll	89.0%
Harford	77.4%
Howard	89.5%
Baltimore City	74.9%

DATA SOURCE
Maryland State Department of Education, 2011

HISTOGRAM
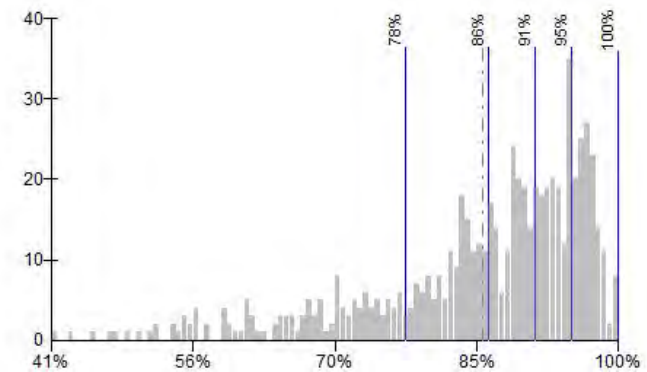
* Summary data indicate the average of census tract values in each jurisdiction.

5th Grade Reading
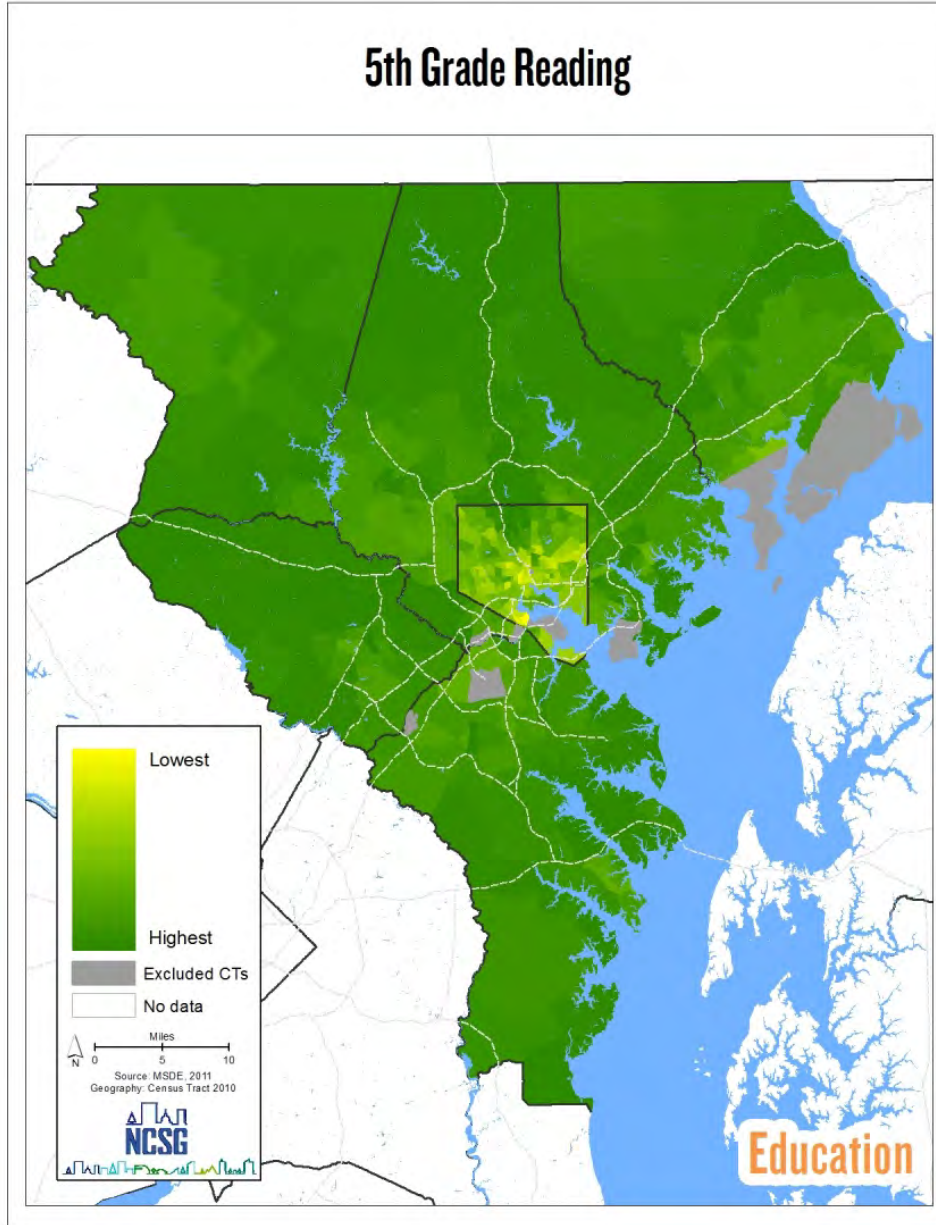
5th Grade Reading

Average share of 'proficient' or 'advanced' scores on the Maryland School Assessment 5th grade reading exam.

METHODOLOGY
School service areas merged to census tract.

SUMMARY DATA*

Region	84.2%
Anne Arundel	81.1%
Baltimore	90.3%
Carroll	91.3%
Harford	81.2%
Howard	91.8%
Baltimore City	76.6%

DATA SOURCE
Maryland State Department of Education, 2011

HISTOGRAM
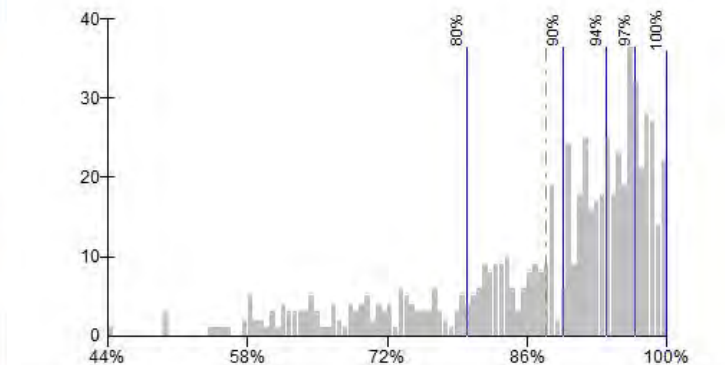
*   Summary data indicate the average of census tract values in each jurisdiction.

5th Grade Math
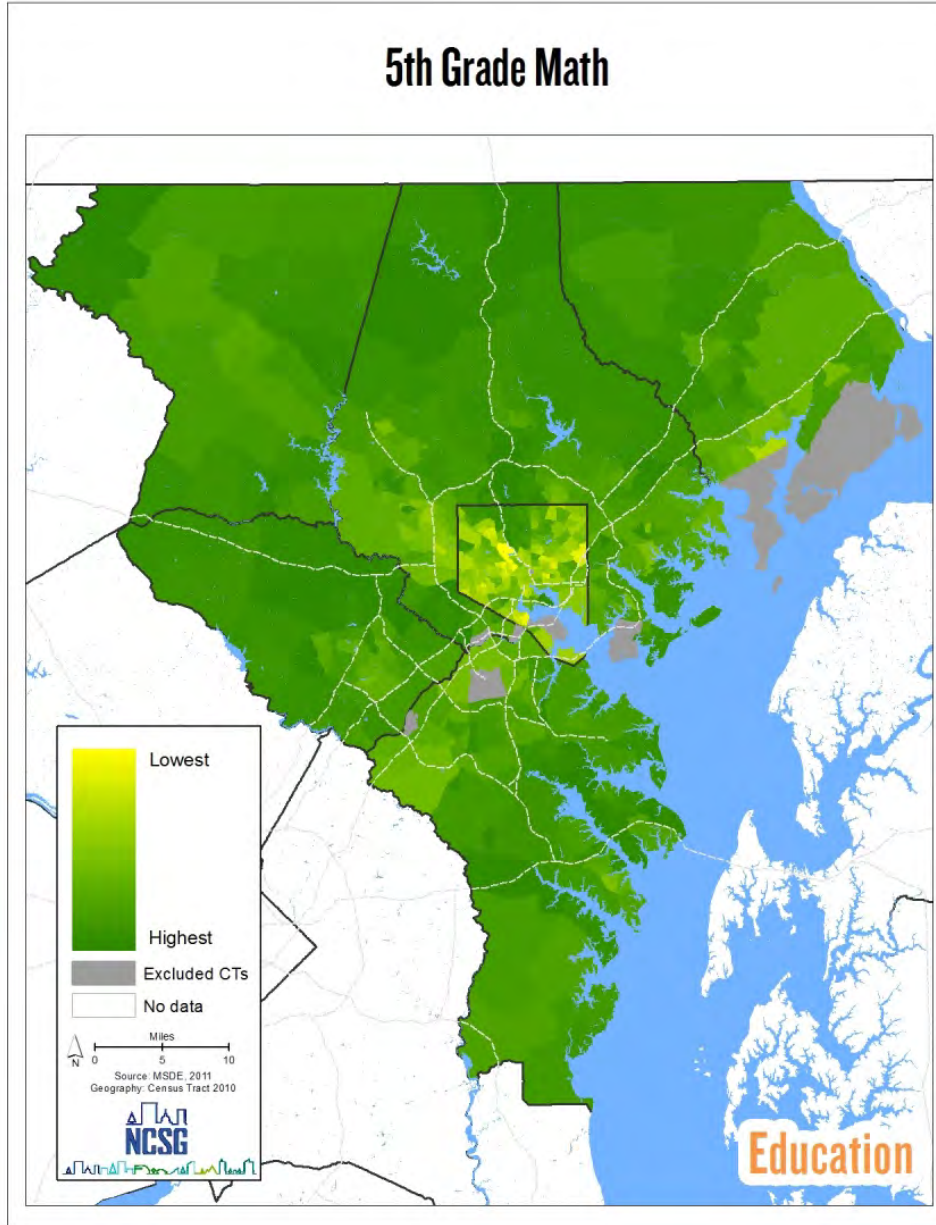
5th Grade Math

Average share of 'proficient' or 'advanced' scores on the Maryland School Assessment 5th grade math exam.

METHODOLOGY
School service areas merged to census tract.

5TH GRADE MATH PERFORMANCE*

Region	77.0%
Anne Arundel	76.5%
Baltimore	83.9%
Carroll	87.0%
Harford	75.0%
Howard	86.7%
Baltimore City	65.8%

DATA SOURCE
Maryland State Department of Education, 2011
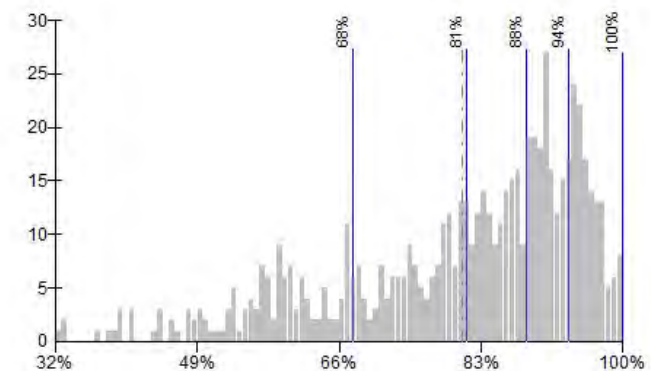
HISTOGRAM

* *Summary data indicate the average of census tract values in each jurisdiction.*

Percent of Teachers Highly Qualified (Elementary School)

Percent of Teachers Highly Qualified (Elementary School)

Legend:
- Lowest → Highest
- Excluded CTs
- No data

Miles
0 5 10

Source: MSDE, 2011
Geography: Census Tract 2010

NCSG

Education
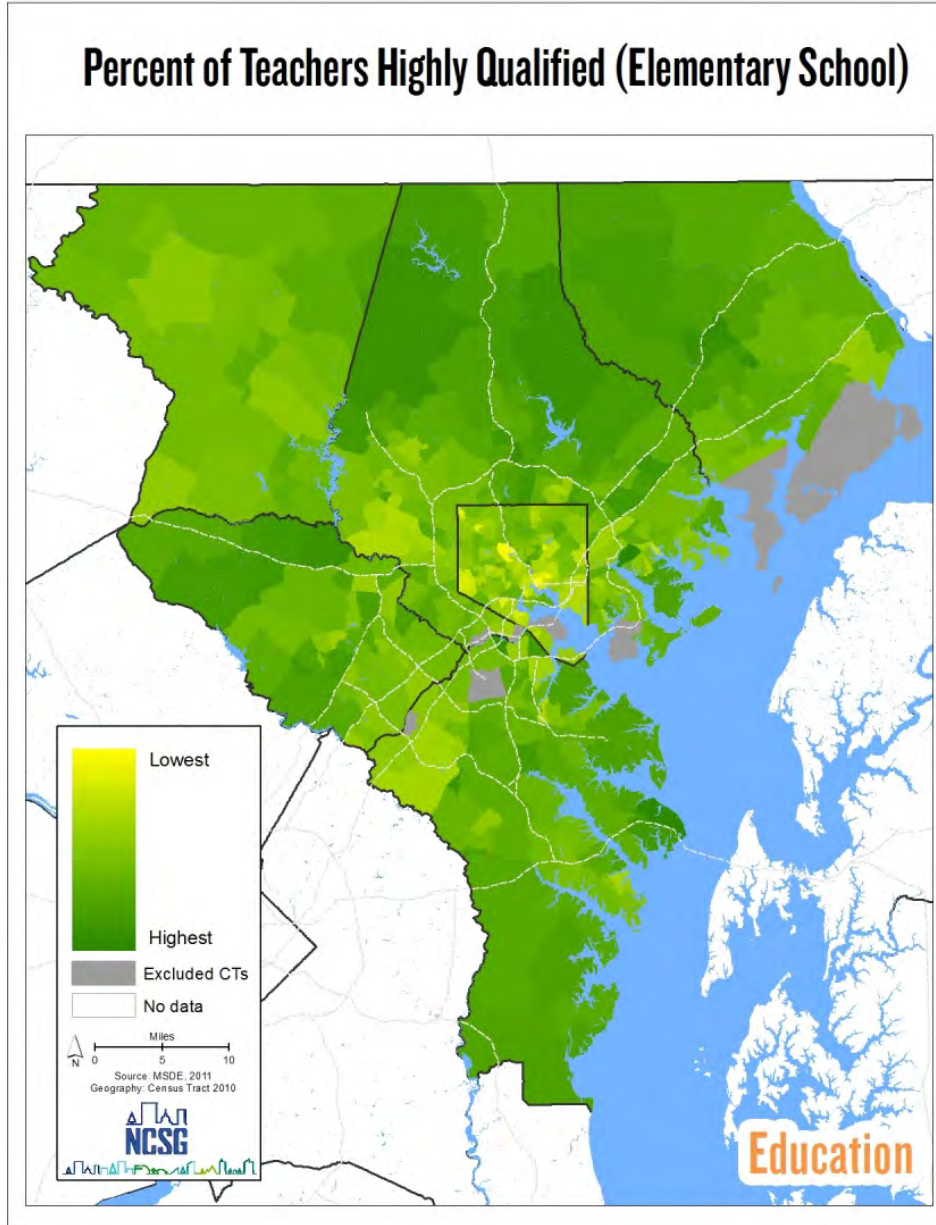
Percent of Teachers Highly Qualified (ES)

Percentage of elementary school teachers with an 'Advanced Professional Certificate.' An Advanced Professional Certificate requires three years of satisfactory professional school-related experience, and a master's degree or a minimum of 36 semester hours of post baccalaureate coursework.

METHODOLOGY
School service areas merged to census tract.

SUMMARY DATA*

Region	56.2%
Anne Arundel	56.6%
Baltimore	61.9%
Carroll	58.4%
Harford	59.7%
Howard	59.4%
Baltimore City	47.5%

DATA SOURCE
Maryland State Department of Education, 2011
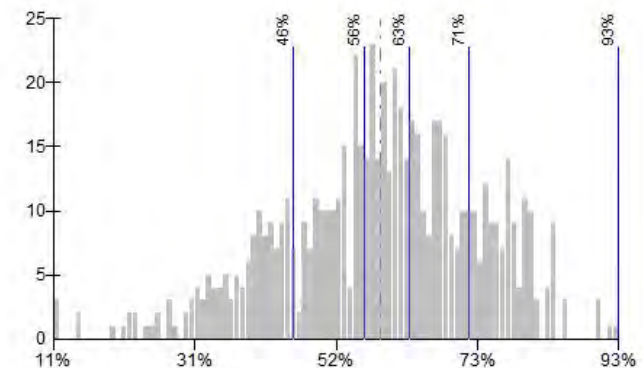
HISTOGRAM

* Summary data indicate the average of census tract values in each jurisdiction.

Student Performance (Middle School)
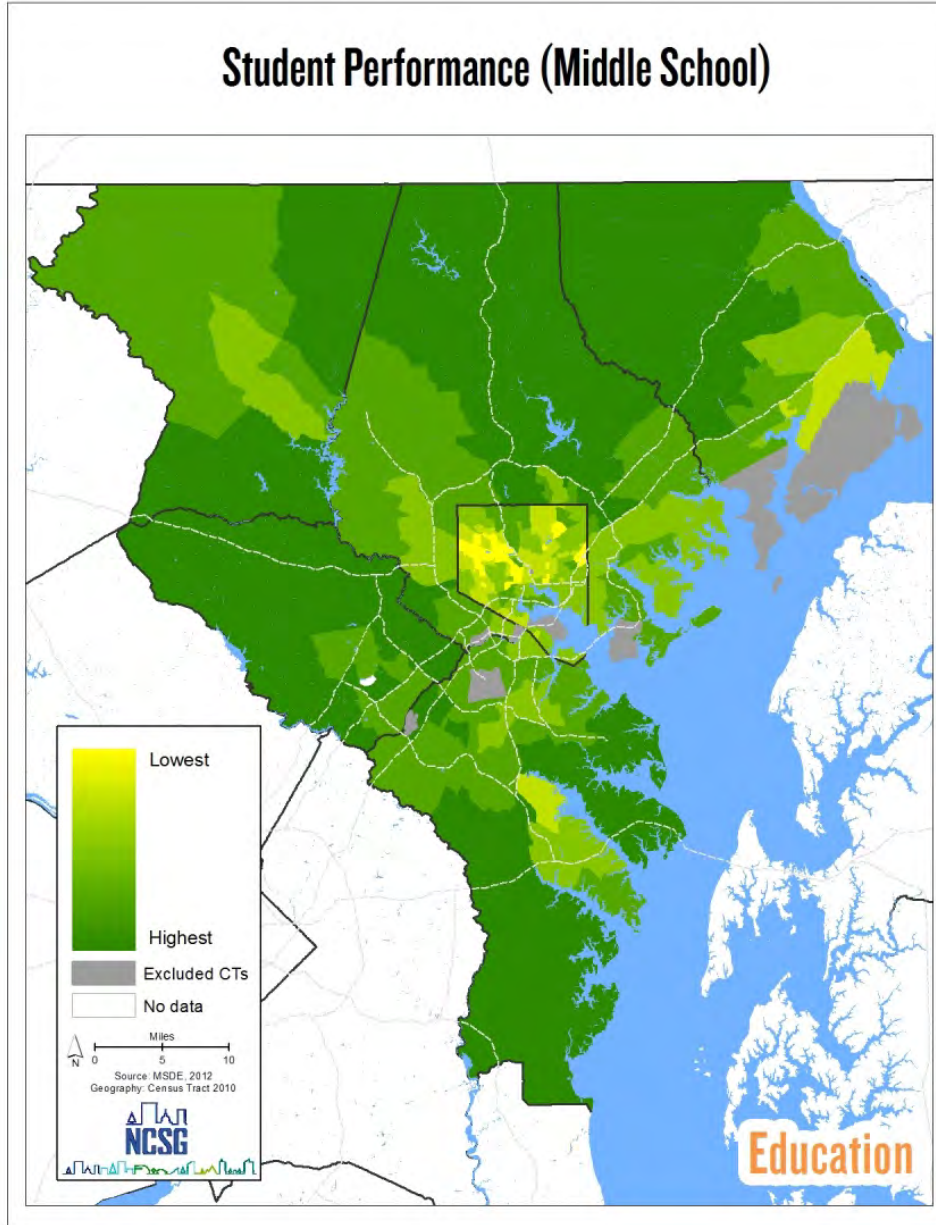
Student Performance (MS)

Average combined share of 'proficient' and 'advanced' scores on all middle school Maryland School Assessment exams.

METHODOLOGY
School service areas merged to census tract.

SUMMARY DATA*

Region	67.5%
Anne Arundel	71.7%
Baltimore	72.6%
Carroll	89.2%
Harford	75.6%
Howard	81.1%
Baltimore City	49.7%

DATA SOURCE
Maryland State Department of Education, 2012

HISTOGRAM
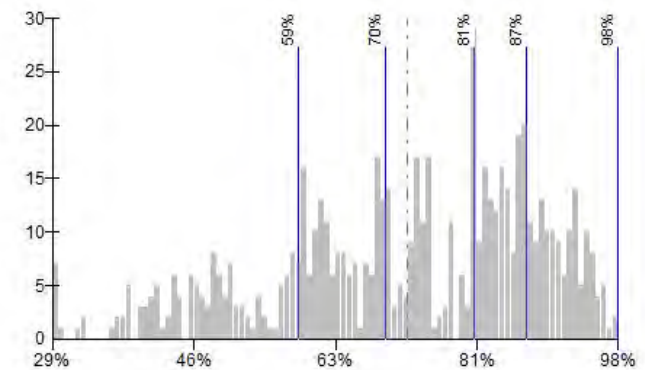
*   Summary data indicate the average of census tract values in each jurisdiction.

Percent of Teachers Highly Qualified (Middle School)
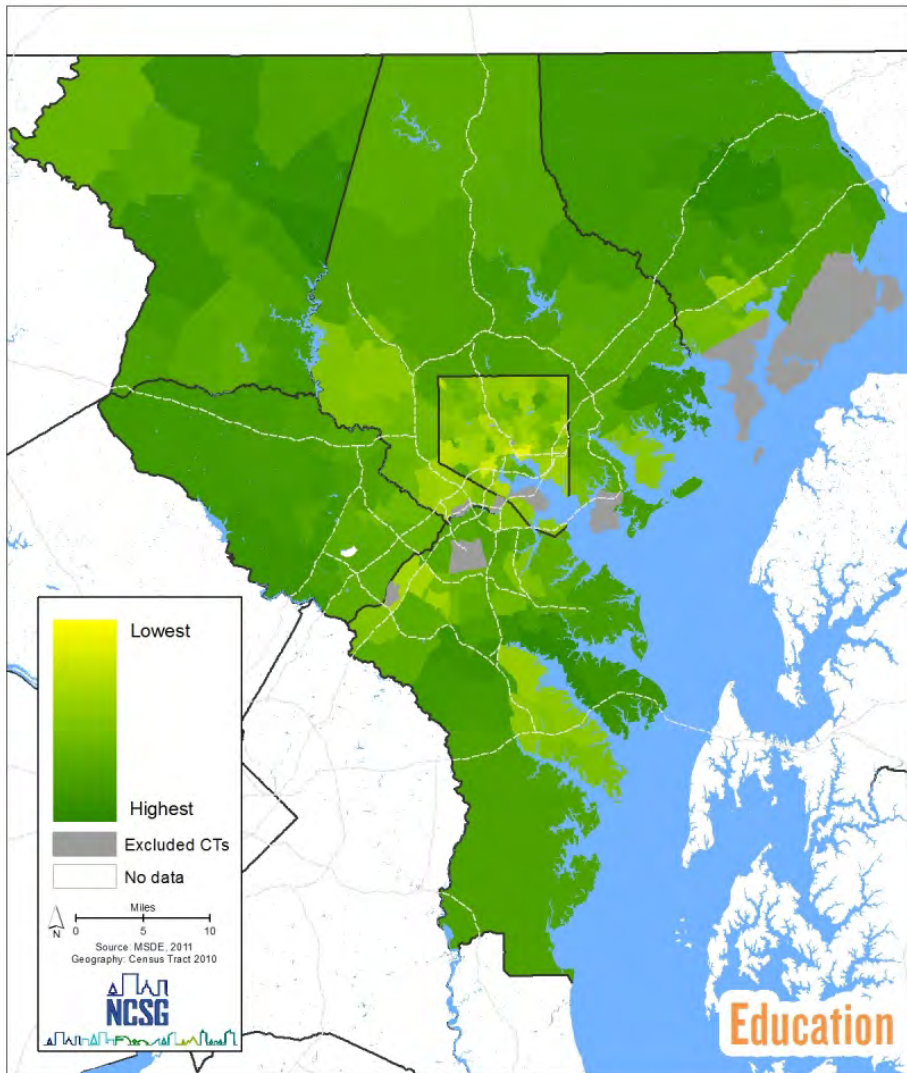
Percent of Teachers Highly Qualified (MS)

Percentage of middle school teachers with an 'Advanced Professional Certificate.' An Advanced Professional Certificate requires three years of satisfactory professional school-related experience, and a master's degree or a minimum of 36 semester hours of post baccalaureate coursework.

METHODOLOGY
School service areas merged to census tract.

SUMMARY DATA*

Region	55.4%
Anne Arundel	57.5%
Baltimore	61.2%
Carroll	70.8%
Harford	65.9%
Howard	62.9%
Baltimore City	40.0%

DATA SOURCE
Maryland State Department of Education, 2011
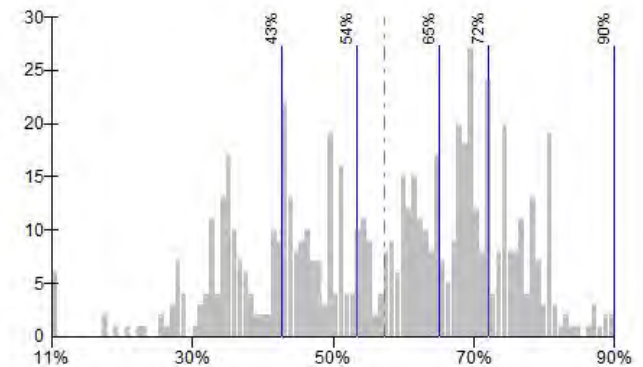
HISTOGRAM

* Summary data indicate the average of census tract values in each jurisdiction.

Student Performance (High School)
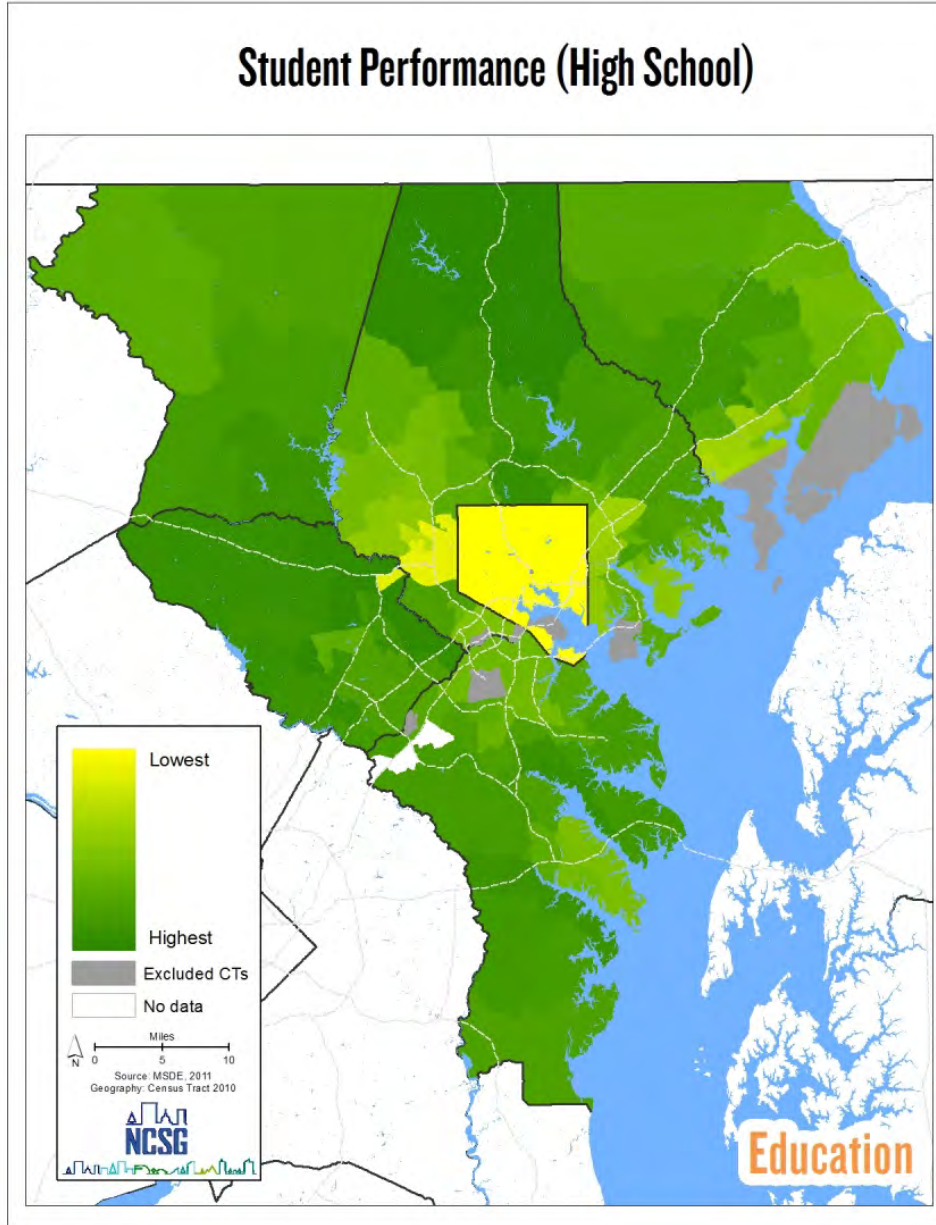
Student Performance (HS)

Average combined share of 'proficient' and 'advanced' scores on all Maryland High School Assessment exams.

METHODOLOGY

School service areas merged to census tract, with one value given to the entire City of Baltimore due to the city's Schools Choice Program. The city's value is calculated as a weighted average (weighted by school enrollment).

SUMMARY DATA*

Region	74.9%
Anne Arundel	73.9%
Baltimore	80.7%
Carroll	91.4%
Harford	84.5%
Howard	80.3%
Baltimore City	61.8%

DATA SOURCE

Maryland State Department of Education, 2011
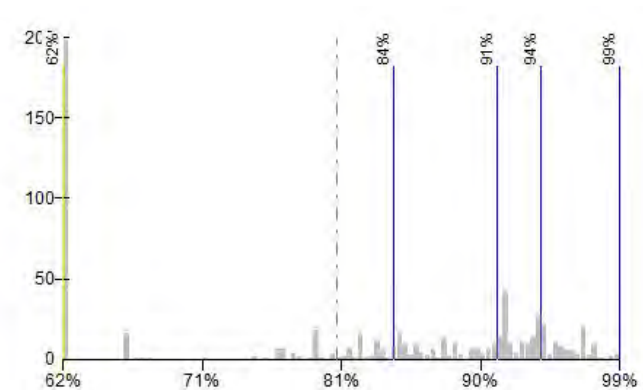
HISTOGRAM

* Summary data indicate the average of census tract values in each jurisdiction.

Advanced Placement Course Enrollment
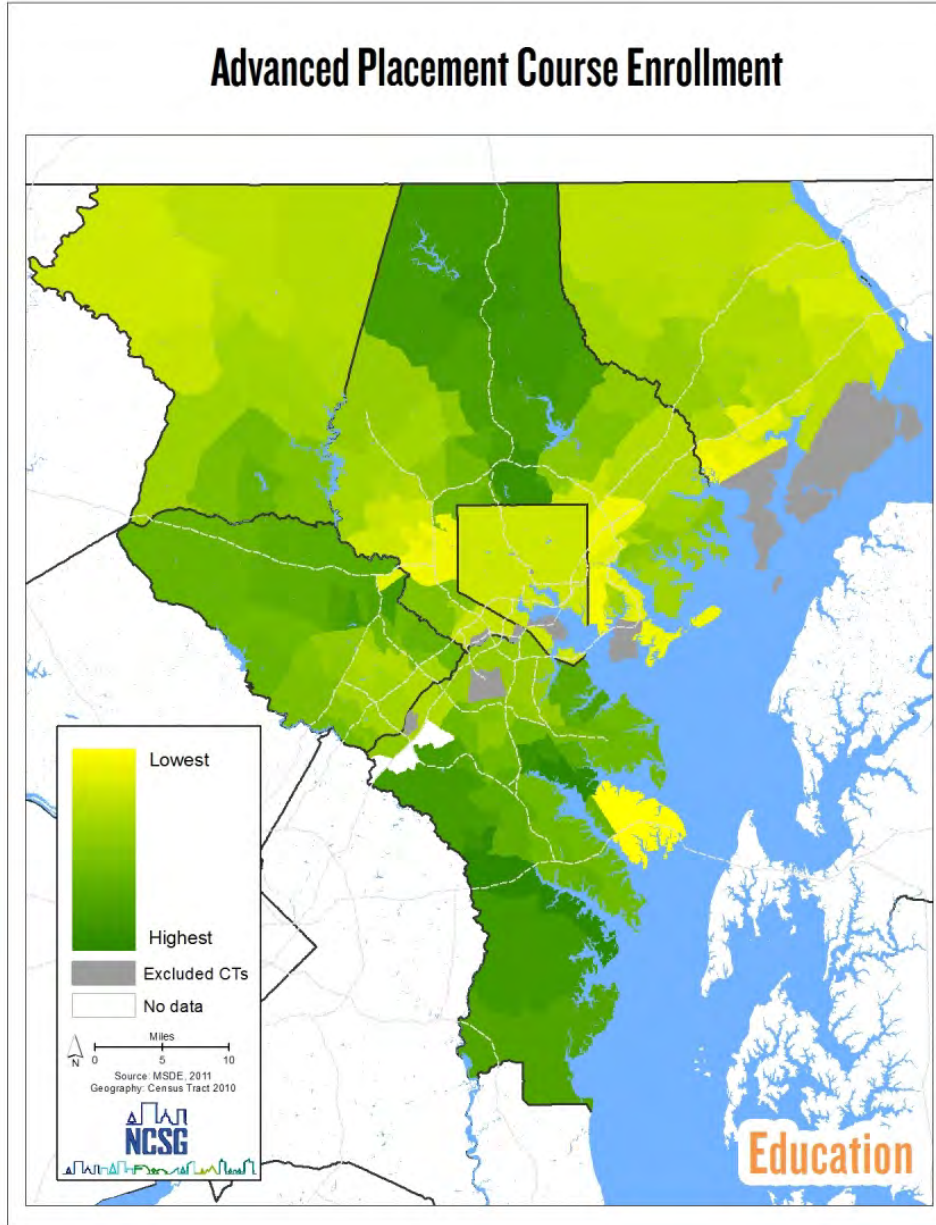
Advanced Placement Course Enrollment

Percentage of high school students currently enrolled in an Advanced Placement (AP) course. AP exams are offered by the College Board in 34 subjects. AP courses offered in high schools follow college-level curricula established by the College Board, and prepare students to take the respective AP exam.

METHODOLOGY

School service areas merged to census tract, with one value given to the entire City of Baltimore due to the city's Schools Choice Program. The city's value is calculated as a weighted average (weighted by school enrollment).

SUMMARY DATA*

Region	14.4%
Anne Arundel	18.9%
Baltimore	16.2%
Carroll	15.3%
Harford	12.4%
Howard	17.0%
Baltimore City	9.8%

DATA SOURCE

Maryland State Department of Education, 2011
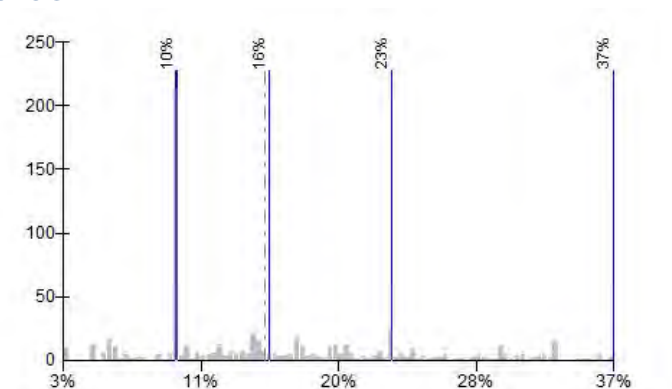
HISTOGRAM

* Summary data indicate the average of census tract values in each jurisdiction.
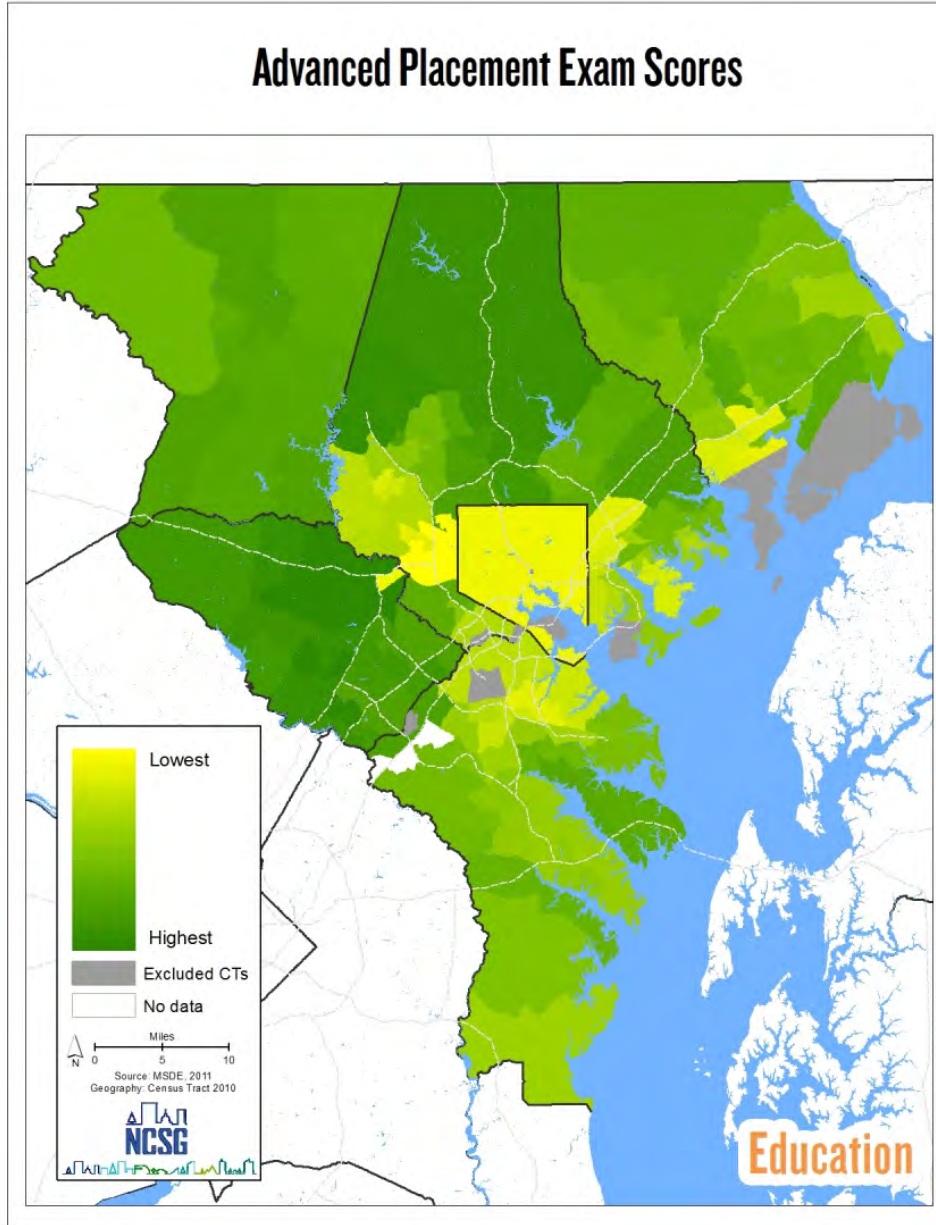
Advanced Placement Exam Scores

Percent of all high school AP exams with a score of 3, 4, or 5:

5 – Extremely well qualified	2 – Possibly qualified
4 – Well qualified	1 – No recommendation
3 – Qualified	

Scores of 3, 4 or 5 will often earn incoming college students course placement, requirement exemptions, and/or course credit.

METHODOLOGY
School service areas merged to census tract, with one value given to the entire City of Baltimore due to the city's Schools Choice Program. The city's value is calculated as a weighted average (weighted by school enrollment).

SUMMARY DATA*

Region	38.2%		
Anne Arundel	34.1%	Harford	51.6%
Baltimore	48.6%	Howard	67.2%
Carroll	64.1%	Baltimore City	12.4%

DATA SOURCE
Maryland State Department of Education, 2011
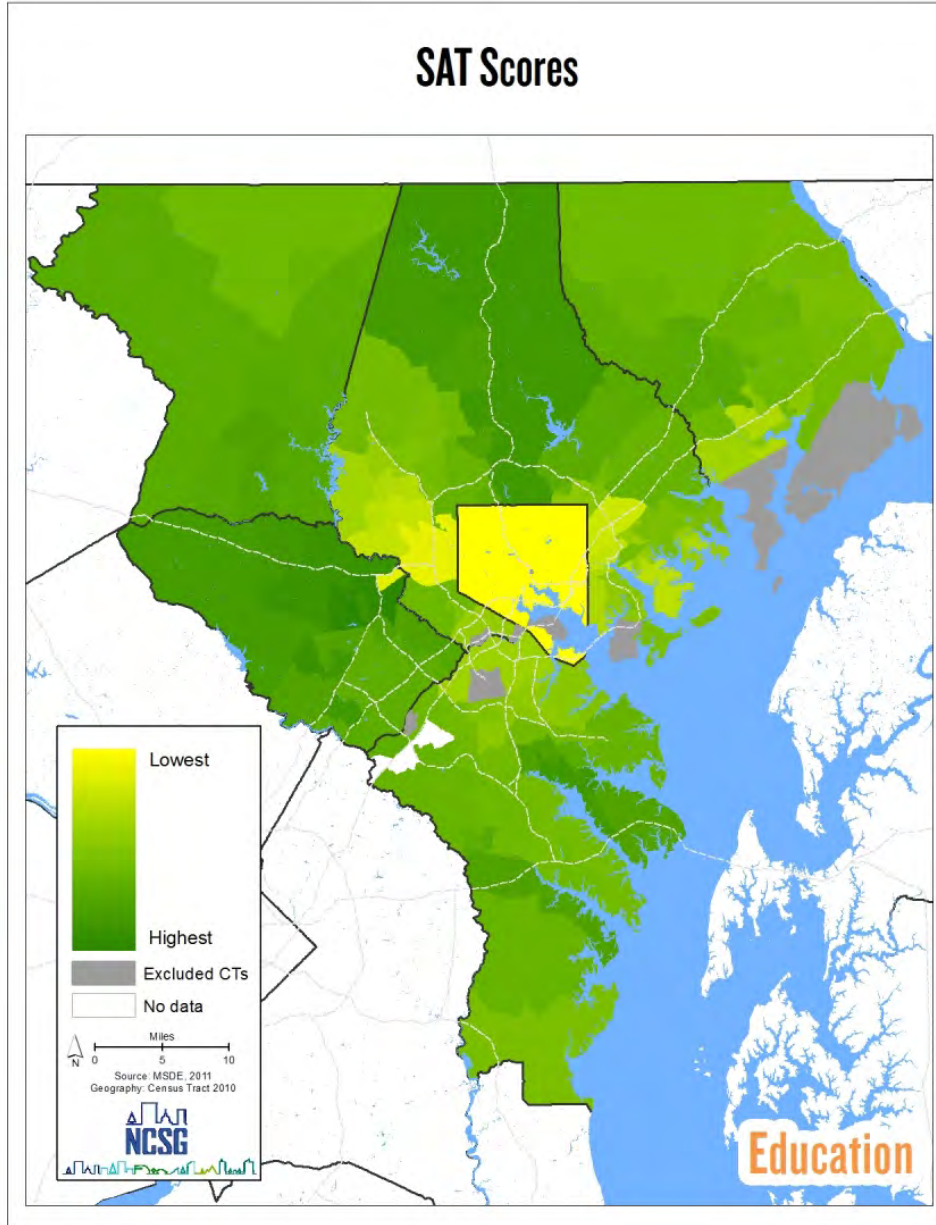
HISTOGRAM

* Summary data indicate the average of census tract values in each jurisdiction.

SAT Scores

SAT Scores

Average combined scores for the SAT exam. Possible test scores range from 600 to 2400.

METHODOLOGY
School service areas merged to census tract, with one value given to the entire City of Baltimore due to the city's Schools Choice Program. The city's value is calculated as a weighted average (weighted by school enrollment).

SUMMARY DATA*

Region	1247
Anne Arundel	1215
Baltimore	1329
Carroll	1537
Harford	1419
Howard	1374
Baltimore City	1037

DATA SOURCE
Maryland State Department of Education, 2011

HISTOGRAM

*   Summary data indicate the average of census tract values in each jurisdiction.
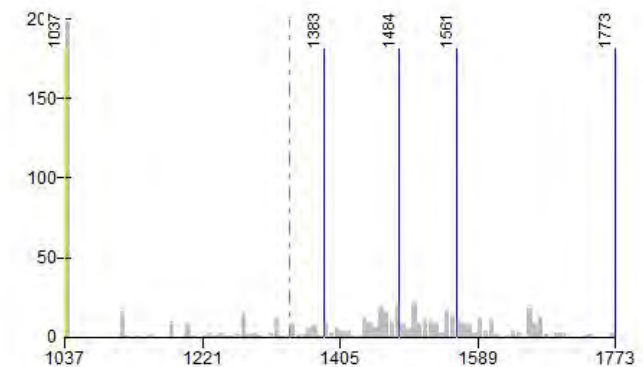
High School Dropout
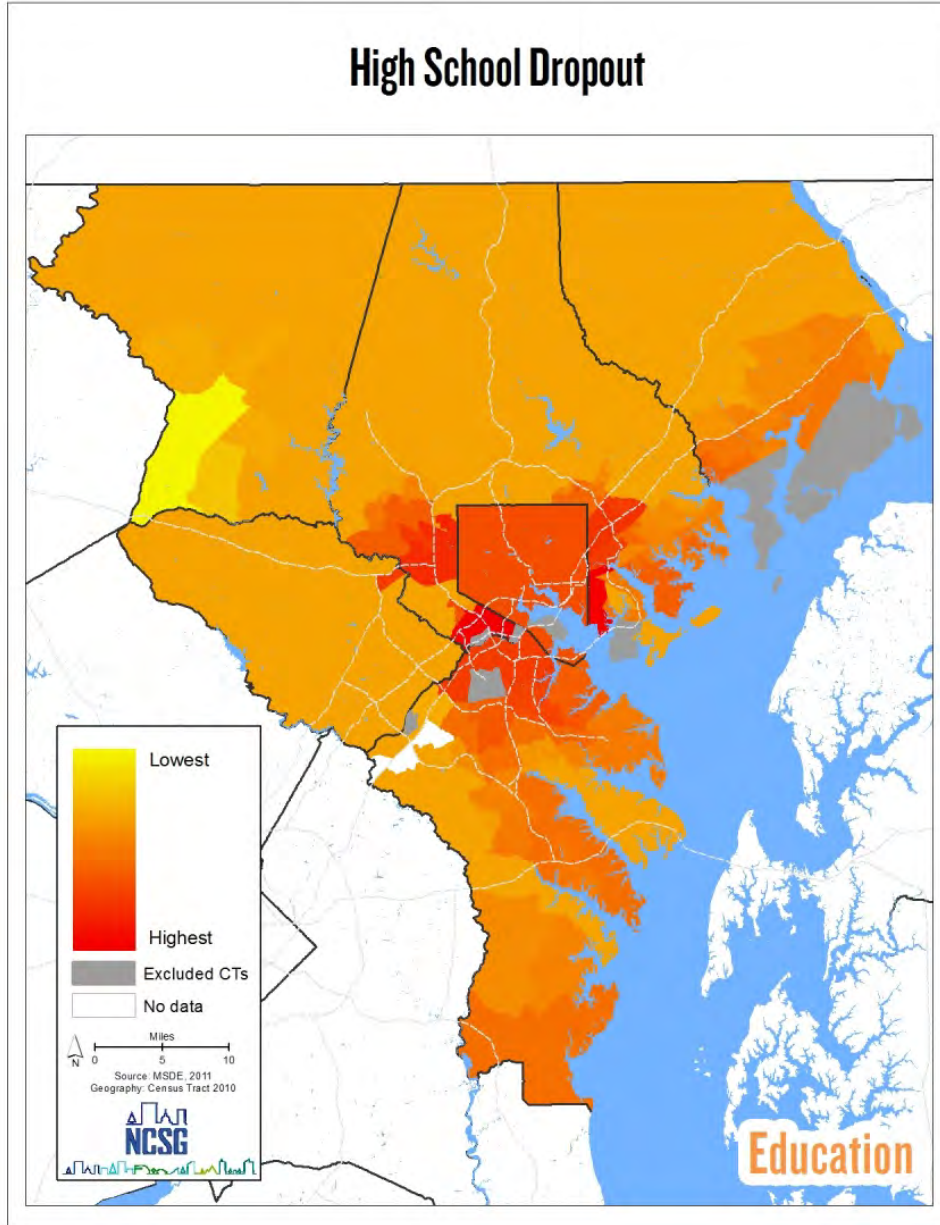
High School Dropout

Percentage of high school students that drop out of school.

METHODOLOGY
School service areas merged to census tract, with one value given to the entire City of Baltimore due to the city's Schools Choice Program. The city's value is calculated as a weighted average (weighted by school enrollment).

SUMMARY DATA*

Region	4.4%
Anne Arundel	6.3%
Baltimore	4.3%
Carroll	4.9%
Harford	3.9%
Howard	1.7%
Baltimore City	4.2%

DATA SOURCE
Maryland State Department of Education, 2011
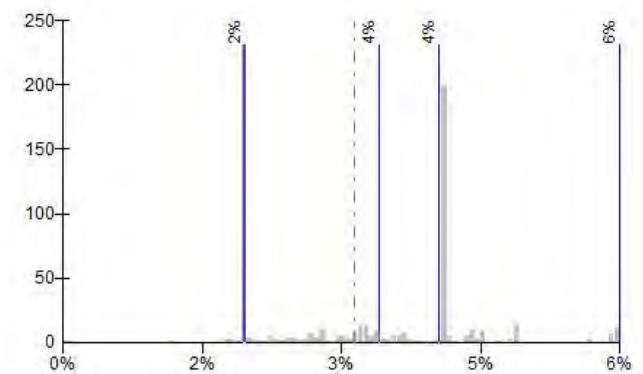
HISTOGRAM

*   Summary data indicate the average of census tract values in each jurisdiction.

Percent of Teachers Highly Qualified (High School)
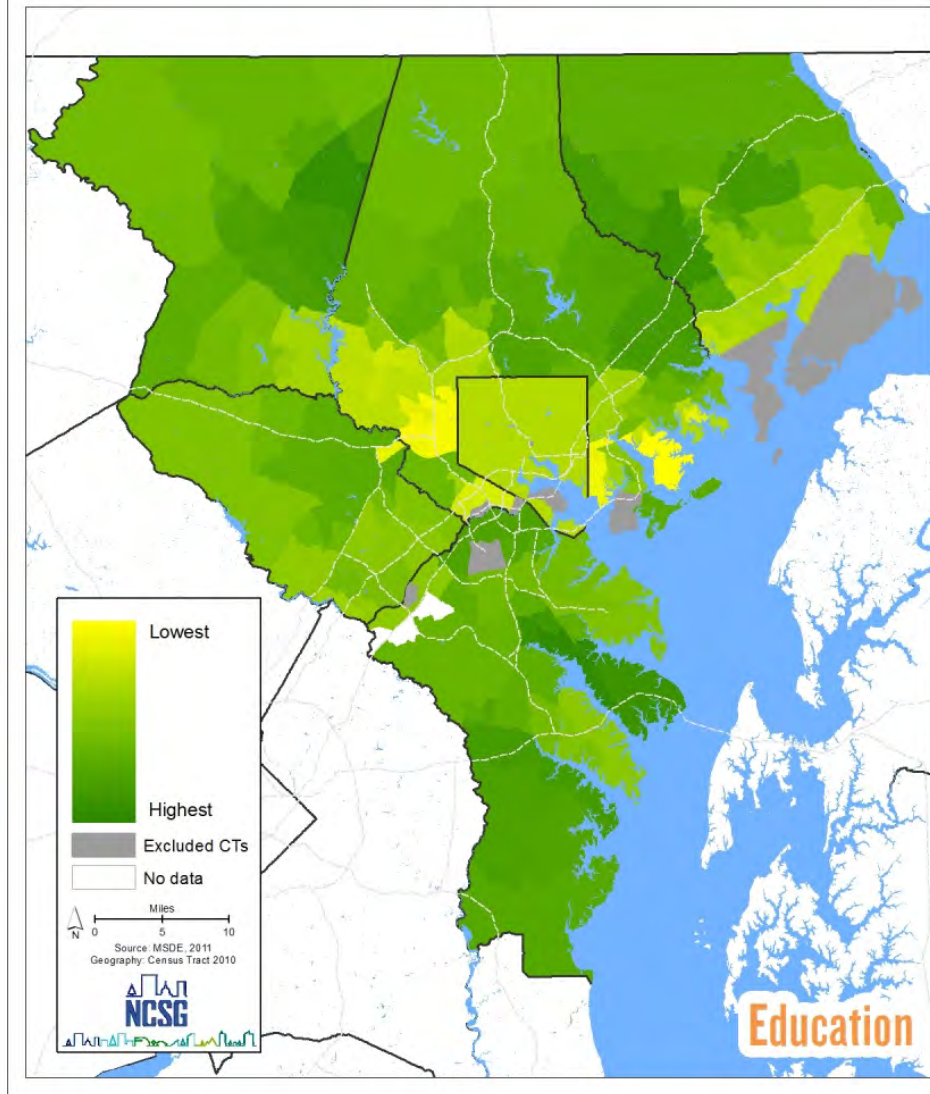
Percent of Teachers Highly Qualified (HS)

Percentage of high school teachers with an 'Advanced Professional Certificate.' An Advanced Professional Certificate requires three years of satisfactory professional school-related experience, and a master's degree or a minimum of 36 semester hours of post baccalaureate coursework.

METHODOLOGY
School service areas merged to census tract, with one value given to the entire City of Baltimore due to the city's Schools Choice Program. The city's value is calculated as a weighted average (weighted by school enrollment).

SUMMARY DATA*

Region	55.2%
Anne Arundel	57.1%
Baltimore	57.2%
Carroll	66.2%
Harford	62.3%
Howard	53.2%
Baltimore City	48.6%

DATA SOURCE
Maryland State Department of Education, 2011
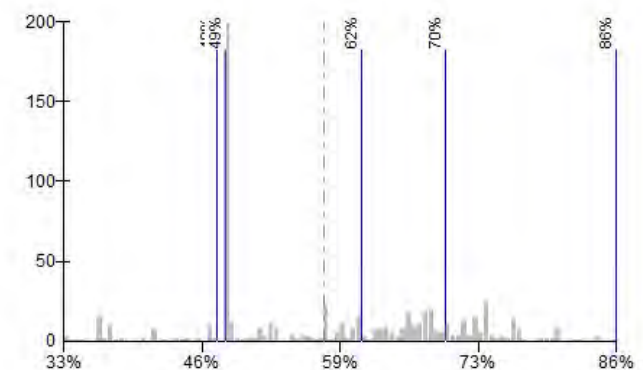
HISTOGRAM

* *Summary data indicate the average of census tract values in each jurisdiction.*
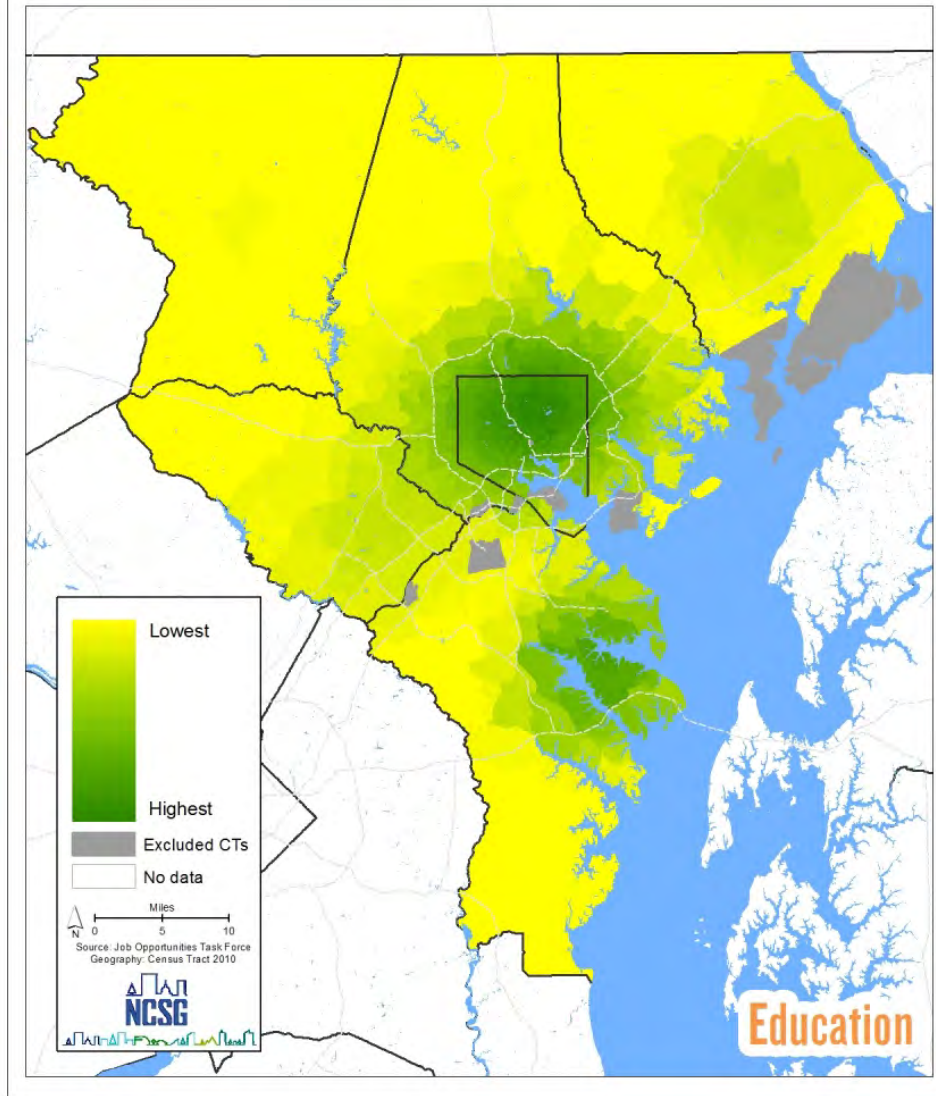
Access to Work Force Investment Area Training Programs

A gravity based measure that captures the distance to locations of job training programs, which include:

- Addiction counseling
- Medical assistant
- Electronics
- Business management
- Law enforcement
- Photography
- Dental hygiene
- Civil design certificate
- Heating and ventilation

METHODOLOGY
Kernel density (no weighting, 5-mile search radius) divided by land area.

SUMMARY DATA (number of programs)

Region	258
Anne Arundel	55
Baltimore	120
Carroll	3
Harford	19
Howard	10
Baltimore City	51

DATA SOURCE
Job Opportunities Task Force

HISTOGRAM
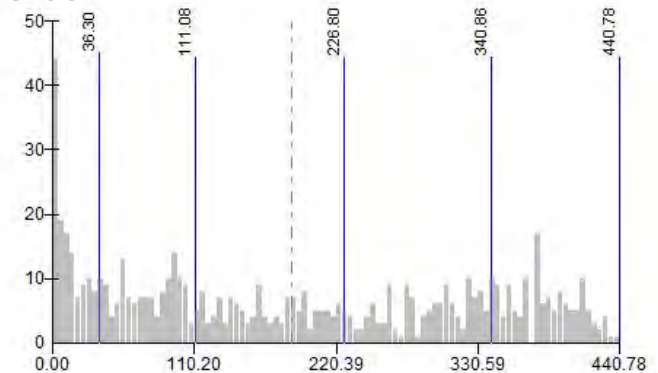
Proximity to Community Colleges
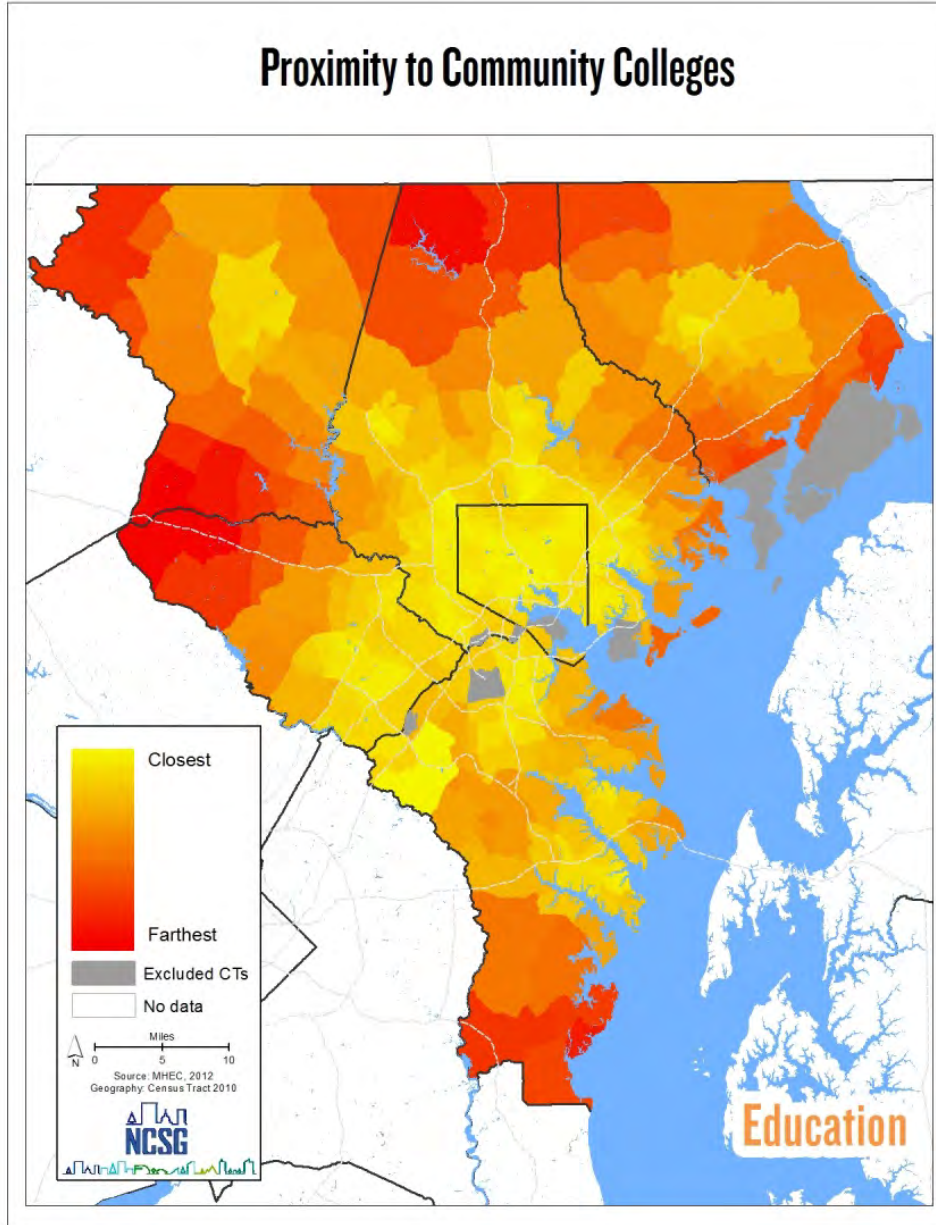
Distance to the nearest nonresidential junior college offering courses to local residents.

METHODOLOGY
Average Euclidean distance from each census tract to the nearest community college.

SUMMARY DATA (number of community college locations)

Region	73
Anne Arundel	9
Baltimore	20
Carroll	3
Harford	3
Howard	11
Baltimore City	27

DATA SOURCE
Maryland Higher Education Commission, 2012

HISTOGRAM
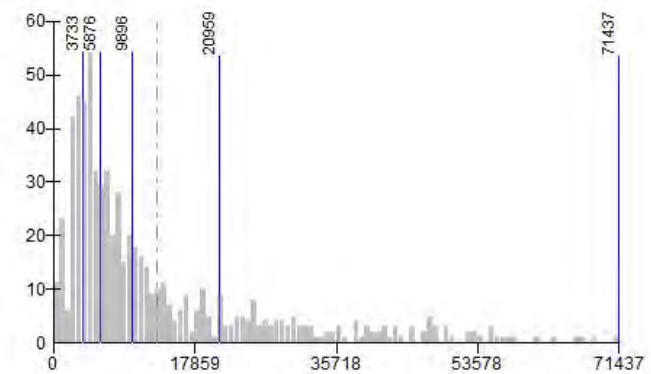
Proximity to Private Career Schools
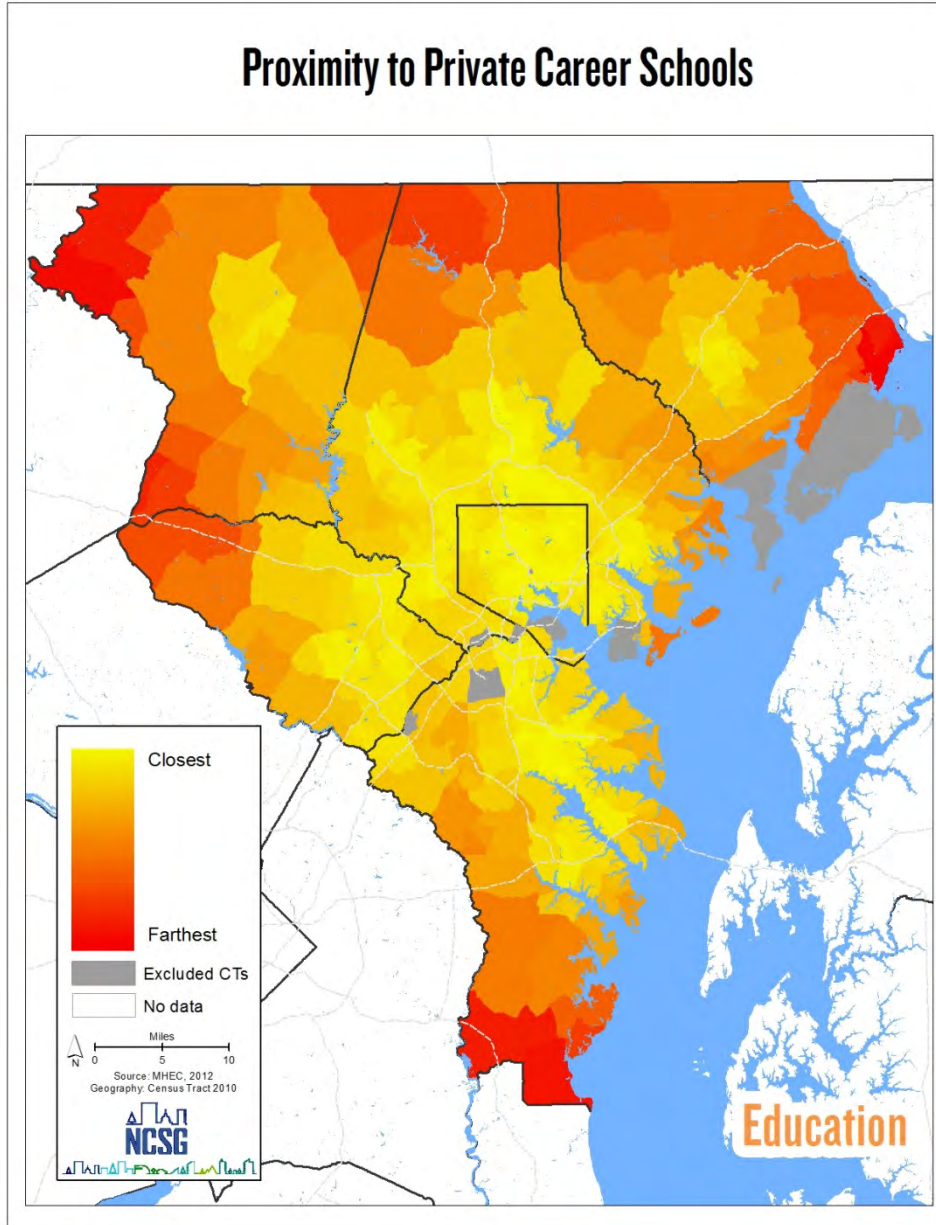
Proximity to Private Career Schools

Distance to the nearest private school offering vocational training programs.

METHODOLOGY
Average Euclidean distance from each census tract to the nearest private career school.

SUMMARY DATA (number of private career schools)

Region	70
Anne Arundel	12
Baltimore	26
Carroll	2
Harford	2
Howard	8
Baltimore City	20

DATA SOURCE
Maryland Higher Education Commission, 2012

HISTOGRAM
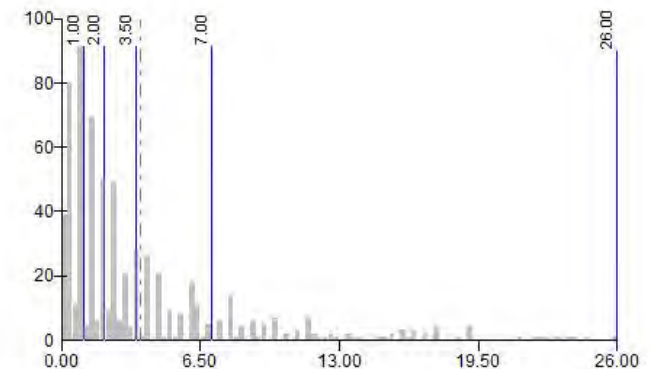
HOUSING & NEIGHBORHOOD QUALITY INDICATORS

Subcategory	Indicator Title	Description
Housing Characteristics	Median Housing Value	The median reported value of owner-occupied homes in a Census Tract.
	Median Gross Rent	The median reported gross rent of renter-occupied housing units paying cash rent in a Census Tract.
	Percent Change of Total Housing Units (2000-2010)	The percent change in the total number of housing units in a Census Tract from 2000 to 2010.
	Percent Change of Total Occupied Housing Units (2000-2010)	The percent change in the total number of occupied housing units in a Census Tract from 2000 to 2010.
	Percent Change of Owner-Occupied Housing Units (2000-2010)	The percent change in the total number of owner-occupied housing units in a Census Tract from 2000 to 2010.
	Percent Change of Renter-Occupied Housing Units (2000-2010)	The percent change in the total number of renter-occupied housing units in a Census Tract from 2000 to 2010.
	Percent of Single Family Housing Units (Attached)	The percent of all housing units in a Census Tract that are part of a single family attached structure.
	Percent of Single Family Housing Units (Detached)	The percent of all housing units in a Census Tract that are a single family detached structure.
	Percent of Multi-Family Housing Units	The percent of all housing units in a Census Tract that are part of a multi-family structure.
Housing Burden/Affordability	Selected Monthly Owner Costs as Percentage of Income	Selected monthly owner costs are reported by the Census as the sum of payment for mortgages, real estate taxes, insurance, utilities, and condominium fees.
	Gross Rent as Percentage of Income	The Census reports gross rent as the amount of the contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water and sewer) and fuels (oil, coal, kerosene, wood, etc.).
	Ratio of Median Gross Rent to FMR	A ratio of gross rent as reported by the Census to the Fair Market Rent (for a 2 bedroom apartment) as determined for the region by HUD.
	Owner Cost Burden	The percentage of homeowners for which selected monthly owner costs are 35% or more of their monthly household income.
	Renter Cost Burden	The percentage of renters for which gross rent 35% or more of their monthly household income.
	Severe Owner Cost Burden	The percentage of homeowners for which selected monthly owner costs are 50% or more of their monthly household income.
	Severe Renter Cost Burden	The percentage of renters for which gross rent 50% or more of their monthly household income.
	Housing Affordability Index	Financial ability of a typical household in an area to purchase an existing home in the area (higher the number, the more purchasing ability).

Subcategory	Indicator Title	Description
Housing Burden/Affordability	Housing + Transportation Index (local base)	Housing plus transportation cost as a percent of the census tract's median household income.
	Housing + Transportation Index (AMI base)	Housing plus transportation cost as a percent of the regional AMI.
	High Cost Loan Rate	The percent of all mortgages issued during the time period that were considered high cost with above-average fees or interest. Lenders often offer high cost loans to applicants that don't qualify for a conventional mortgage because of poor credit or income problems.
Housing Market	Foreclosure Rate	During the given time period, the percent of all mortgages that went into foreclosure.
	Vacant Units Abandoned	The percent of all housing units that are vacant and considered abandoned (not on the market, not seasonally unoccupied, not sold or rented and unoccupied, and not for migrant workers).
Housing Policy	Housing Capacity per Acre	Based on existing zoning and land use, the potential total number of housing units that could be built in each jurisdiction, normalized by land area.

Additional housing indicators considered by the OMAP include:
- Median Residential Improvement Value per Square Foot
- Median Age of Structure
- Percentage of Owner Occupied Housing Units
- Percentage of Renter Occupied Housing Units
- Dwelling Grade
- Vacancy Rate
- Vacant Units on the Market
- Days on Market

Median Housing Value
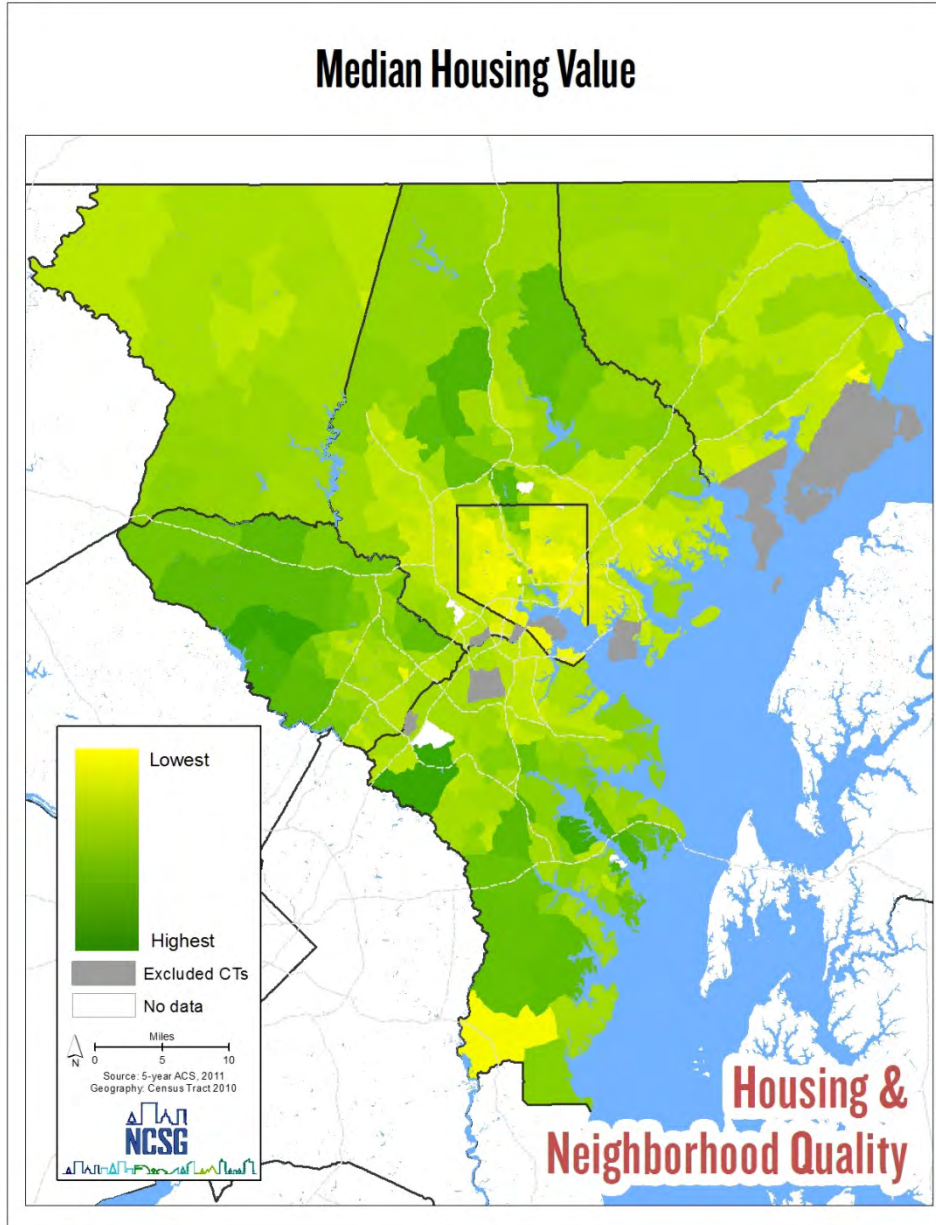
The median reported value of owner-occupied homes in a census tract.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

Anne Arundel	$361,700
Baltimore	$269,400
Carroll	$342,900
Harford	$295,900
Howard	$447,000
Baltimore City	$163,700

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011

HISTOGRAM
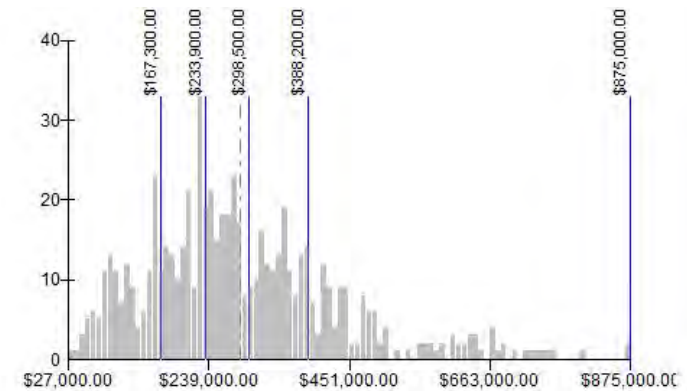
Median Gross Rent
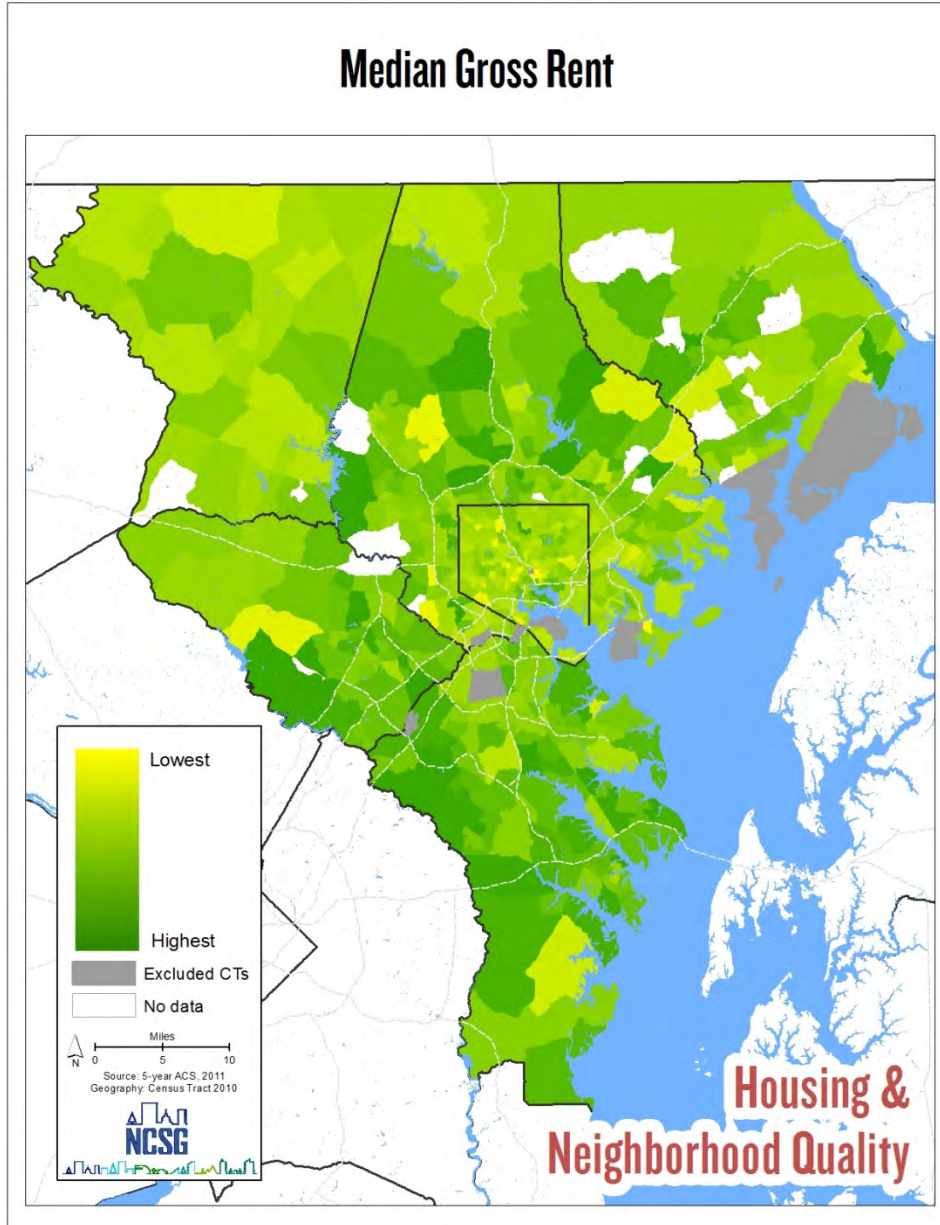
Median Gross Rent

The median reported gross rent of renter-occupied housing units paying cash rent in a census tract.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

Anne Arundel	$1,369
Baltimore	$1,082
Carroll	$975
Harford	$1,044
Howard	$1,388
Baltimore City	$889

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011

HISTOGRAM

Percent Change of Total Housing Units (2000-2010)

The percent change in the total number of housing units in a census tract from 2000 to 2010.

METHODOLOGY
Mapped as reported by the Longitudinal Tract Database. These data have been capped at 100% for mapping purposes (9 census tracts were capped).

SUMMARY DATA
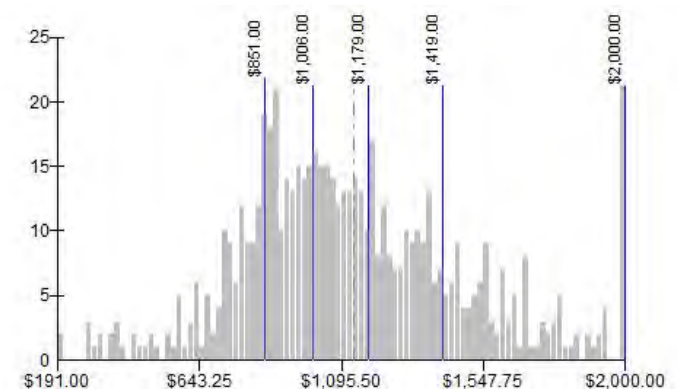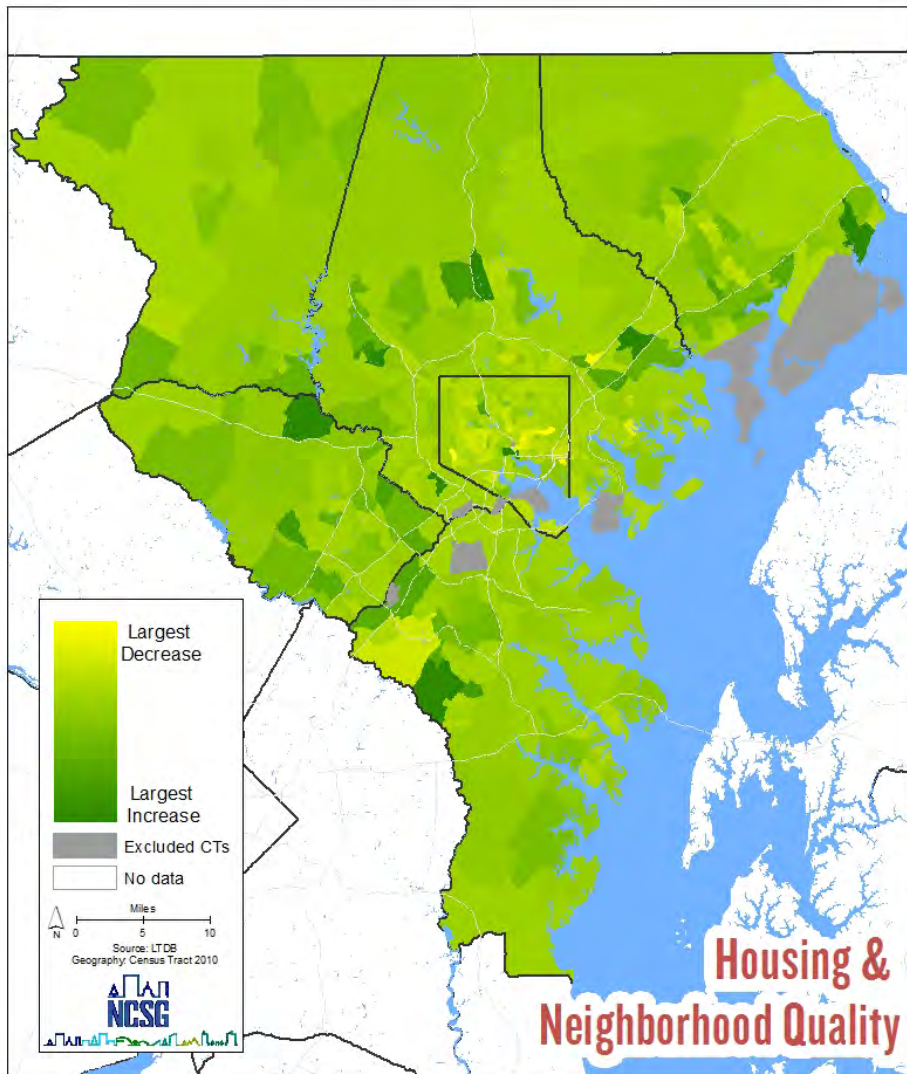
Region	4.4%
Anne Arundel	9.6%
Baltimore	5.2%
Carroll	12.9%
Harford	12.9%
Howard	13.5%
Baltimore City	-7.5%

DATA SOURCE
Longitudinal Tract Database
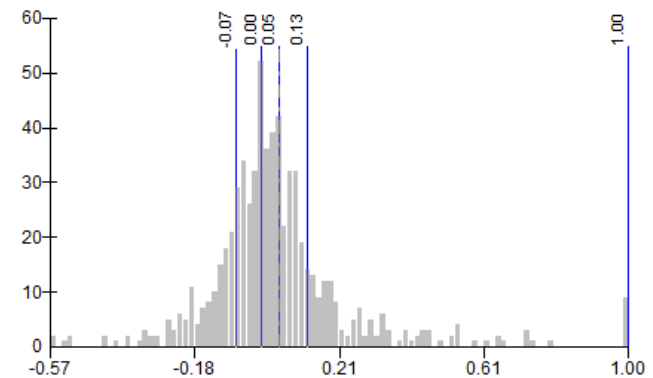
HISTOGRAM

Percent Change of Total Occupied Housing Units (2000-2010)
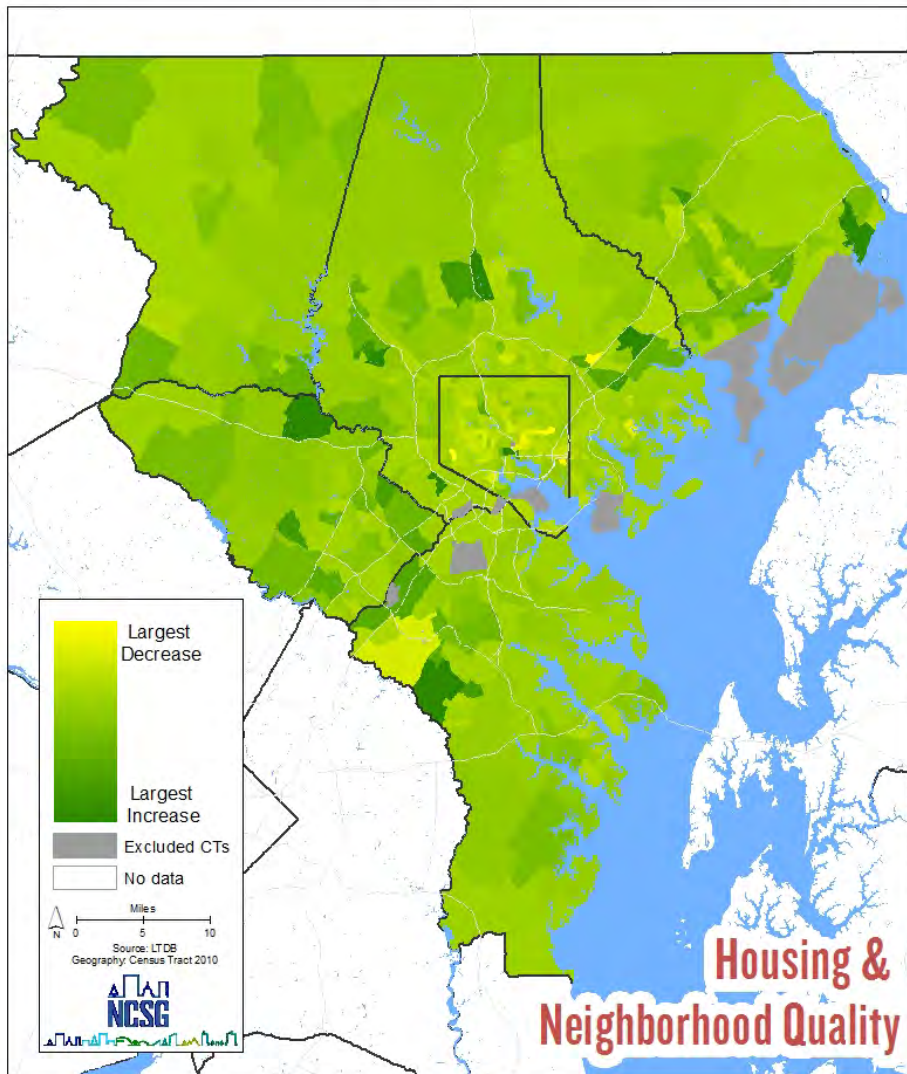
Percent Change of Total Occupied Housing Units

The percent change in the total number of occupied housing units in a census tract from 2000 to 2010.

METHODOLOGY
Mapped as reported by the Longitudinal Tract Database. These data have been capped at 100% for mapping purposes (8 census tracts were capped).

SUMMARY DATA

Region	4.5%
Anne Arundel	9.7%
Baltimore	5.2%
Carroll	13.2%
Harford	13.0%
Howard	13.6%
Baltimore City	-7.6%

DATA SOURCE
Longitudinal Tract Database
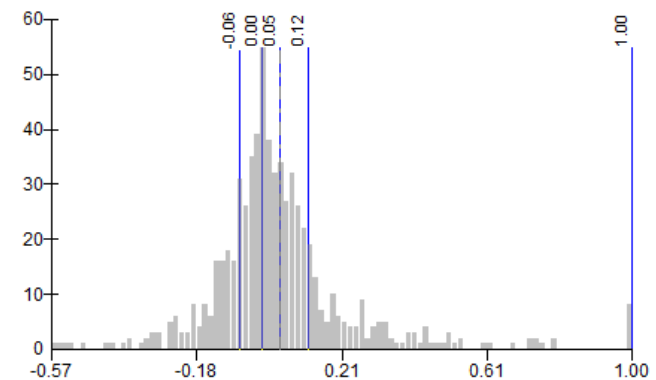
HISTOGRAM

Percent Change of Owner-Occupied Housing Units (2000-2010)
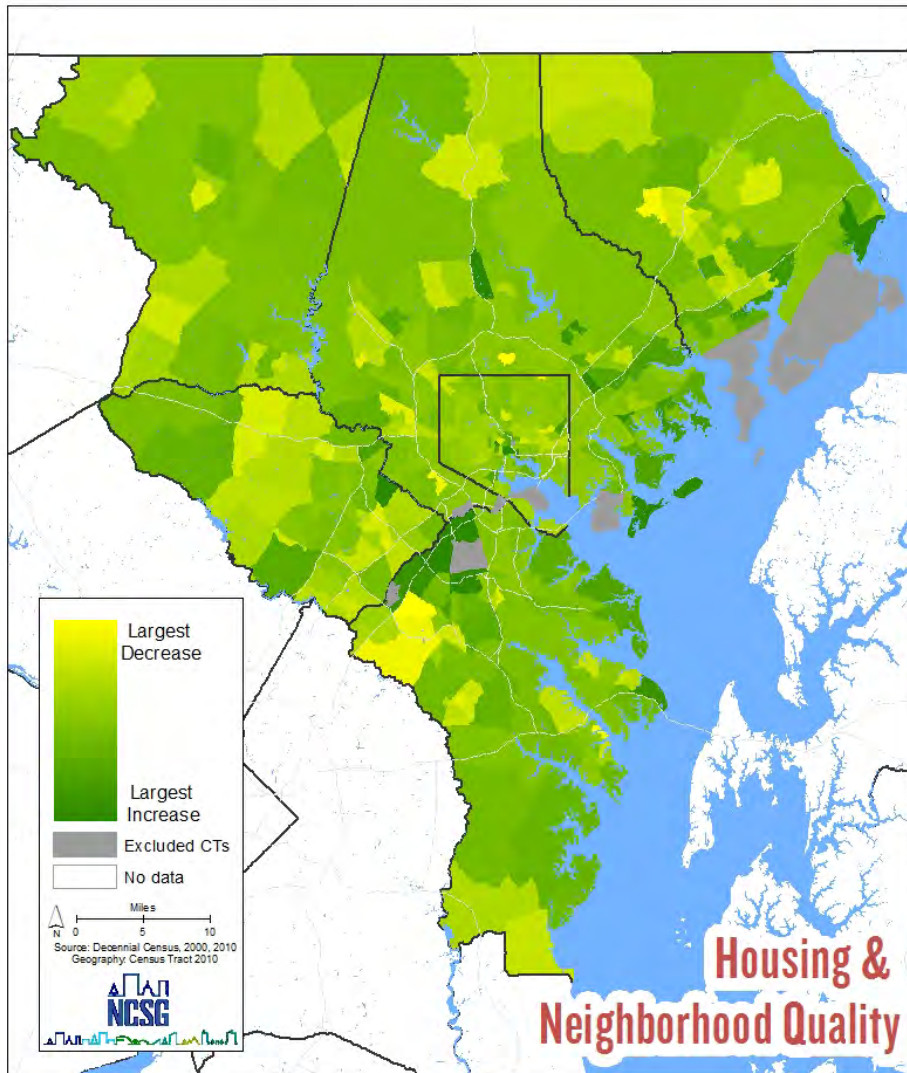
Percent Change of Owner-Occupied Housing Units

The percent change in the total number of owner-occupied housing units in a census tract from 2000 to 2010.

METHODOLOGY

Convert 2000 census tracts to 2010 census tracts, compute percent change from 2000 to 2010. These data have been capped at 100% for mapping purposes (7 census tracts were capped).

SUMMARY DATA

Region	5.9%
Anne Arundel	9.7%
Baltimore	4.4%
Carroll	13.9%
Harford	15.6%
Howard	16.1%
Baltimore City	-8.2%

DATA SOURCE

U.S. Census Bureau, Census 2000, 2010
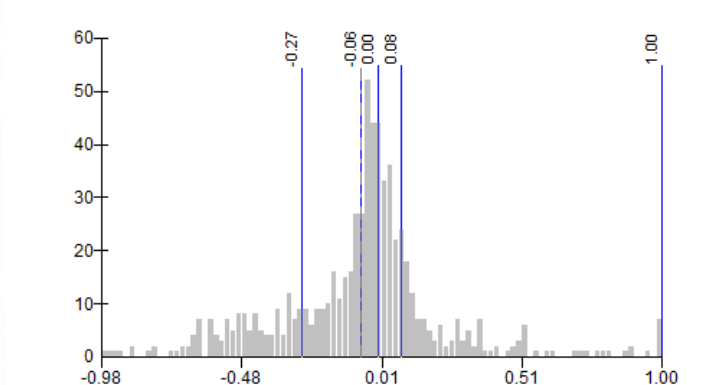
HISTOGRAM

Percent Change of Renter-Occupied Housing Units (2000-2010)
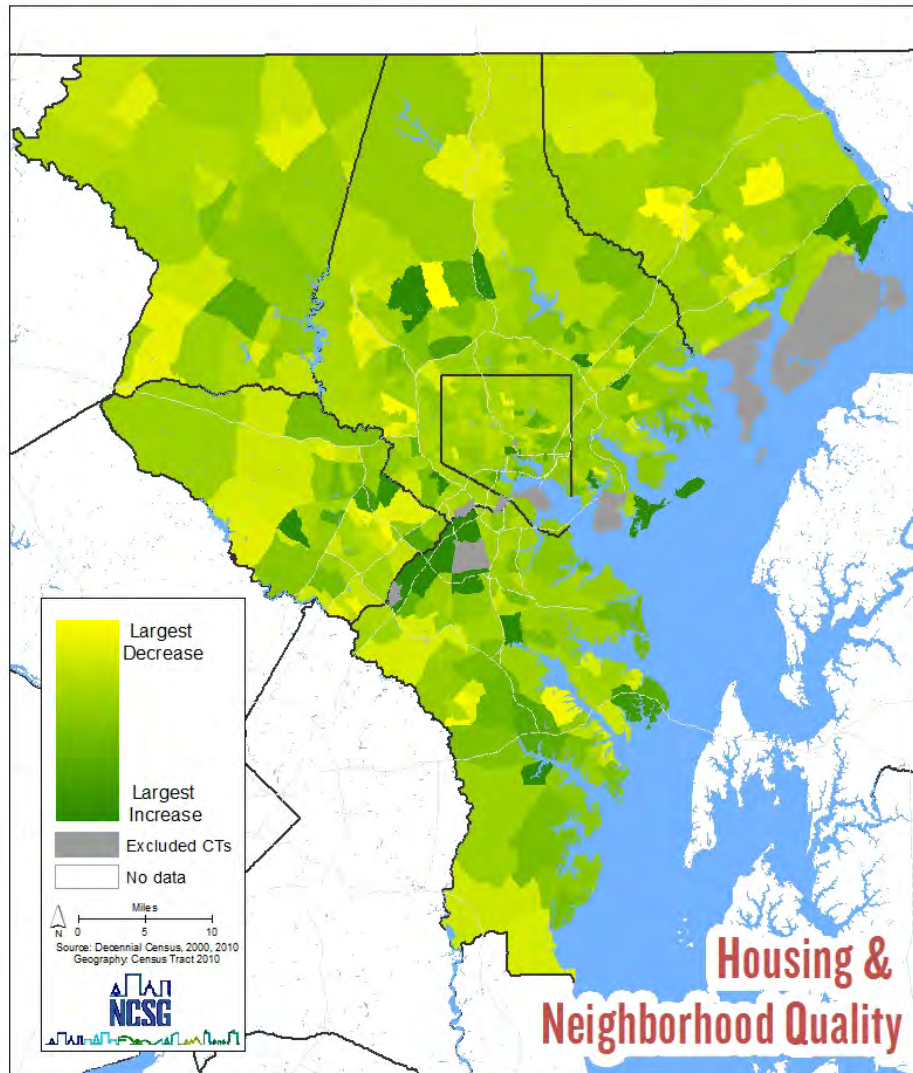
Percent Change of Renter-Occupied Housing Units

The percent change in the total number of renter-occupied housing units in a census tract from 2000 to 2010.

METHODOLOGY

Convert 2000 census tracts to 2010 census tracts, compute percent change from 2000 to 2010. These data have been capped at 175% for mapping purposes (13 census tracts were capped).

SUMMARY DATA

Region	7.6%
Anne Arundel	17.4%
Baltimore	8.1%
Carroll	13.8%
Harford	5.0%
Howard	16.9%
Baltimore City	2.0%

DATA SOURCE

U.S. Census Bureau, Census 2000, 2010

HISTOGRAM

Percent of Single Family Housing Units (Attached)

Percent of Single Family Housing Units

The percent of all housing units in a census tract that are part of a single family attached structure.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

	ALL	ATTACHED	DETACHED
Region	73.8%	29.2%	44.6%
Anne Arundel	80.7%	19.0%	61.8%
Baltimore	70.8%	23.8%	47.0%
Carroll	87.2%	9.5%	77.6%
Harford	81.2%	20.3%	60.9%
Howard	73.8%	20.5%	53.3%
Baltimore City	67.0%	52.6%	14.4%

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011

HISTOGRAM

Percent of Single Family Housing Units (Detached)

Percent of Single Family Housing Units (Detached)

Lowest
Highest
Excluded CTs
No data

Miles
0   5   10
N
Source: 5-year ACS, 2011
Geography: Census Tract 2010

NCSG

Housing &
Neighborhood Quality

Percent of Single Family Housing Units (Detached)

The percent of all housing units in a census tract that are a single family detached structure.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

	ALL	ATTACHED	DETACHED
Region	**73.8%**	**29.2%**	**44.6%**
Anne Arundel	80.7%	19.0%	61.8%
Baltimore	70.8%	23.8%	47.0%
Carroll	87.2%	9.5%	77.6%
Harford	81.2%	20.3%	60.9%
Howard	73.8%	20.5%	53.3%
Baltimore City	67.0%	52.6%	14.4%

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011

HISTOGRAM

Percent of Multi-Family Housing Units
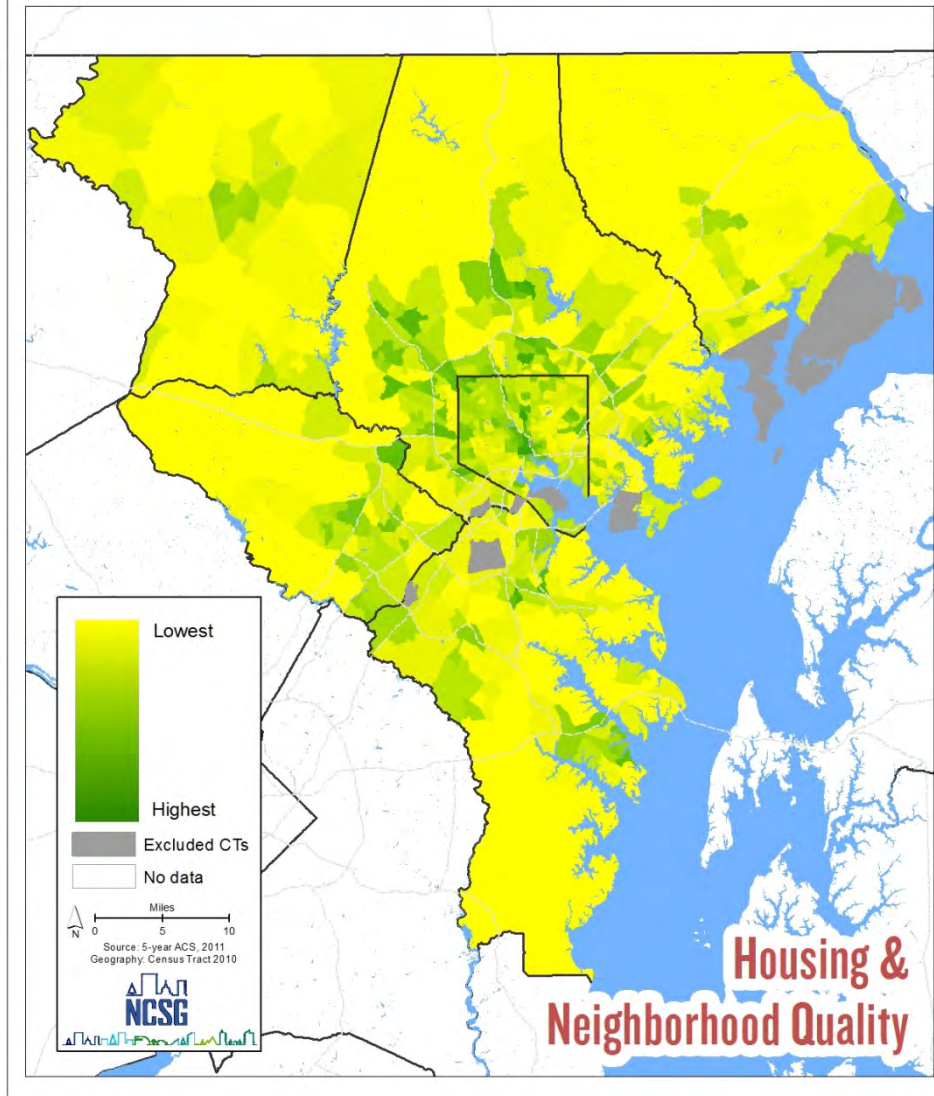
Percent of Multi-Family Housing Units

Percent of Multi- Family Housing Units

The percent of all housing units in a census tract that are part of a multi-family structure.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

Region	25.0%
Anne Arundel	17.3%
Baltimore	28.2%
Carroll	11.7%
Harford	15.1%
Howard	24.9%
Baltimore City	32.8%

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011

HISTOGRAM
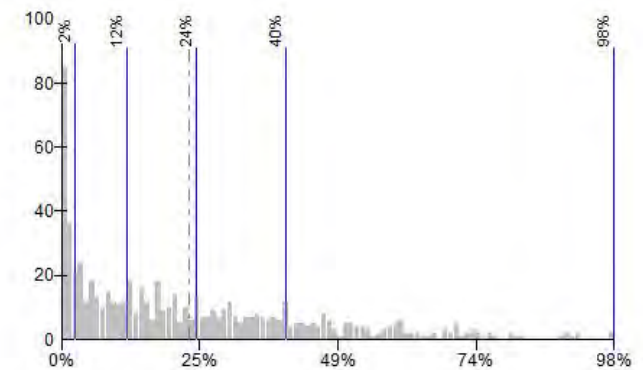
Selected Monthly Owner Costs as Percentage of Income
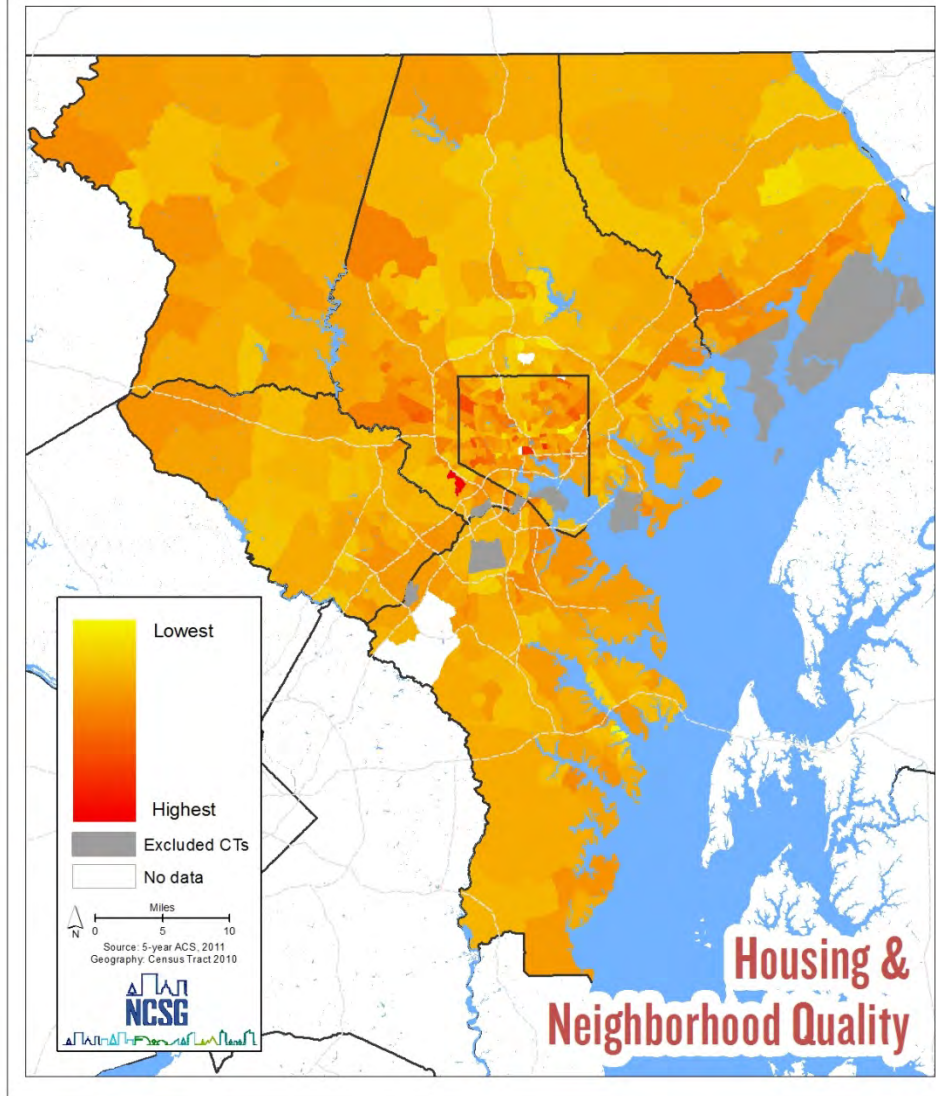
Selected monthly owner costs are reported by the Census as the sum of payment for mortgages, real estate taxes, insurance, utilities, and condominium fees. This is the percent of income spent on such costs.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

Anne Arundel	22.6%
Baltimore	21.7%
Carroll	22.7%
Harford	22.3%
Howard	21.6%
Baltimore City	23.9%

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011
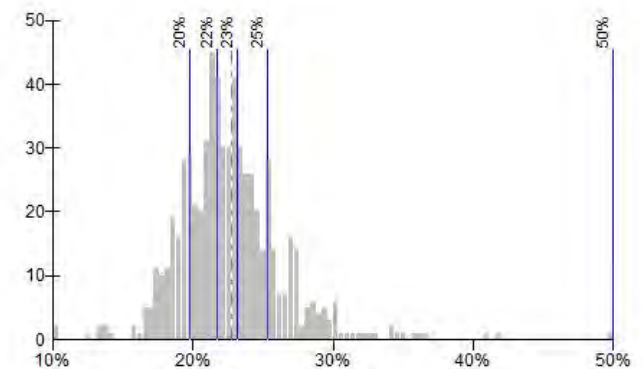
HISTOGRAM

Gross Rent as Percentage of Income
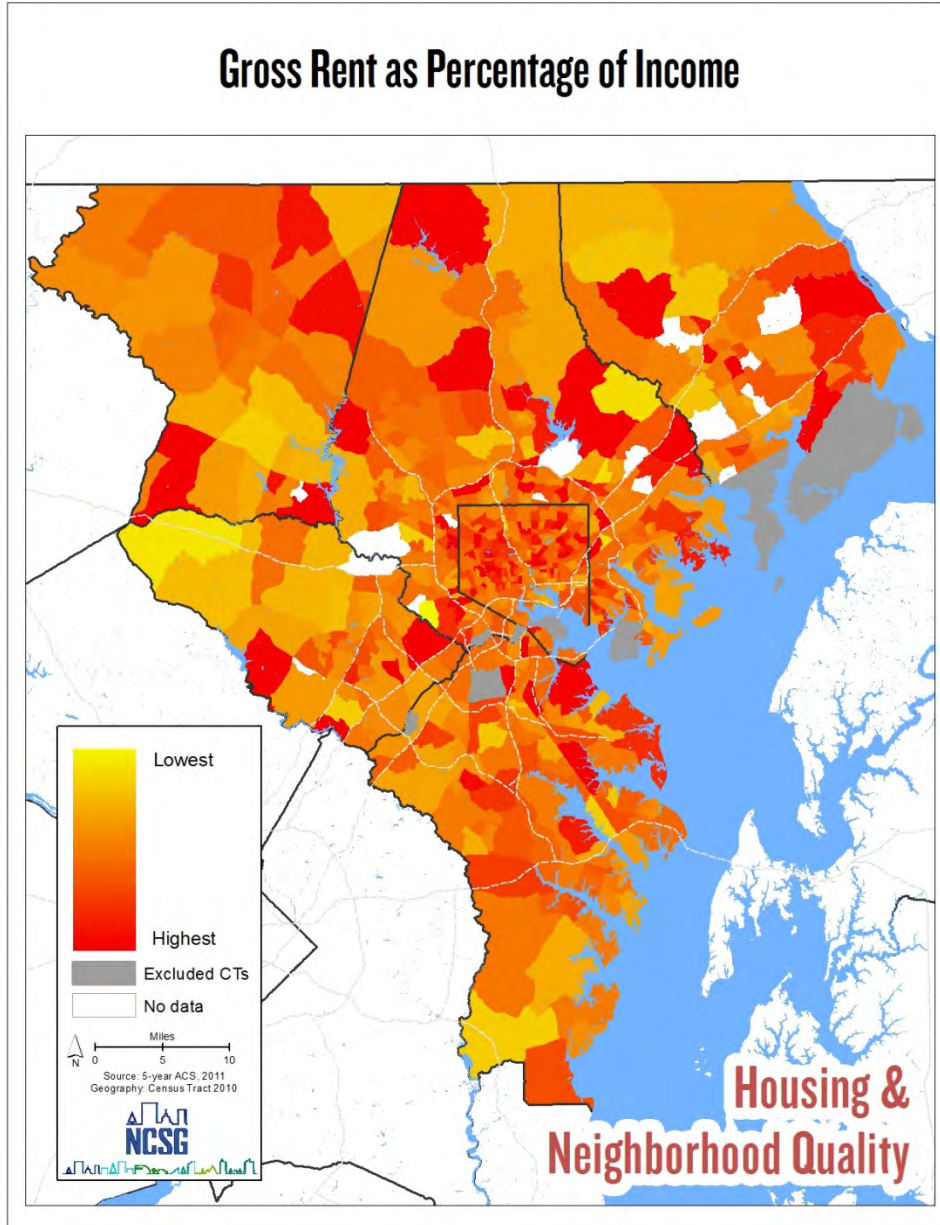
The Census reports gross rent as the amount of the contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water and sewer) and fuels (oil, coal, kerosene, wood, etc.). This is the percent of income spent on gross rent.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

Anne Arundel	29.7%
Baltimore	30.4%
Carroll	31.4%
Harford	29.3%
Howard	28.8%
Baltimore City	33.7%

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011

HISTOGRAM
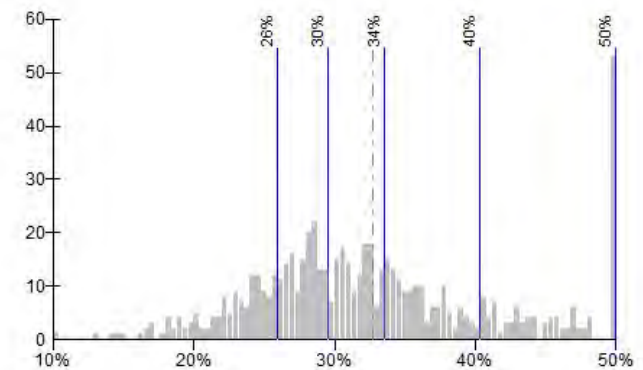
Ratio of Median Gross Rent to FMR
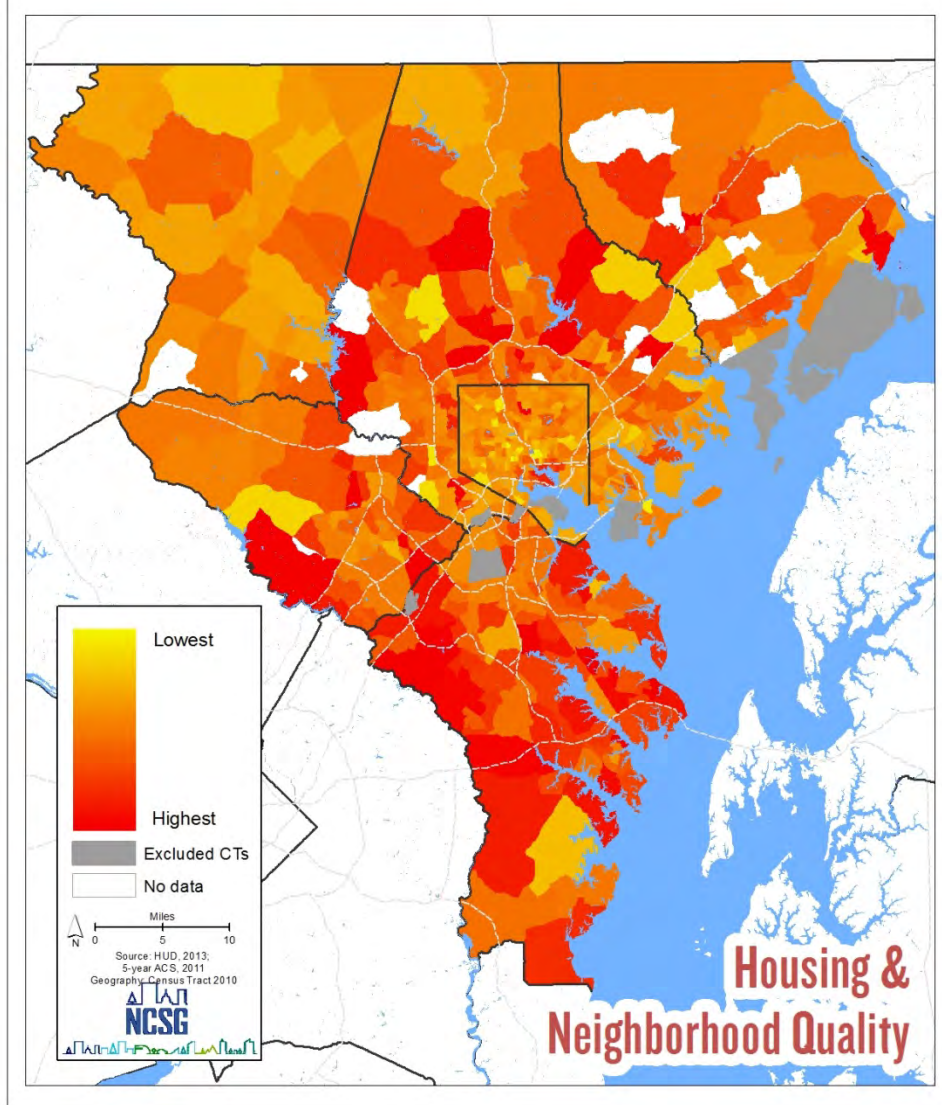
Ratio of Median Gross Rent to Fair Market Rent

A ratio of median gross rent as reported by the Census to the Fair Market Rent (for a 2 bedroom apartment) as determined for the region by HUD.

METHODOLOGY

Calculated the ratio between the two values for each census tract. Note that the Fair Market Rent is the same for all parts of the region except for Columbia.

SUMMARY DATA

Anne Arundel	1.14
Baltimore	0.90
Carroll	0.81
Harford	0.87
Howard	1.15
Columbia	0.89
Baltimore City	0.74

DATA SOURCES

U.S. Department of Housing and Urban Development, 2013; U.S. Census Bureau, American Community Survey 5-year Estimates, 2011
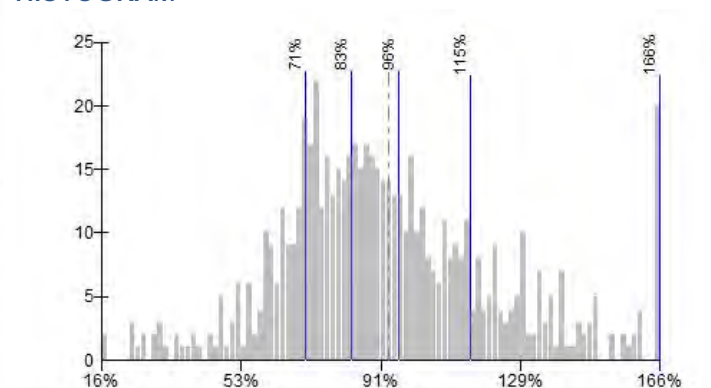
HISTOGRAM

Owner Cost Burden
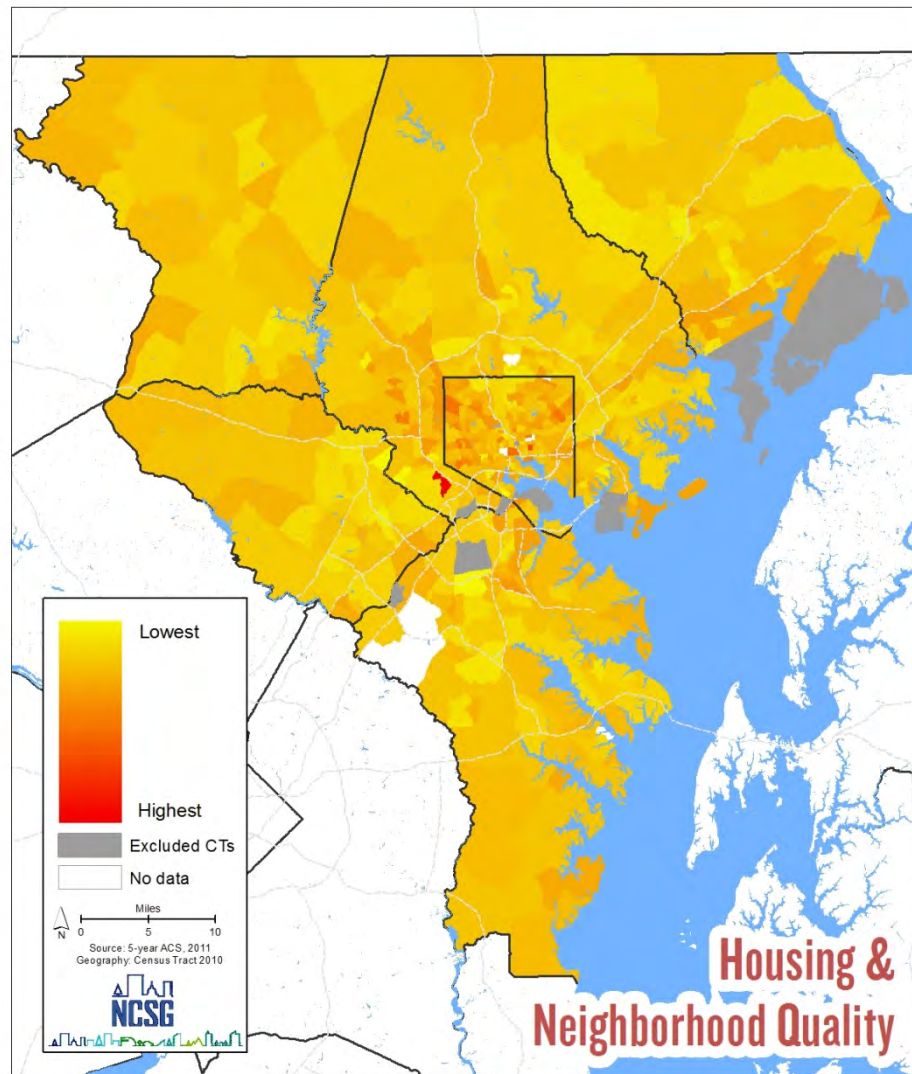
The percentage of homeowners for which selected monthly owner costs are 35% or more of their monthly household income.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

United States	23.1%
Region	23.1%
Anne Arundel	23.0%
Baltimore	22.6%
Carroll	22.0%
Harford	21.7%
Howard	19.8%
Baltimore City	27.8%

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011
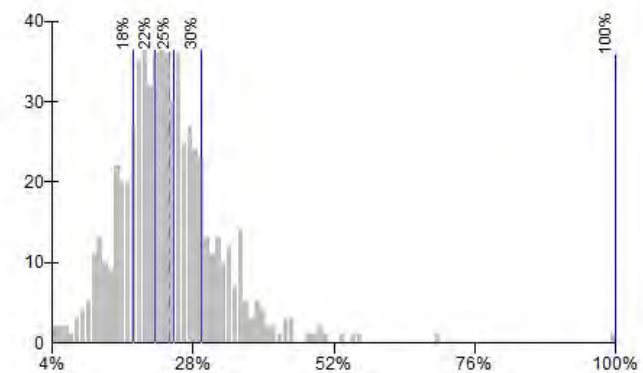
HISTOGRAM

Renter Cost Burden
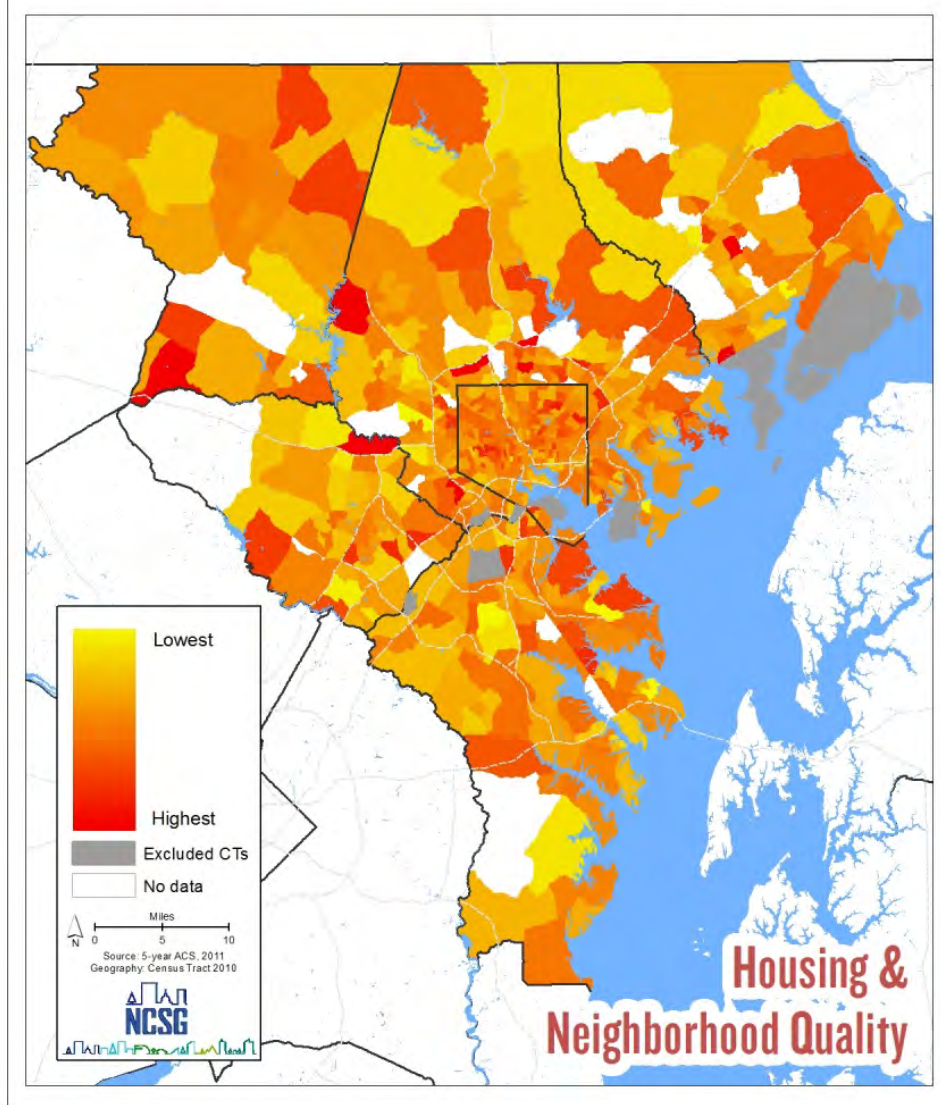
The percentage of renters for which gross rent 35% or more of their monthly household income.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

United States	**39.2%**
Region	**40.4%**
Anne Arundel	37.1%
Baltimore	39.0%
Carroll	39.1%
Harford	36.1%
Howard	34.6%
Baltimore City	44.8%

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011
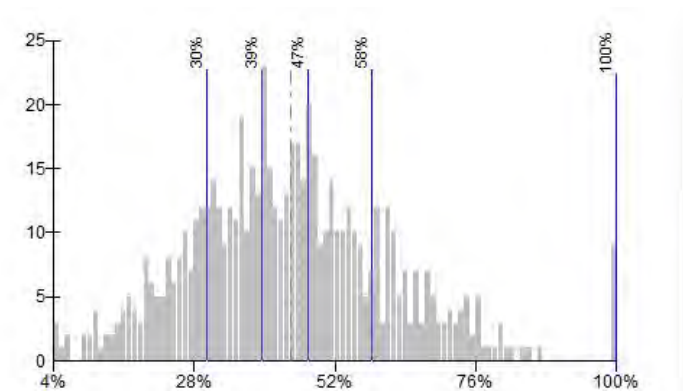
HISTOGRAM

Severe Owner Cost Burden
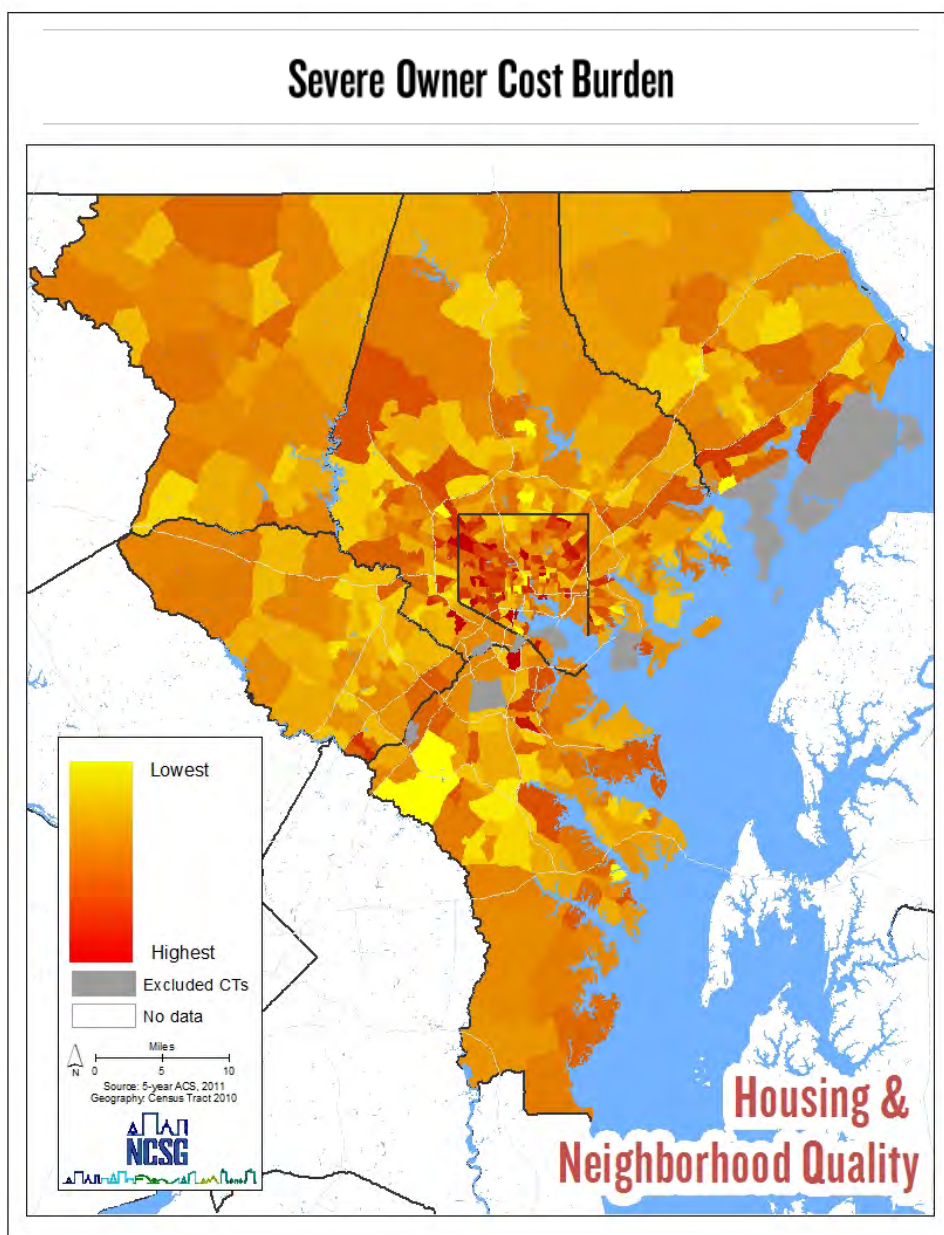
Severe Owner Cost Burden

The percentage of homeowners for which selected monthly owner costs are 50% or more of their monthly household income.

METHODOLOGY

Mapped as reported by Census. These data have been capped at 30% for mapping purposes (11 census tracts were capped).

SUMMARY DATA

United States	11.9%
Region	11.5%
Anne Arundel	11.3%
Baltimore	10.9%
Carroll	10.5%
Harford	10.6%
Howard	9.4%
Baltimore City	15.1%

DATA SOURCE

U.S. Census Bureau, American Community Survey 5-year Estimates, 2011
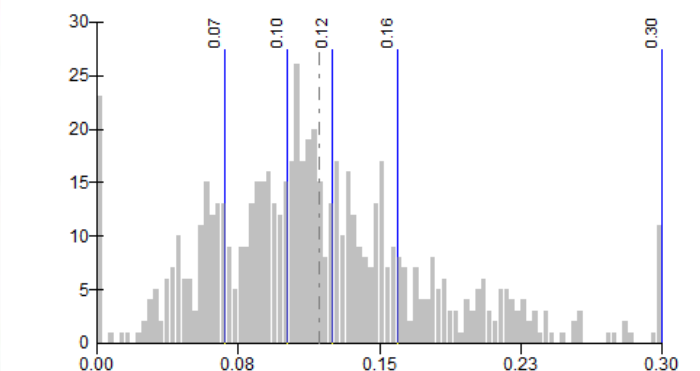
HISTOGRAM

Severe Renter Cost Burden
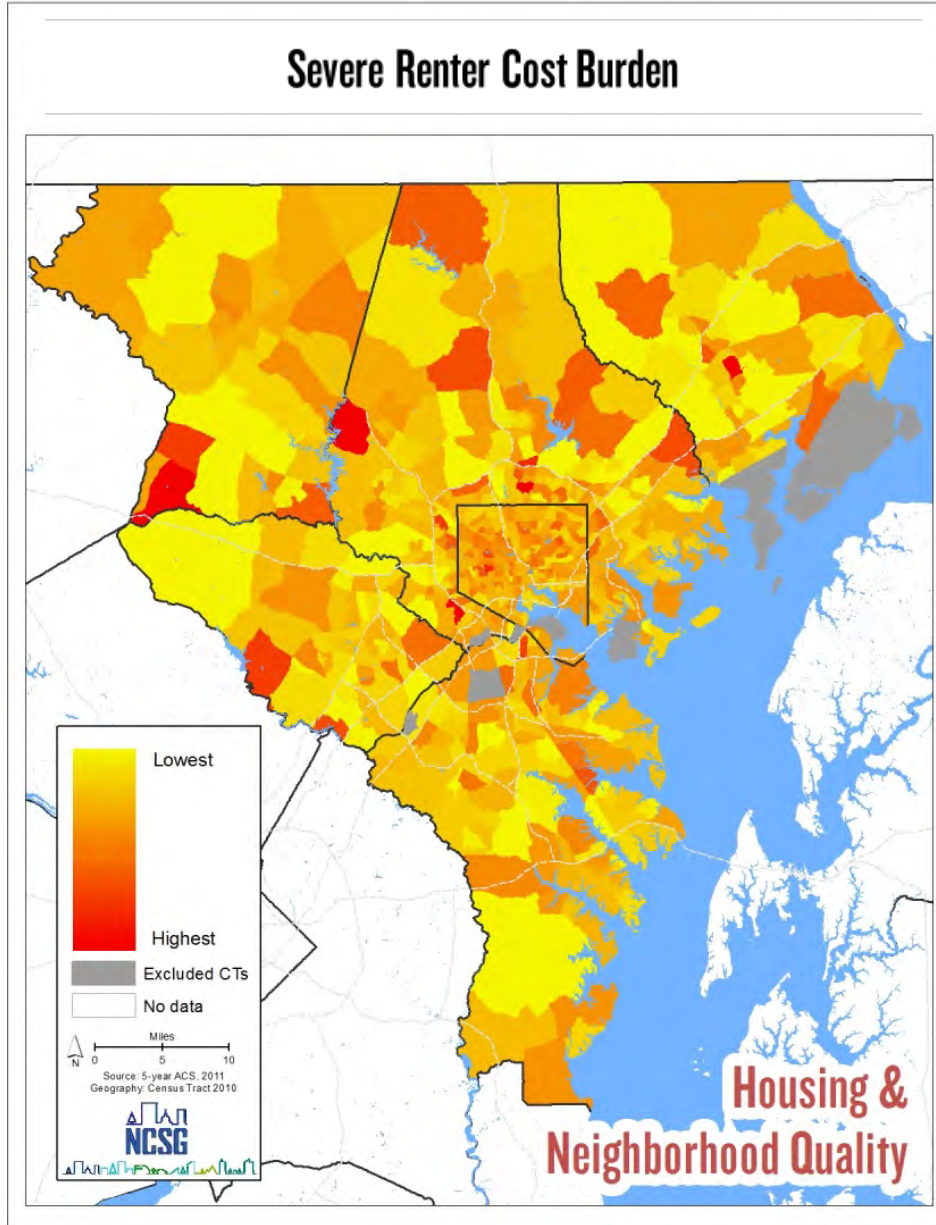
Severe Renter Cost Burden

The percentage of renters for which gross rent 50% or more of their monthly household income.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

United States	24.4%
Region	24.2%
Anne Arundel	20.9%
Baltimore	22.9%
Carroll	25.2%
Harford	22.6%
Howard	16.8%
Baltimore City	28.3%

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011

HISTOGRAM
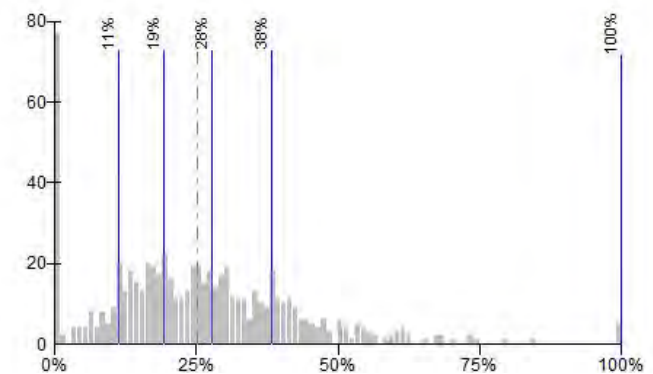
Housing Affordability Index
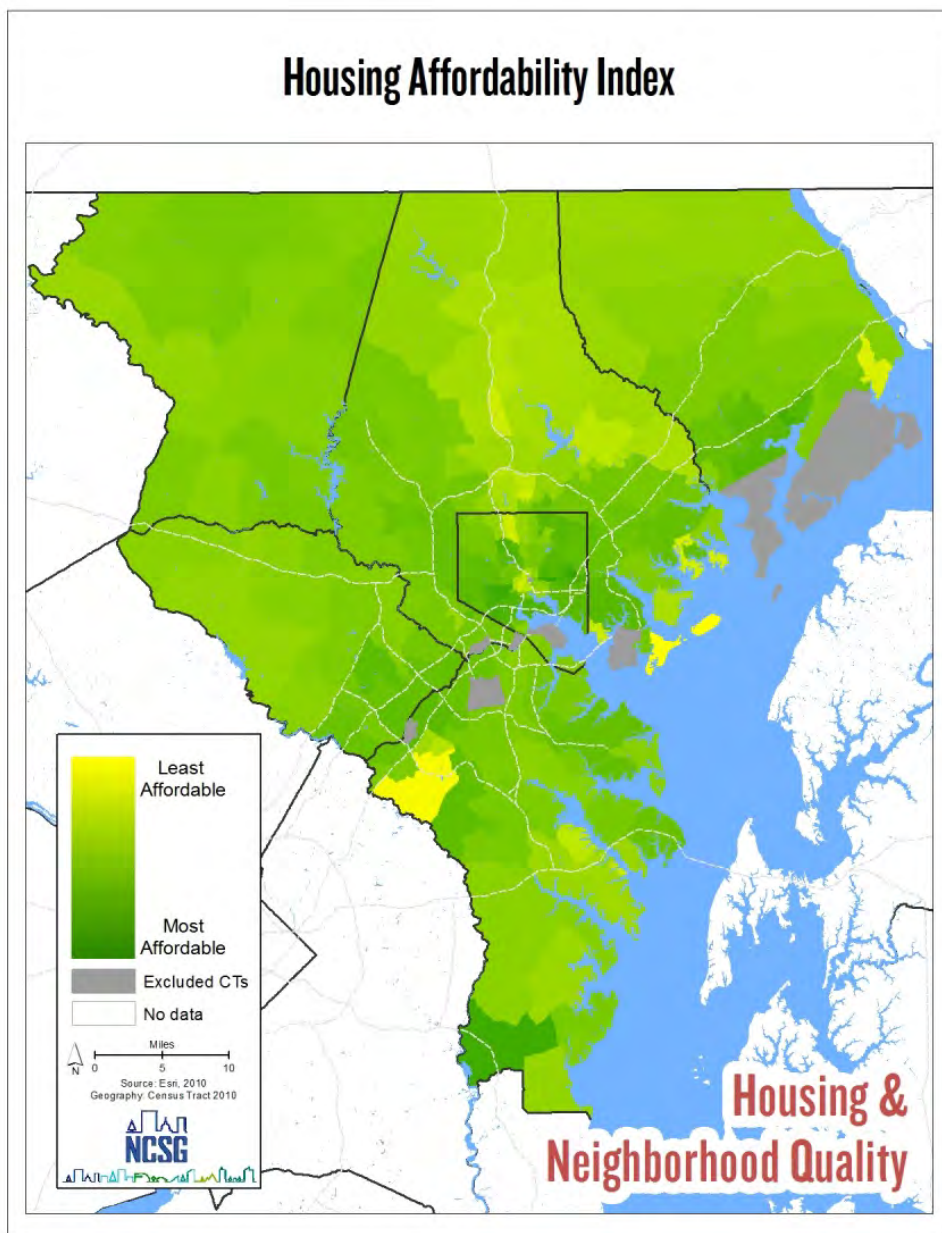
Housing Affordability Index

Financial ability of a typical household in an area to purchase an existing home in the area (higher the number, the more purchasing ability).

METHODOLOGY
Mapped as reported by Esri.

SUMMARY DATA*

Region	132.4
Anne Arundel	123.3
Baltimore	127.6
Carroll	122.2
Harford	129.6
Howard	131.4
Baltimore City	145.2

DATA SOURCE
Environmental Systems Research Institute, Inc. (Esri), 2010

HISTOGRAM
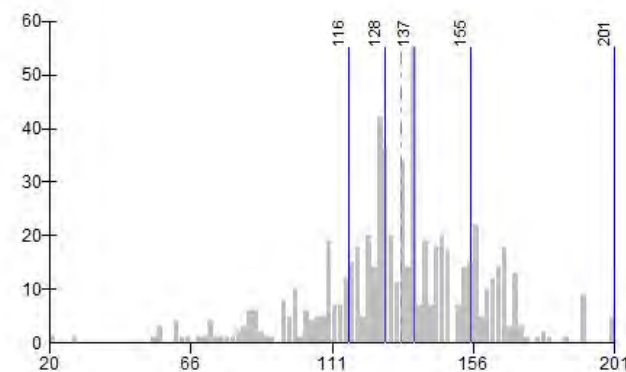
Summary data indicate the average of census tract values in each jurisdiction.

Housing + Transportation Index (Local Base)
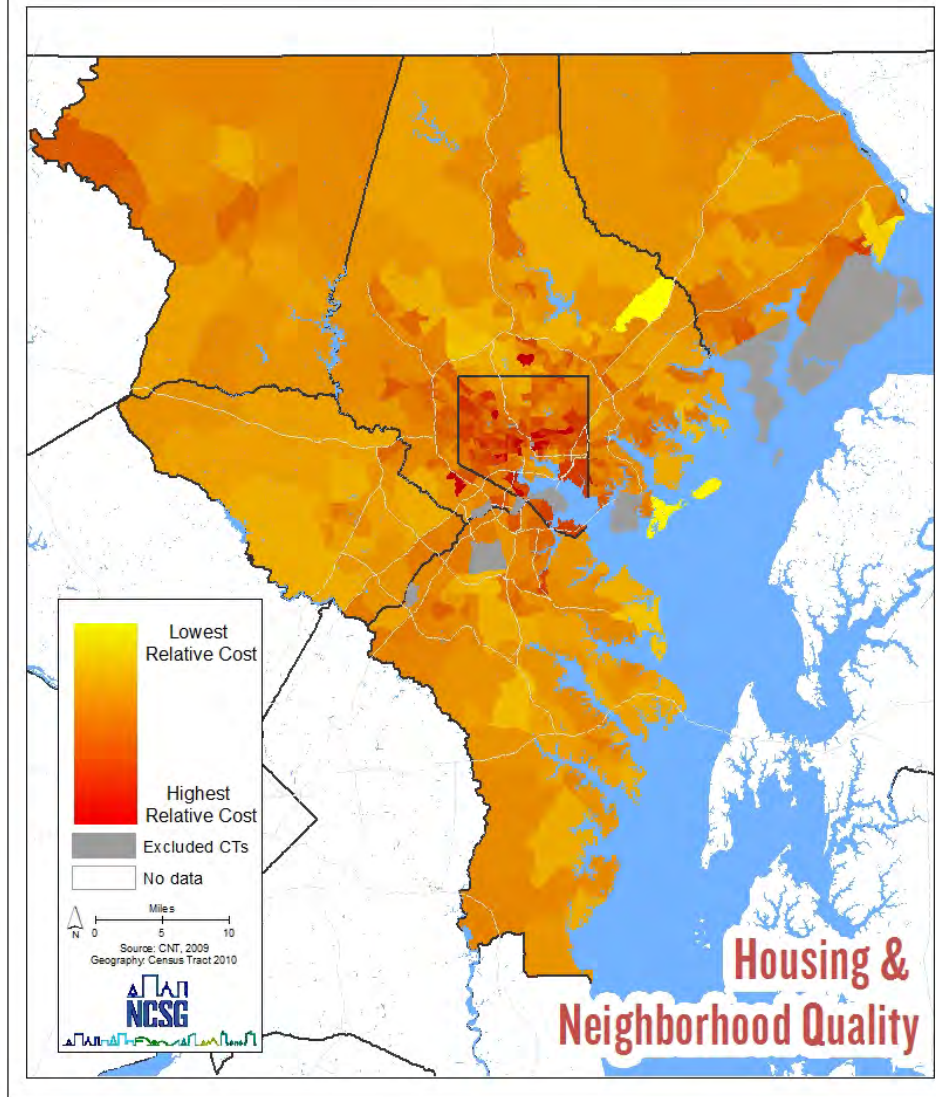
Housing plus transportation cost as a percent of the census tract's median household income.

METHODOLOGY

Divided median census tract level H+T (as provided by the Center for Neighborhood Technology, but translated to 2010 census tracts) by each census tract's median household income. These data have been capped at an index value of 110 for mapping purposes (13 census tracts were capped).

SUMMARY DATA

Anne Arundel	40.5%
Baltimore	46.8%
Carroll	43.7%
Harford	42.6%
Howard	38.2%
Baltimore City	64.5%

DATA SOURCE

Center for Neighborhood Technology, 2009; U.S. Census Bureau, American Community Survey 5-year Estimates, 2009

HISTOGRAM
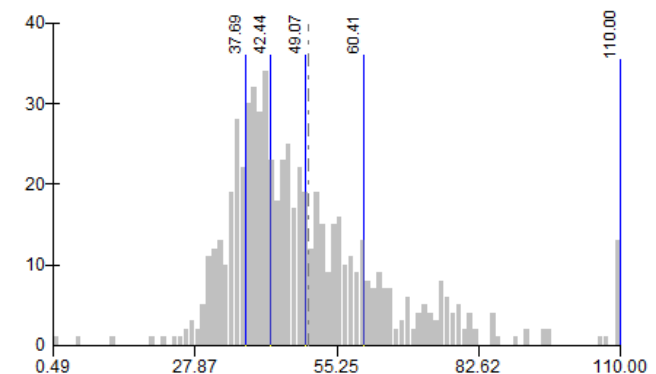
Housing + Transportation Index (AMI base)
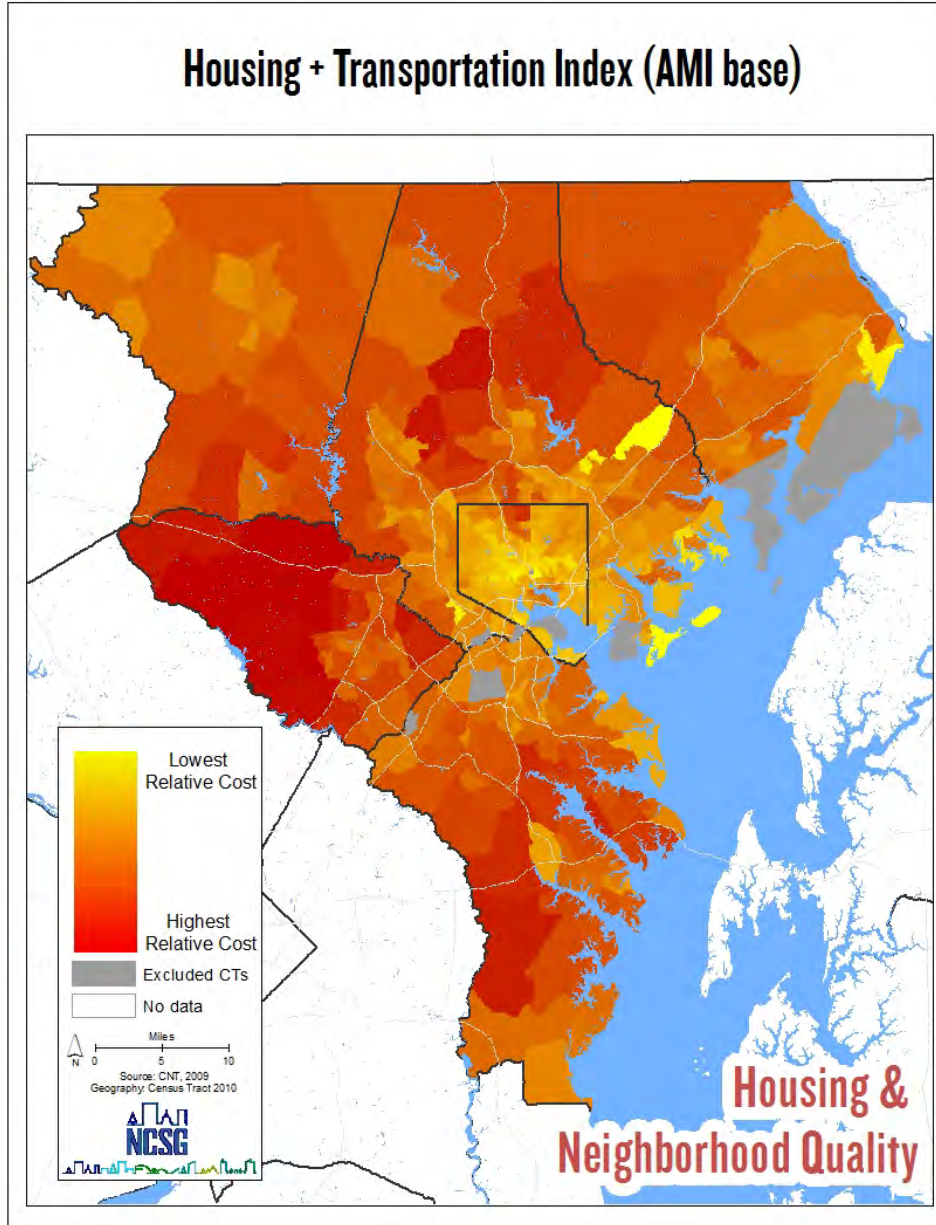
Housing + Transportation Index (AMI Base)

Housing plus transportation cost as a percent of the regional AMI. *Note that Queen Anne's County is included in the regional AMI calculation, but is not included in the analysis region.*

METHODOLOGY
Mapped as reported by the Center for Neighborhood Technology, but translated to 2010 census tracts. These data have been capped at a minimum index value of 20 for mapping purposes (only 5 census tracts were capped).

SUMMARY DATA

Region	46.5%
Anne Arundel	52.6%
Baltimore	45.1%
Carroll	53.1%
Harford	49.9%
Howard	57.9%
Baltimore City	35.6%

DATA SOURCE
Center for Neighborhood Technology, 2009

HISTOGRAM
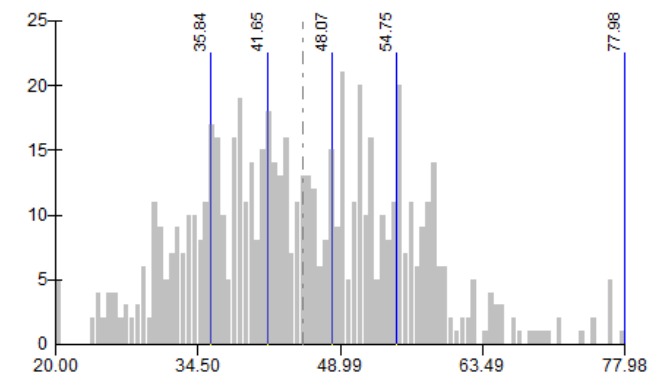
High Cost Loan Rate
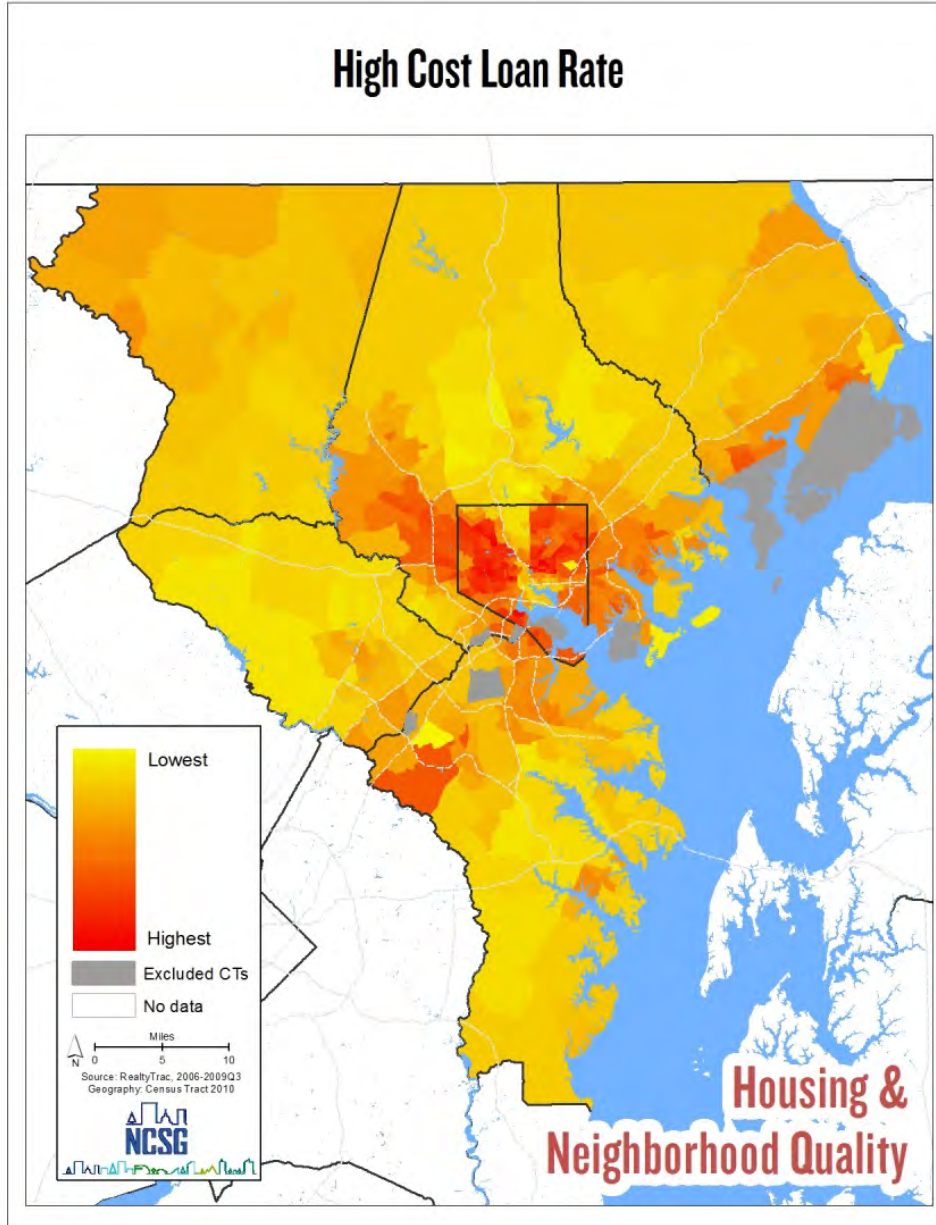
High Cost Loan Rate

The percent of all mortgages issued during the time period that were considered high cost with above-average fees or interest. Lenders often offer high cost loans to applicants that don't qualify for a conventional mortgage because of poor credit or income problems.

METHODOLOGY
Mapped as reported by RealtyTrac, but translated to 2010 census tracts.

SUMMARY DATA

Anne Arundel	20.4%
Baltimore	26.7%
Carroll	16.7%
Harford	23.4%
Howard	14.7%
Baltimore City	45.2%

DATA SOURCE
RealtyTrac, 2006-2009Q3

HISTOGRAM
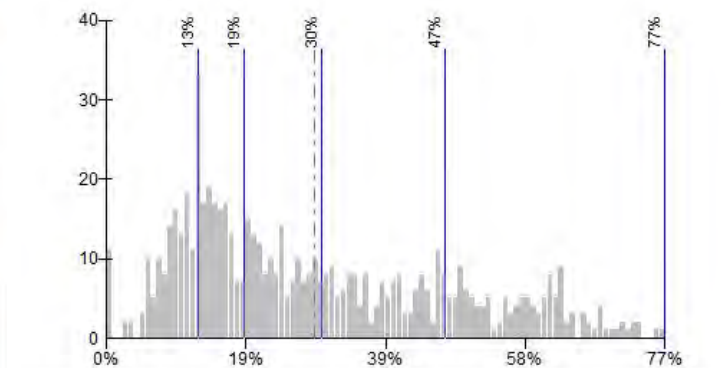
Foreclosure Rate
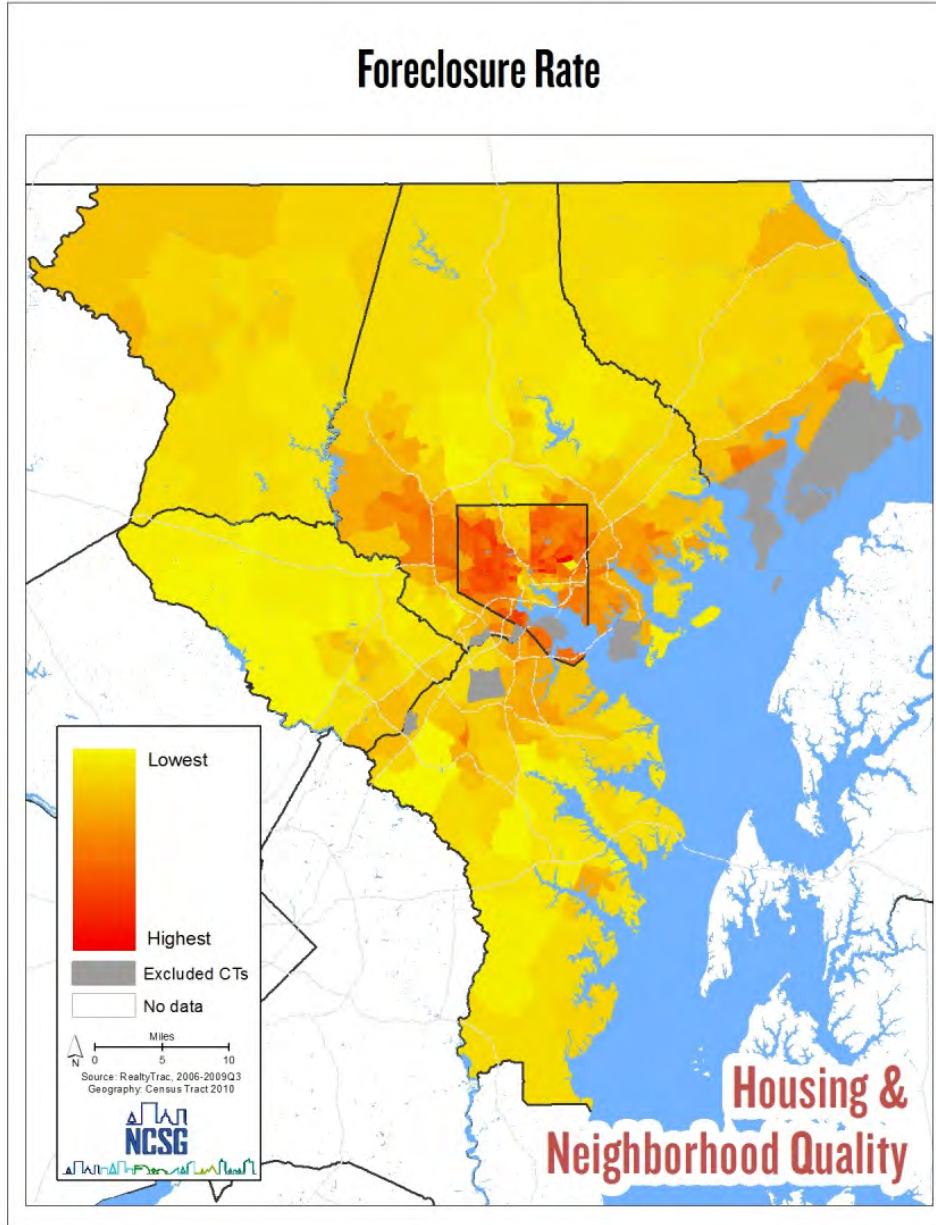
Foreclosure Rate

During the given time period, the percent of all mortgages that went into foreclosure.

METHODOLOGY
Mapped as reported by RealtyTrac, but translated to 2010 census tracts.

SUMMARY DATA

Anne Arundel	2.1%
Baltimore	3.0%
Carroll	1.6%
Harford	2.7%
Howard	1.2%
Baltimore City	5.9%

DATA SOURCE
RealtyTrac, 2006-2009Q3

HISTOGRAM
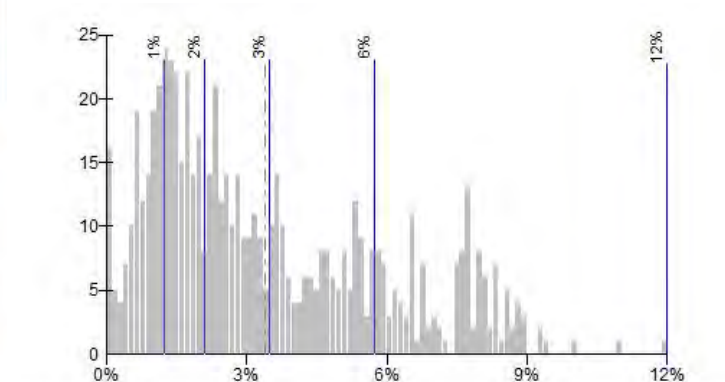
Vacant Units Abandoned
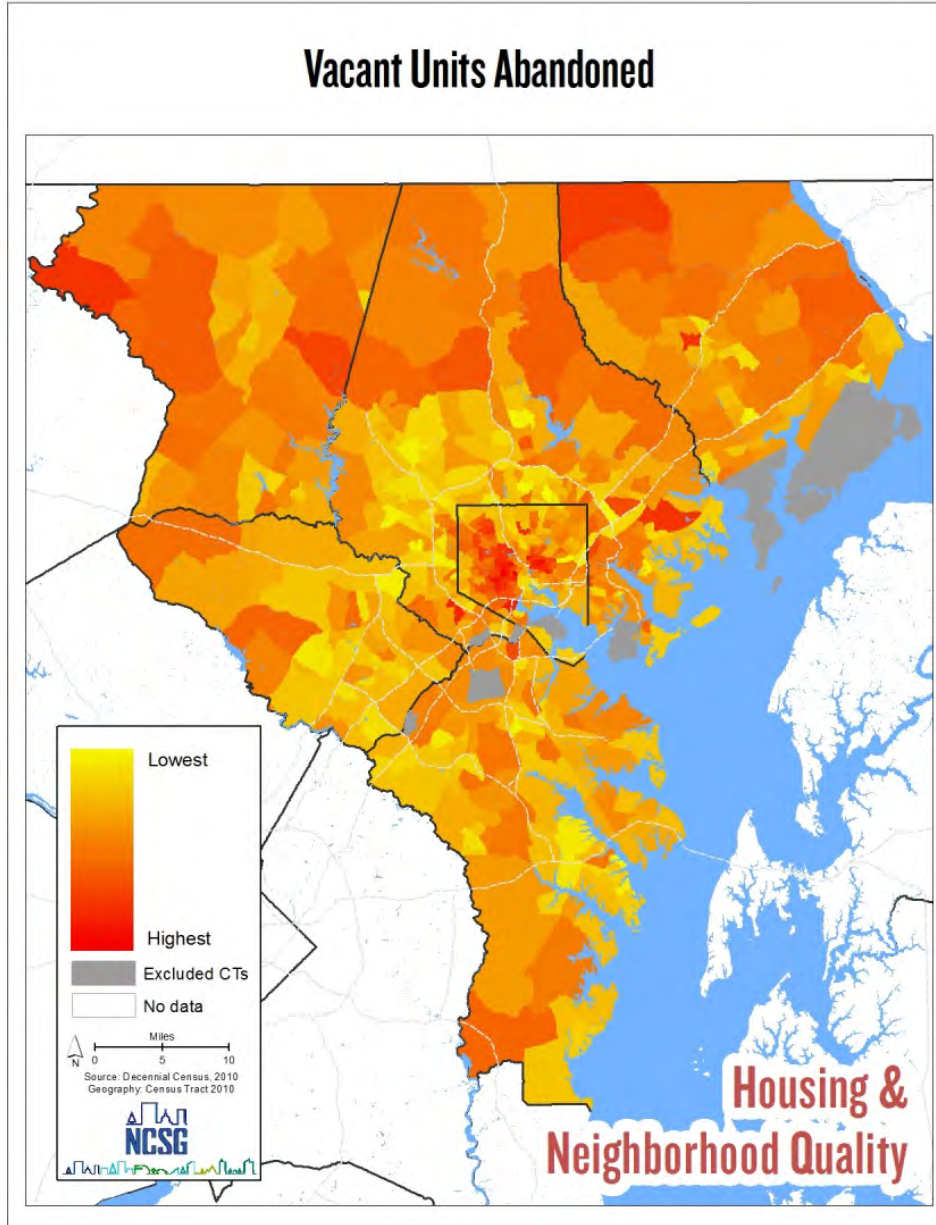
Vacant Units Abandoned

The percent of all housing units that are vacant and considered abandoned (not on the market, not seasonally unoccupied, not sold or rented and unoccupied, and not for migrant workers).

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

United States	24.4%
Maryland	27.6%
Region	37.1%
Anne Arundel	24.1%
Baltimore	23.1%
Carroll	37.0%
Harford	30.0%
Howard	20.8%
Baltimore City	48.7%

DATA SOURCE
U.S. Census Bureau, Census 2010
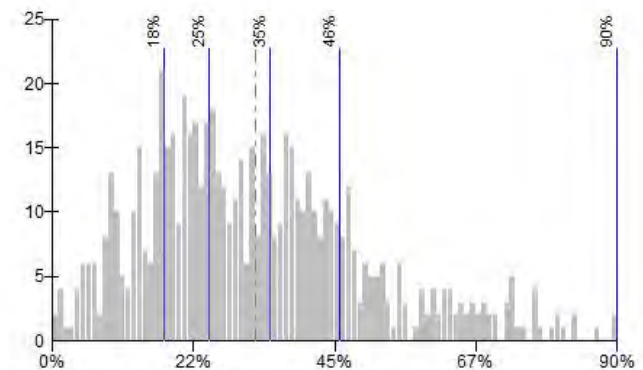
HISTOGRAM

Housing Capacity per Acre
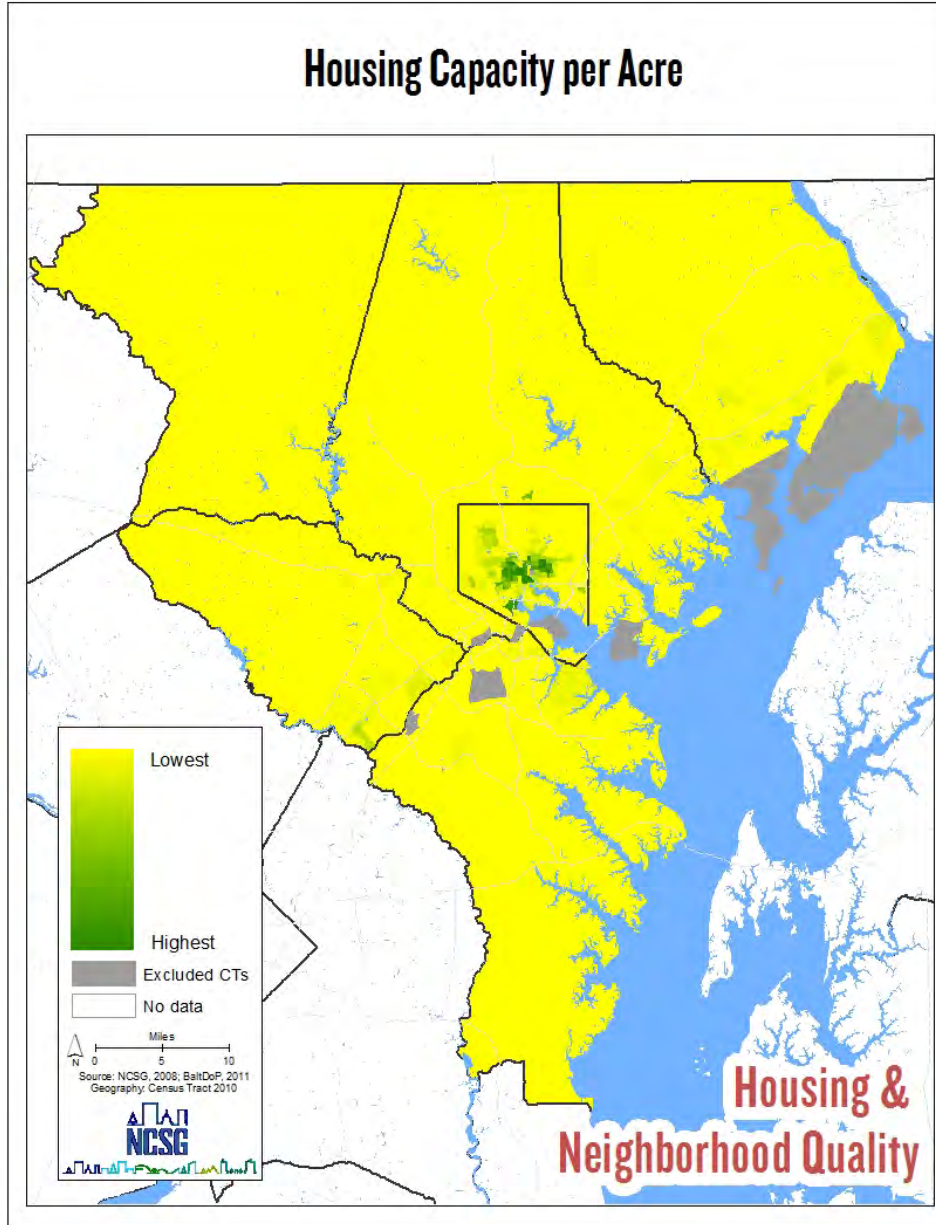
Based on existing zoning and land use, the potential total number of housing units that could be built in each jurisdiction, normalized by land area.

METHODOLOGY

Mapped as reported by the NCSG. The calculation for each census tract involves a detailed review of zoning and regulatory allowances as well as the existing land use patterns. The capacity is then divided by land area in acres. These data have been capped at 12.5 units per acre for mapping purposes (9 census tracts were capped).

SUMMARY DATA

Region	192,414
Anne Arundel	34,422
Baltimore	35,158
Carroll	24,028
Harford	28,632
Howard	26,525
Baltimore City	43,649

DATA SOURCE

NCSG, 2008; City of Baltimore Department of Planning, 2011

HISTOGRAM
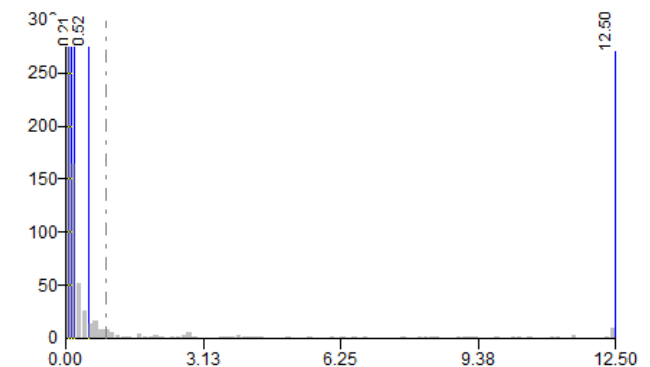
SOCIAL CAPITAL INDICATORS

Subcategory	Indicator Title	Description
N/A	Access to Civic, Social, Community & Religious Organizations	A gravity based measure that captures the distance to locations of churches, synagogues, temples and the locations of other religious and faith-based organizations, along with social, volunteer, civic and other community organizations.
	Access to Public Institutions	A gravity based measure that captures the distance to locations of public institutions, such as libraries and museums.
	Percent Population Aged 25 to 44	The percent of a census tract's population that is between the ages of 25 and 44.
	Racial Diversity Index	For a given census tract, the probability that the next person you encounter is a different race. The higher the value, the more diverse the census tract.
	Percent Population Having High School Diploma or Greater	Percent of population ages 25 or older with at least a high school diploma.
	Percent Population Having Bachelor's Degree or Greater	Percent of population ages 25 or older with at least a bachelor's degree.
	Median Income	The median income of households in the census tract in 2011 inflation-adjusted dollars.
	Percent of Households in Poverty	The percent of households that fall below various money income thresholds that vary by household size and composition. Households that fall below these thresholds are considered in poverty.
	Labor Force Participation Rate - Ages 16-64	The percent of people ages 16 to 64 that are in the labor force. People in the labor force include employed civilians, unemployed civilians seeking employment, and members of the U.S. Armed Forces.
	Percent of Labor Force Unemployed	Percent of the labor force aged 16 and older that is unemployed.
	Population Density	The density of people in a census tract.
	Percentage of Owner Occupied Housing Units	Percent of all occupied housing units in a census tract that are owner occupied.
	Percent Single Parent Households	Percent of households in a census tract head by a single parent.

Additional social capital indicators considered by the OMAP include:
- Access to Religious & Faith-based Organizations (separate from civic organizations)
- Access to Civic, Social & Community Organizations (separate from religious organizations)
- Percent Population Does Not Speak English

Access to Civic, Social, Community & Religious Organizations
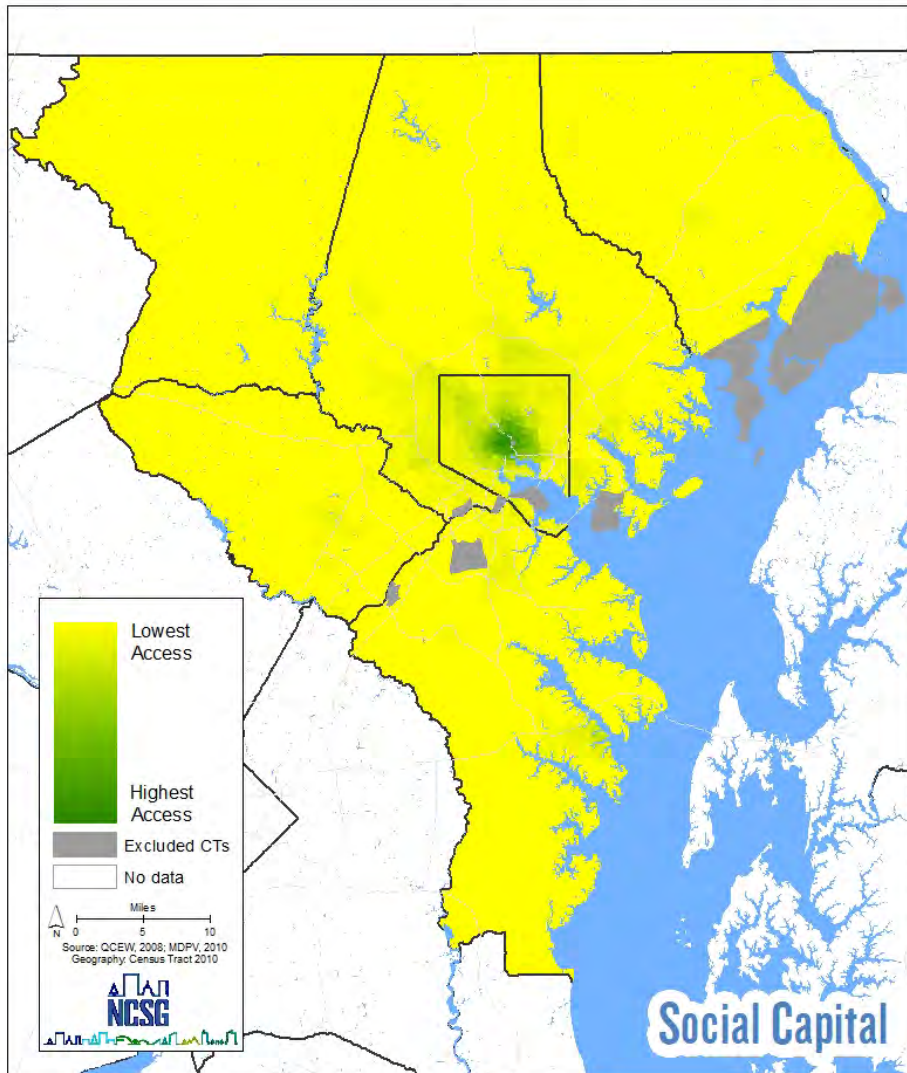
Access to Civic, Social, Community & Religious Organizations

A gravity based measure that captures the distance to locations of churches, synagogues, temples and the locations of other religious and faith-based organizations, along with social, volunteer, civic and other community organizations.

METHODOLOGY
Kernel density, no weighting, 0.5-mile search radius.

SUMMARY DATA (number of sites)

Region	4,428
Anne Arundel	688
Baltimore	1,246
Carroll	267
Harford	333
Howard	259
Baltimore City	1,635

DATA SOURCE
QCEW, 2008; Maryland PropertyView, 2010
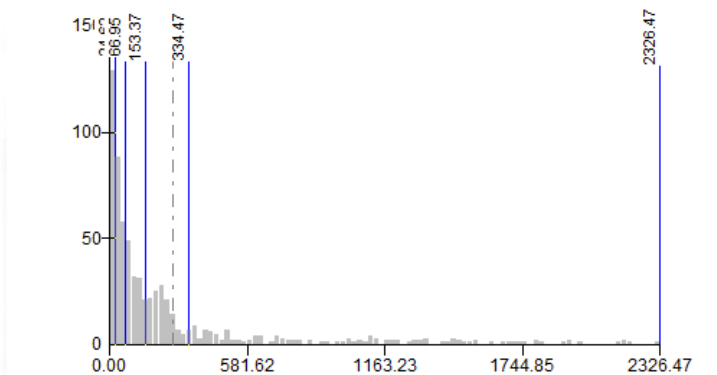
HISTOGRAM

Access to Public Institutions
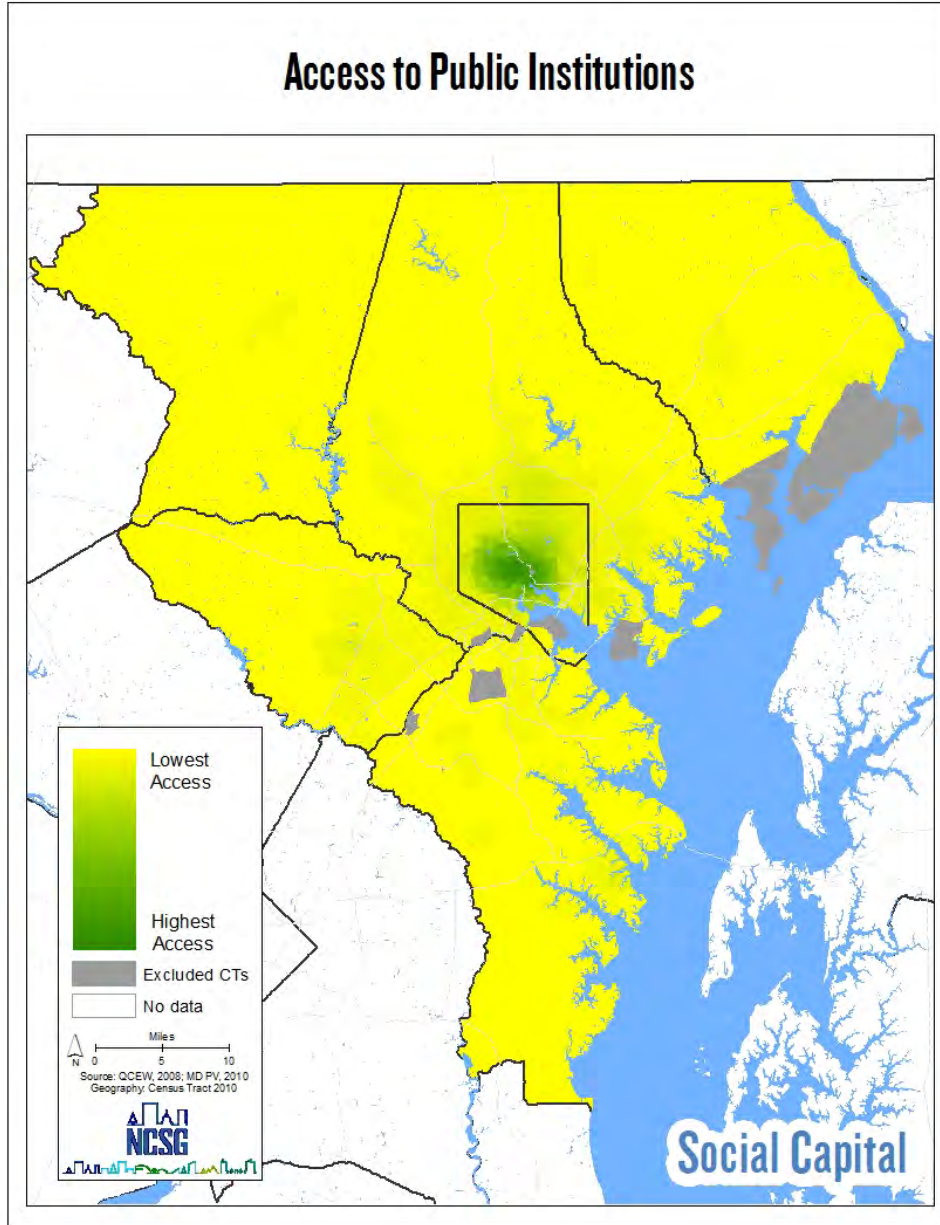
A gravity based measure that captures the distance to locations of public institutions, such as libraries and museums.

METHODOLOGY
Kernel density, no weighting, 0.5-mile search radius.

SUMMARY DATA (number of sites)

Region	1,282
Anne Arundel	191
Baltimore	295
Carroll	67
Harford	88
Howard	111
Baltimore City	530

DATA SOURCE
QCEW, 2008; Maryland PropertyView, 2010

HISTOGRAM
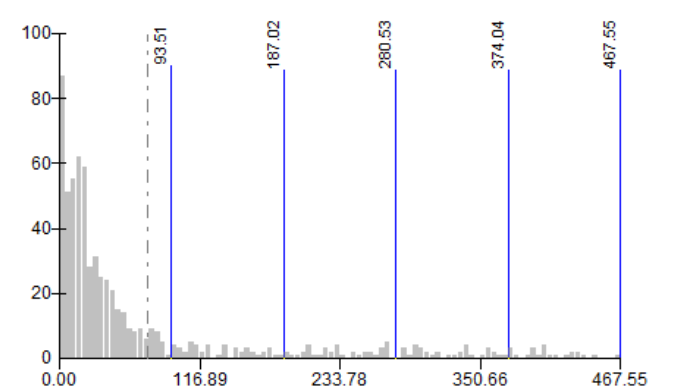
Percent Population Aged 25 to 44
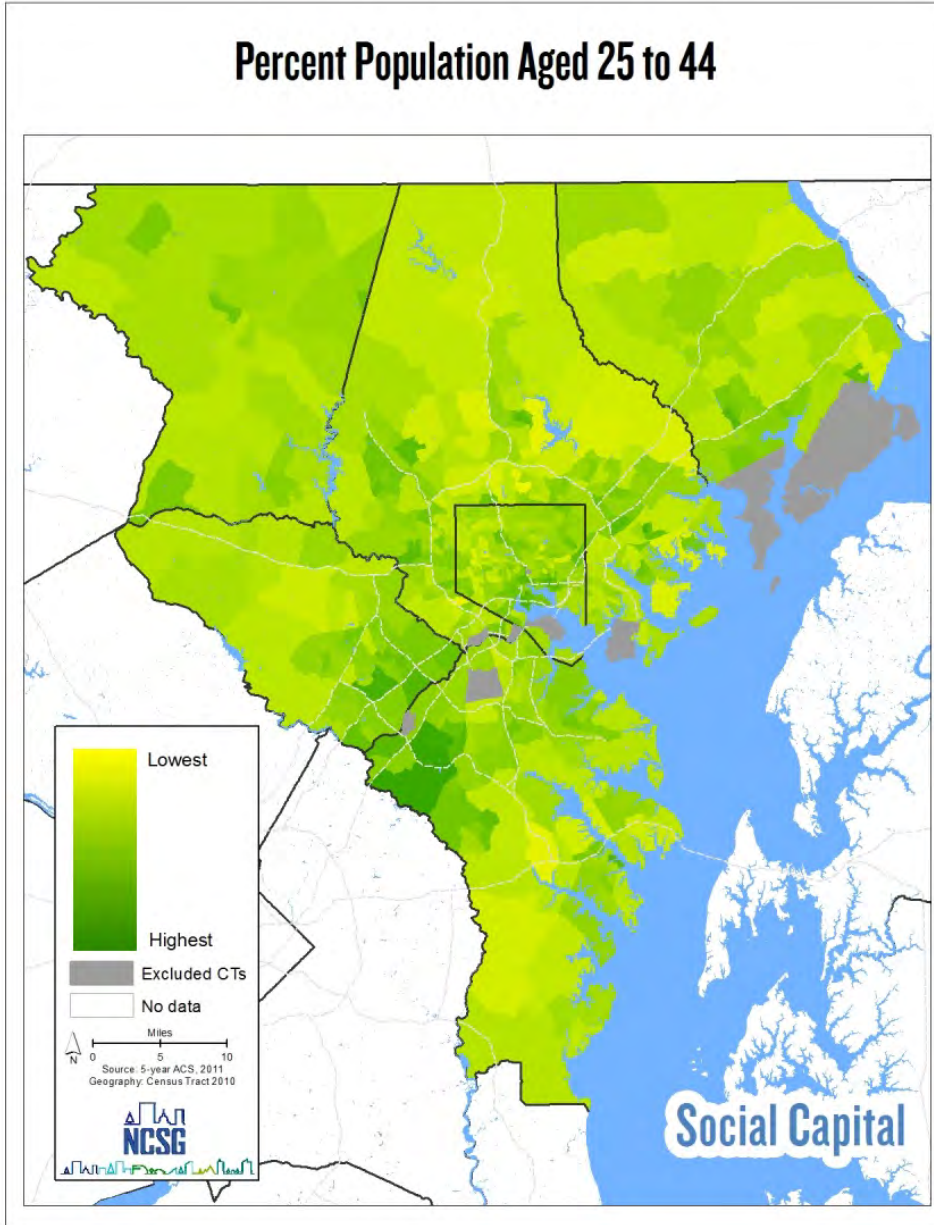
Percent Population Aged 25 to 44

The percent of a census tract's population that is between the ages of 25 and 44.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

United States	26.9%
Maryland	27.3%
Region	27.1%
Anne Arundel	27.8%
Baltimore	26.0%
Carroll	24.0%
Harford	26.0%
Howard	27.7%
Baltimore City	28.9%

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011

HISTOGRAM
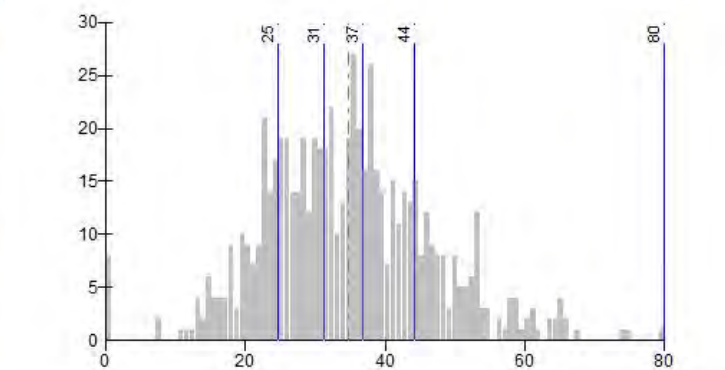
Racial Diversity Index
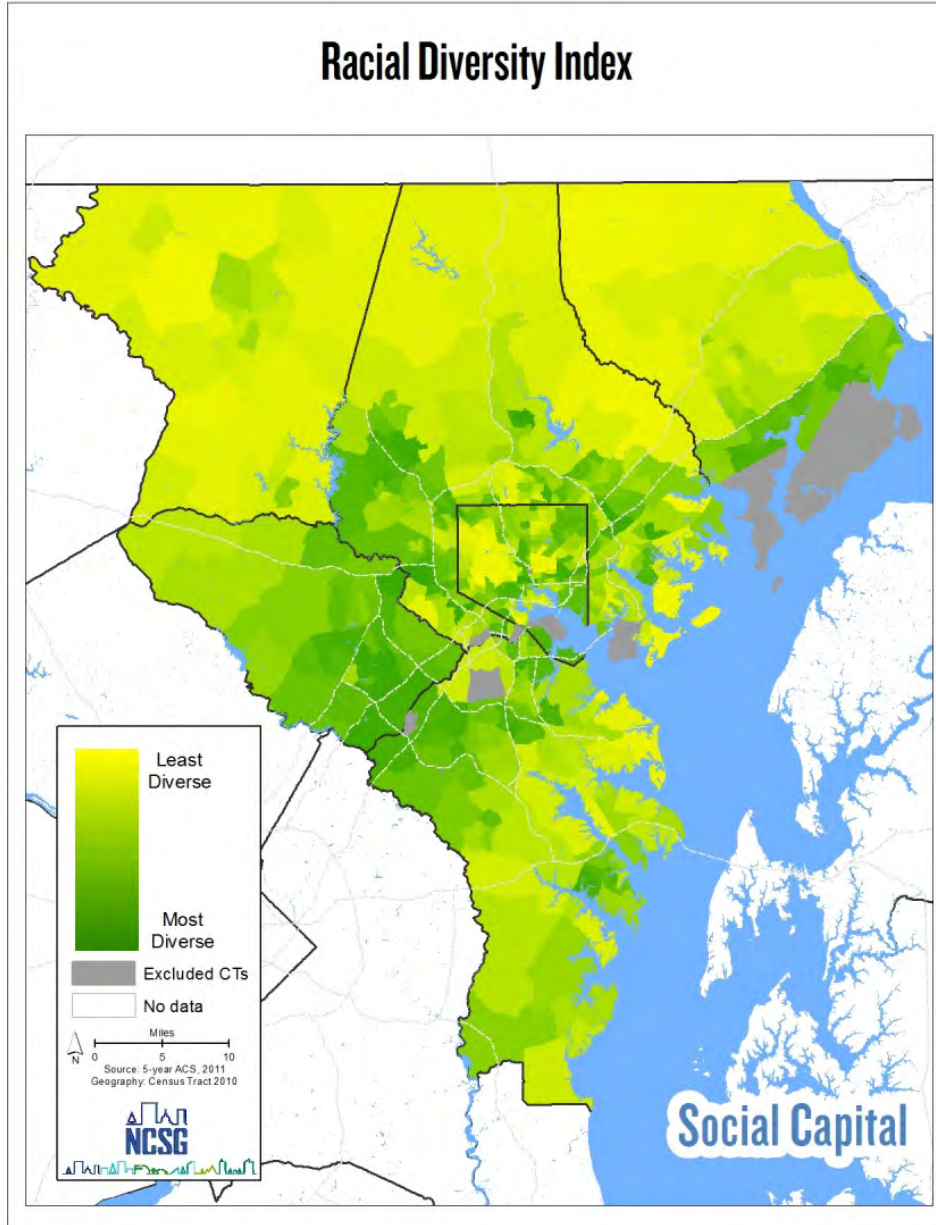
For a given census tract, the probability that the next person you encounter is a different race. The higher the value, the more diverse the census tract.

METHODOLOGY

The index is created as a ratio of the proportional size of each racial group to the number of groups. An index value of 1.00 suggests an equal number of people in all racial groups.

SUMMARY DATA*

Region	0.32
Anne Arundel	0.34
Baltimore	0.33
Carroll	0.13
Harford	0.27
Howard	0.52
Baltimore City	0.28

DATA SOURCE

U.S. Census Bureau, American Community Survey 5-year Estimates, 2011

HISTOGRAM

Summary data indicate the average of census tract values in each jurisdiction.
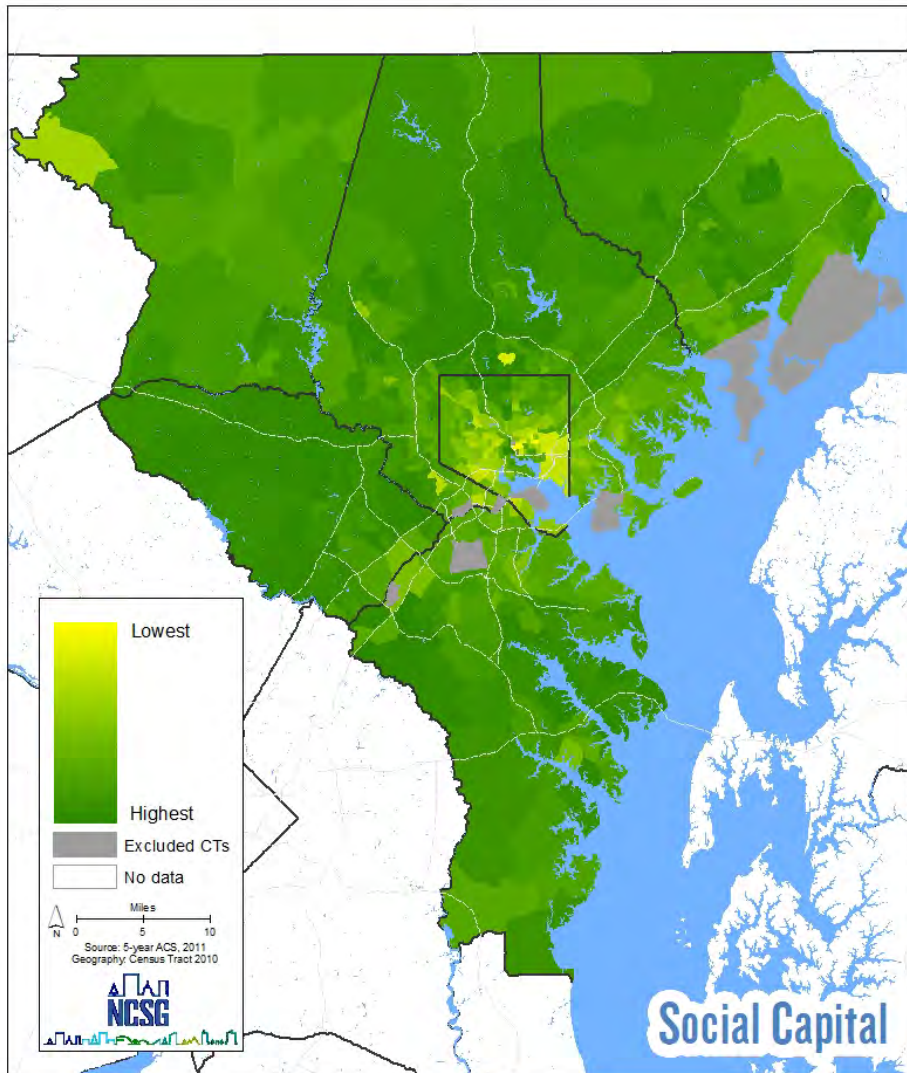
Percent Population Having High School Diploma or Greater

Percent of population ages 25 or older with at least a high school diploma.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

United States	85.4%
Maryland	88.2%
Region	87.8%
Anne Arundel	90.4%
Baltimore	89.2%
Carroll	90.3%
Harford	91.3%
Howard	94.9%
Baltimore City	78.5%

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011

HISTOGRAM
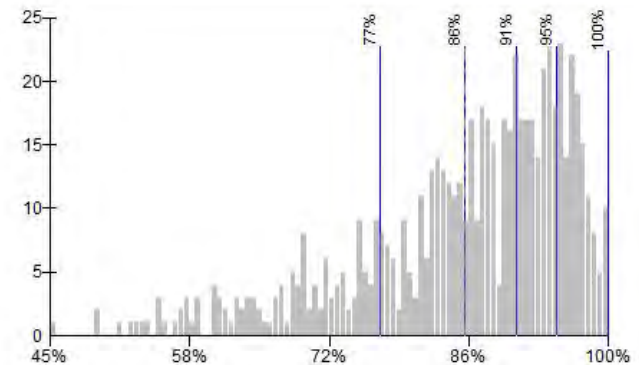
Percent Population Having Bachelor's Degree or Greater
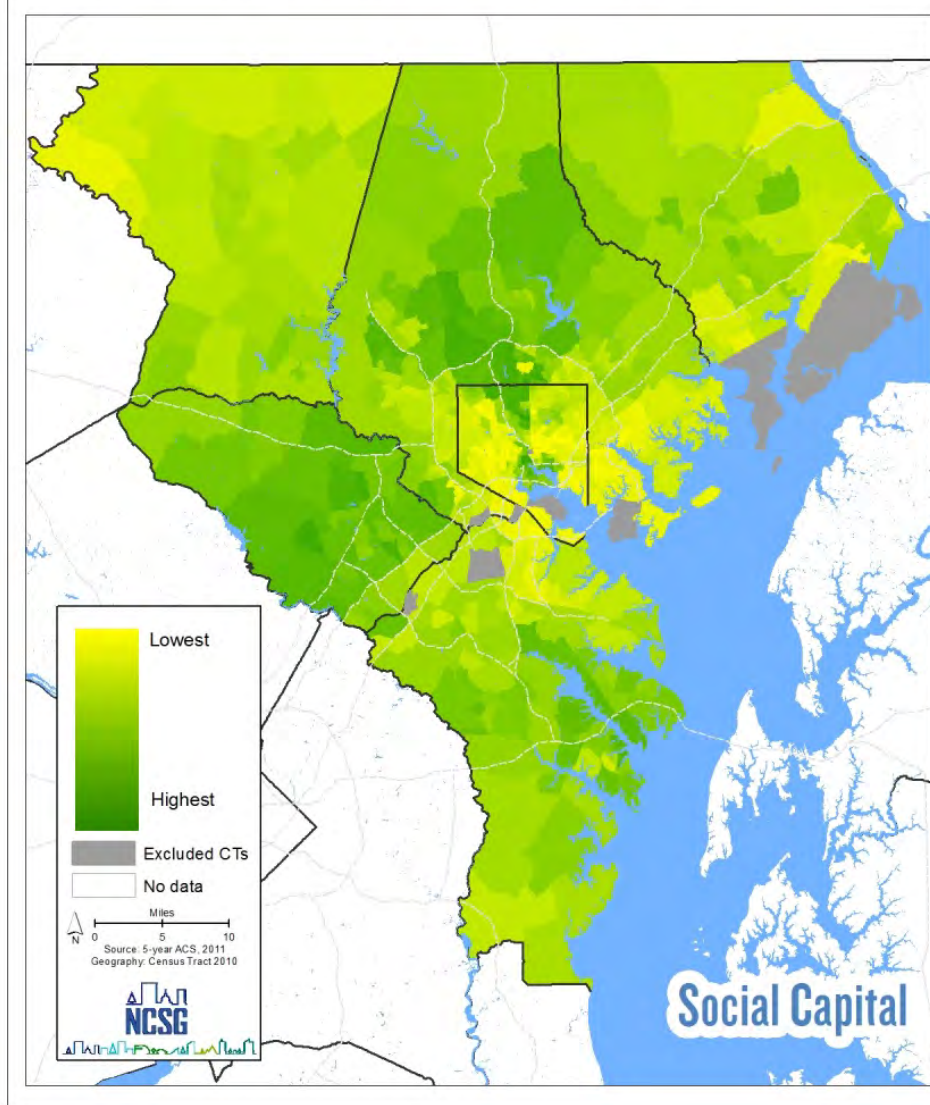
Percent Population Having Bachelor's Degree or Greater

Percent of population ages 25 or older with at least a bachelor's degree.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

United States	85.4%
Maryland	88.2%
Region	87.8%
Anne Arundel	90.4%
Baltimore	89.2%
Carroll	90.3%
Harford	91.3%
Howard	94.9%
Baltimore City	78.5%

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011

HISTOGRAM
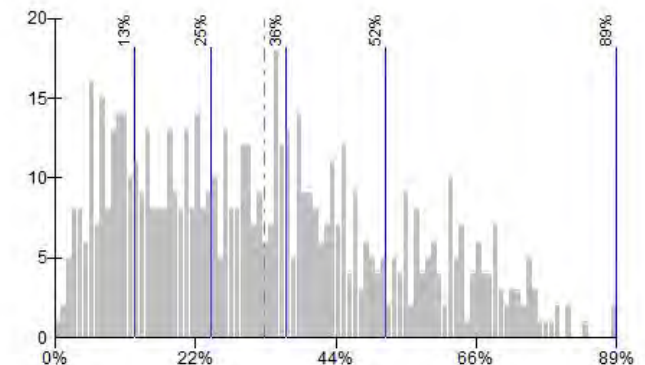
Median Income
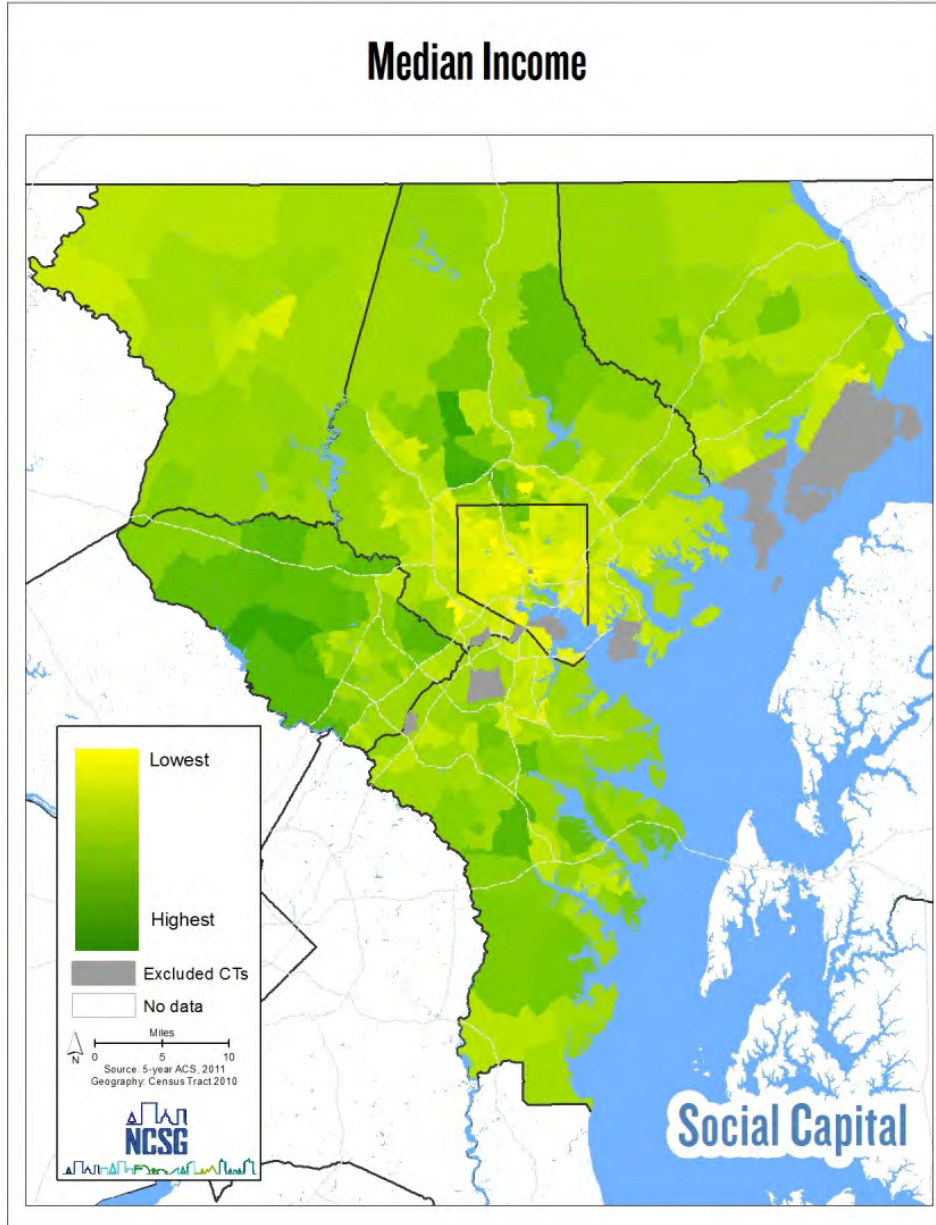
Median Income

The median income of households in the census tract in 2011 inflation-adjusted dollars.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

United States	$52,762
Maryland	$72,419
Anne Arundel	$85,690
Baltimore	$65,411
Carroll	$83,325
Harford	$79,953
Howard	$105,692
Baltimore City	$40,100

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011

HISTOGRAM
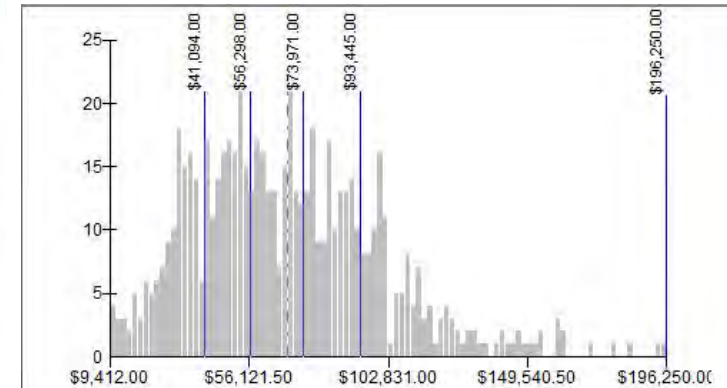
Percent of Households in Poverty
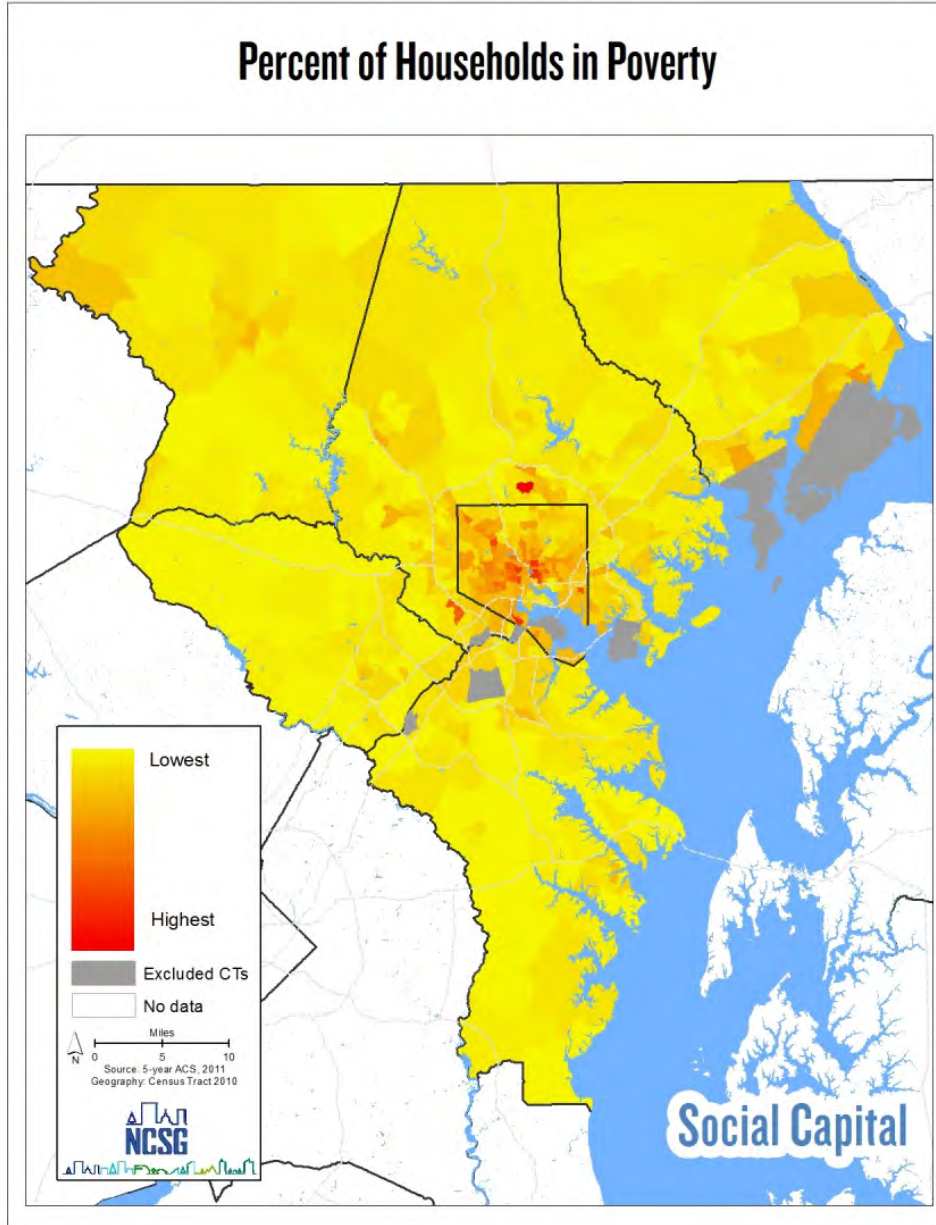
Percent of Households in Poverty

The percent of households that fall below various money income thresholds that vary by household size and composition. Households that fall below these thresholds are considered in poverty.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

United States	10.5%
Maryland	6.1%
Region	7.0%
Anne Arundel	3.7%
Baltimore	5.4%
Carroll	4.0%
Harford	4.8%
Howard	3.0%
Baltimore City	17.7%

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011

HISTOGRAM
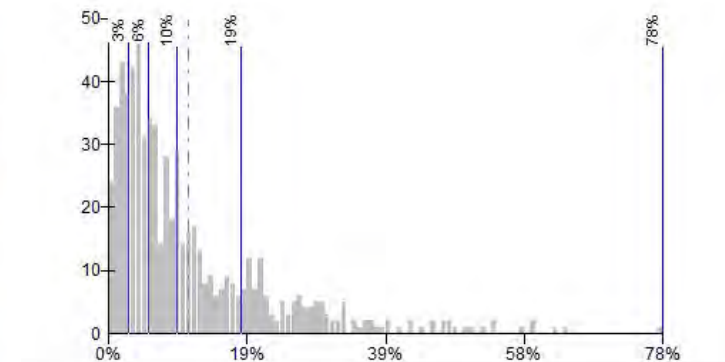
Labor Force Participation Rate - Ages 16-64
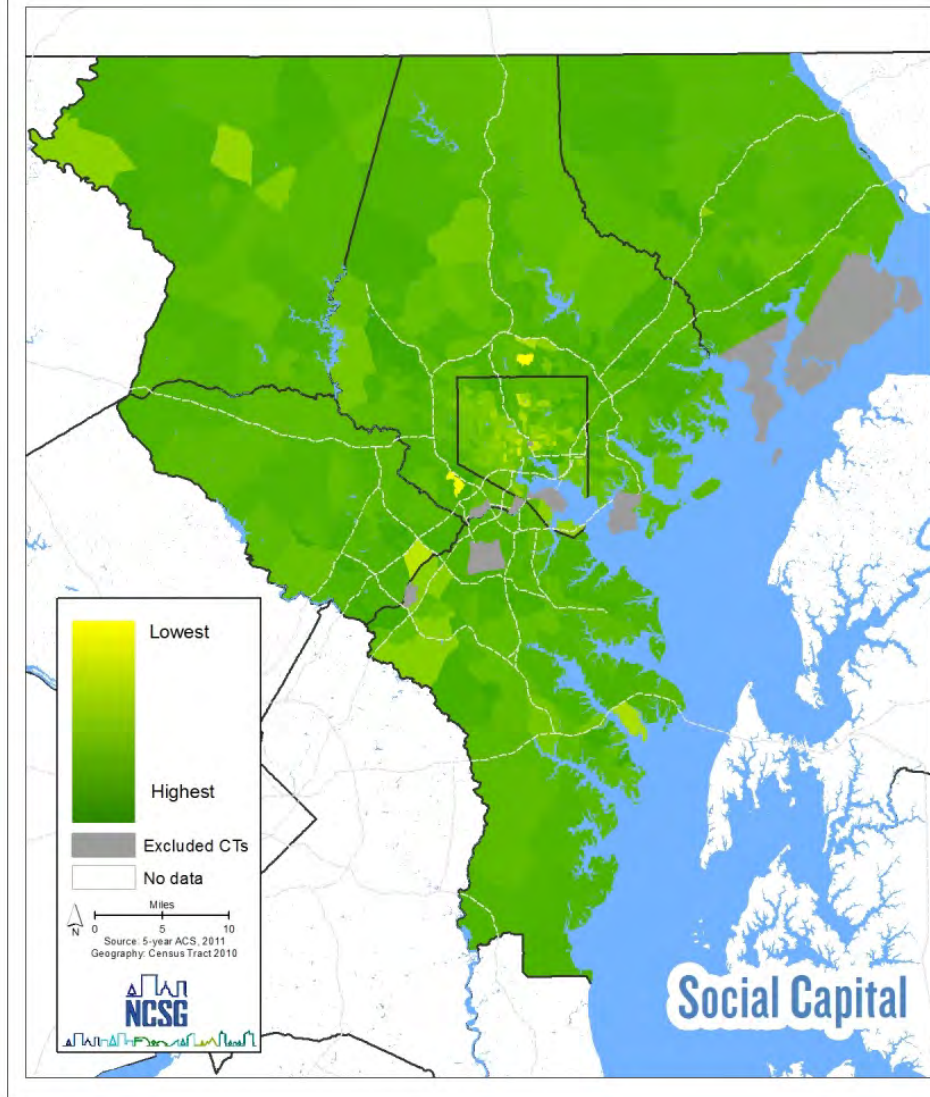
Labor Force Participation Rate – Ages 16-64

The percent of people ages 16 to 64 that are in the labor force. People in the labor force include employed civilians, unemployed civilians seeking employment, and members of the U.S. Armed Forces.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

United States	**74.5%**
Maryland	**78.6%**
Region	**77.4%**
Anne Arundel	79.6%
Baltimore	79.1%
Carroll	79.1%
Harford	80.4%
Howard	80.8%
Baltimore City	70.4%

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011

HISTOGRAM
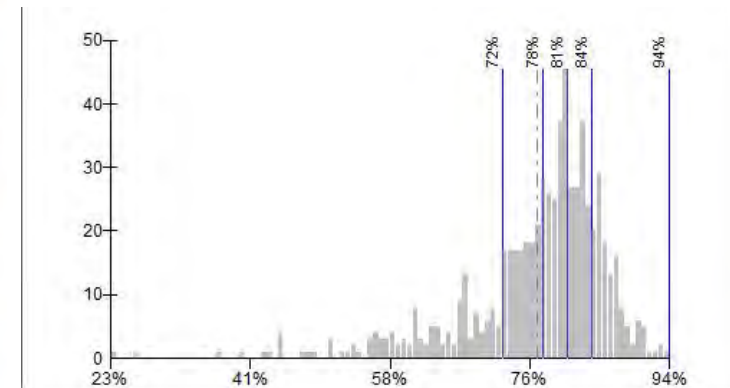
Percent of Labor Force Unemployed
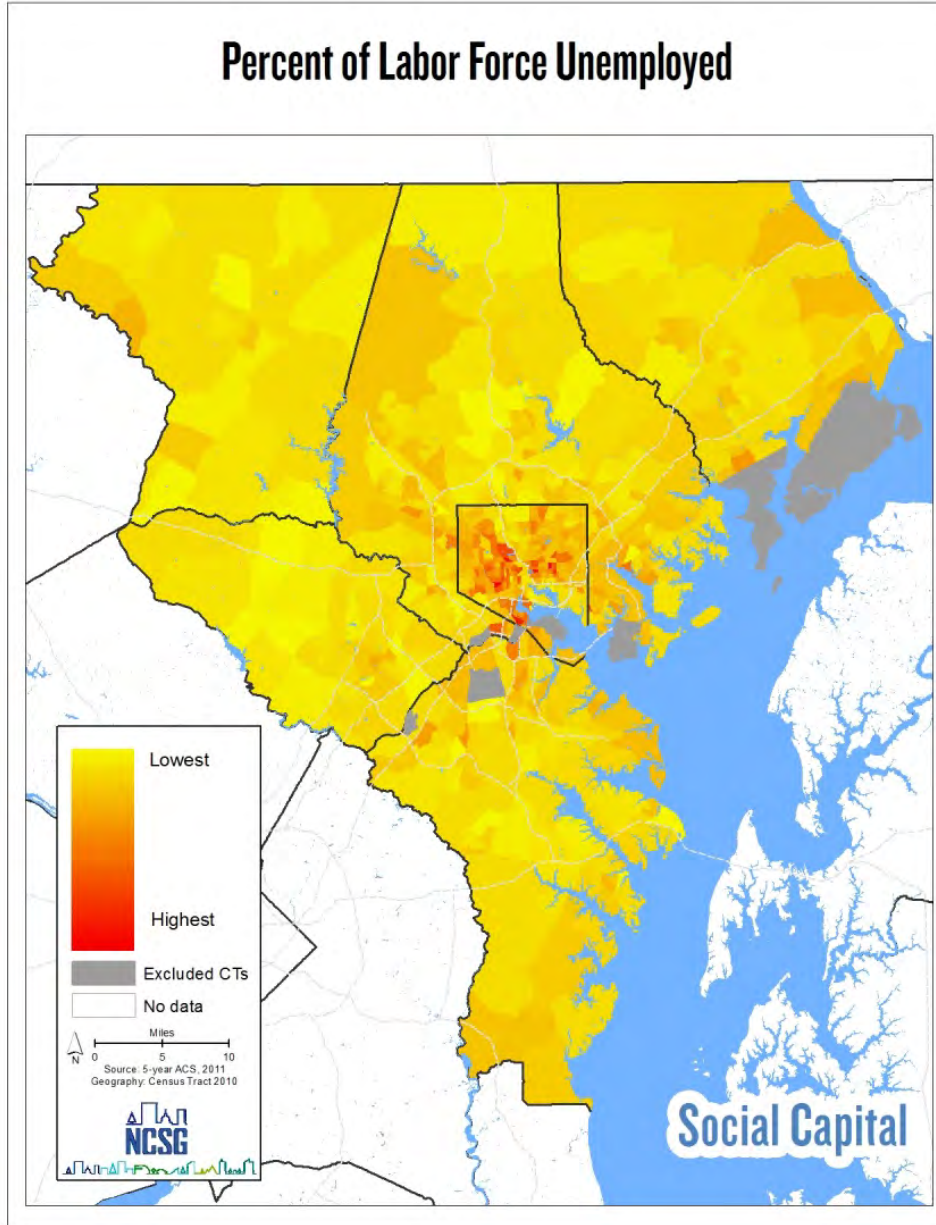
Percent of Labor Force Unemployed

Percent of the labor force aged 16 and older that is unemployed.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

United States	8.6%
Maryland	7.2%
Region	7.4%
Anne Arundel	5.8%
Baltimore	6.8%
Carroll	4.0%
Harford	6.2%
Howard	4.5%
Baltimore City	12.6%

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011

HISTOGRAM
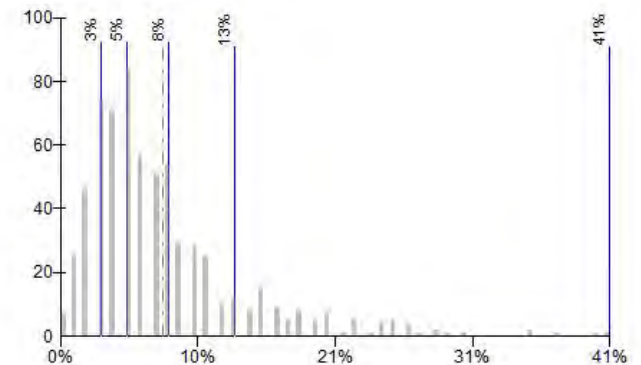
Population Density
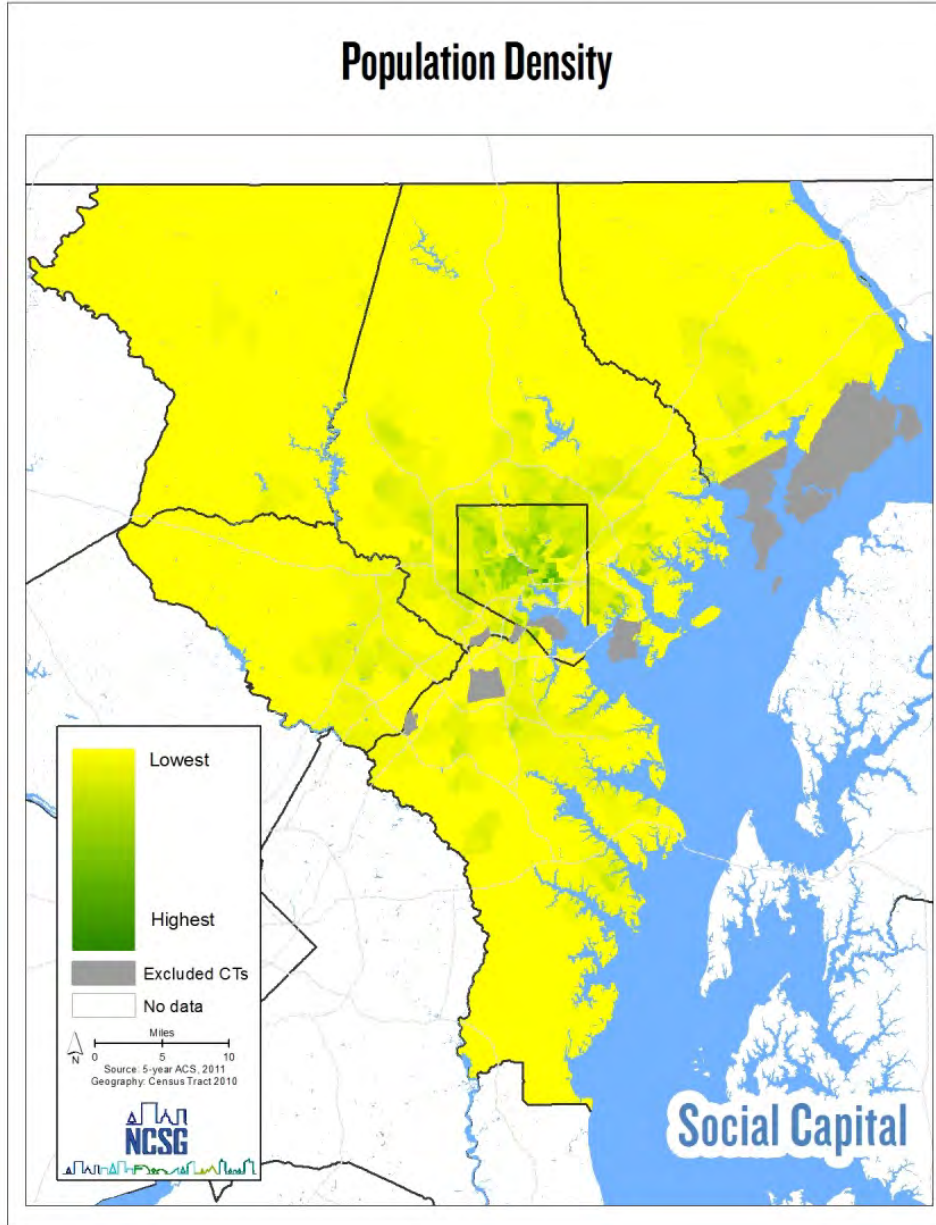
Population Density

The number of people per square mile in a census tract.

METHODOLOGY
Total population within a census tract divided by the land area of that tract in square miles.

SUMMARY DATA (people per square mile)

Region	1,185
Anne Arundel	1,280
Baltimore	1,341
Carroll	372
Harford	554
Howard	1,125
Baltimore City	7,676

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011

HISTOGRAM
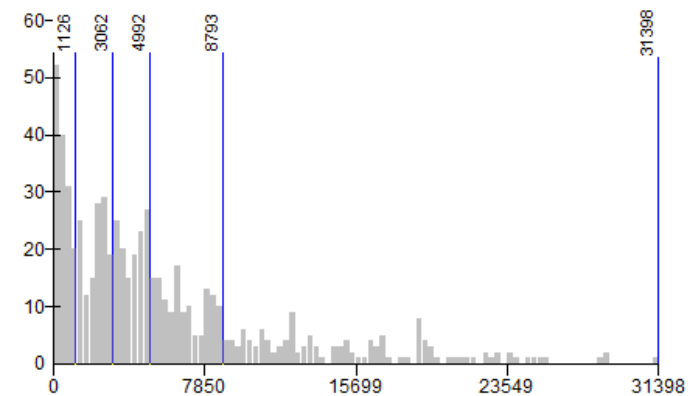
Percentage of Owner Occupied Housing Units
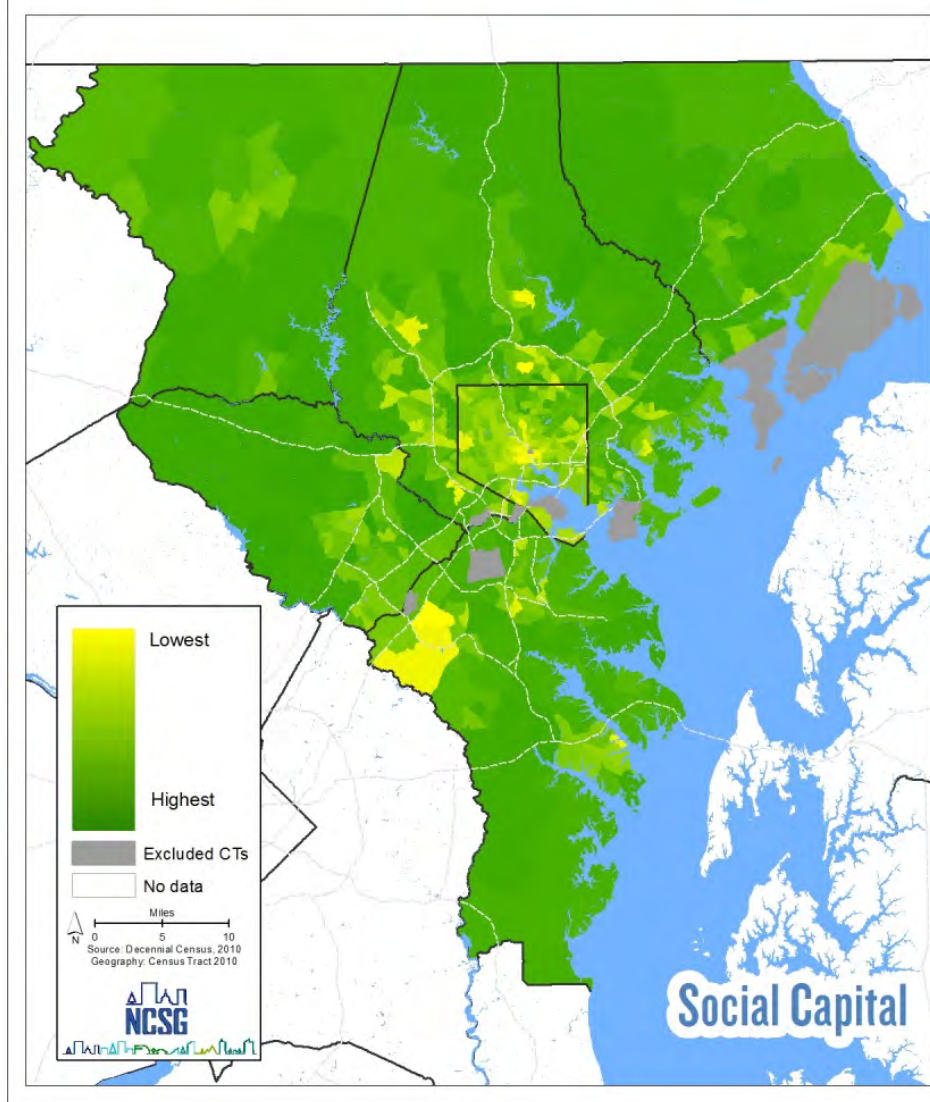
Percentage of Owner Occupied Housing Units

Percent of all occupied housing units in a census tract that are owner occupied.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

United States	65.1%
Maryland	67.5%
Region	66.3%
Anne Arundel	74.2%
Baltimore	66.8%
Carroll	82.0%
Harford	79.6%
Howard	73.7%
Baltimore City	47.7%

DATA SOURCE
U.S. Census Bureau, Census 2010

HISTOGRAM
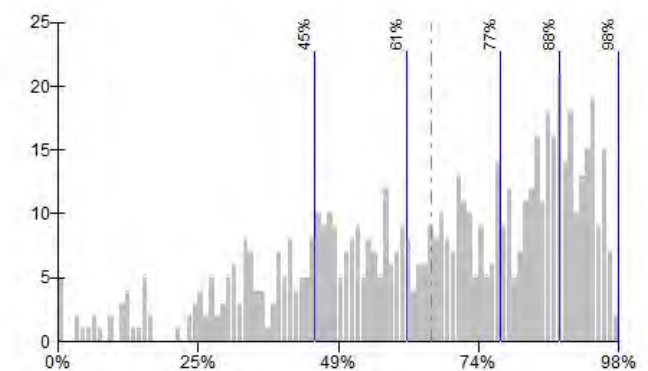
Percent Single Parent Households
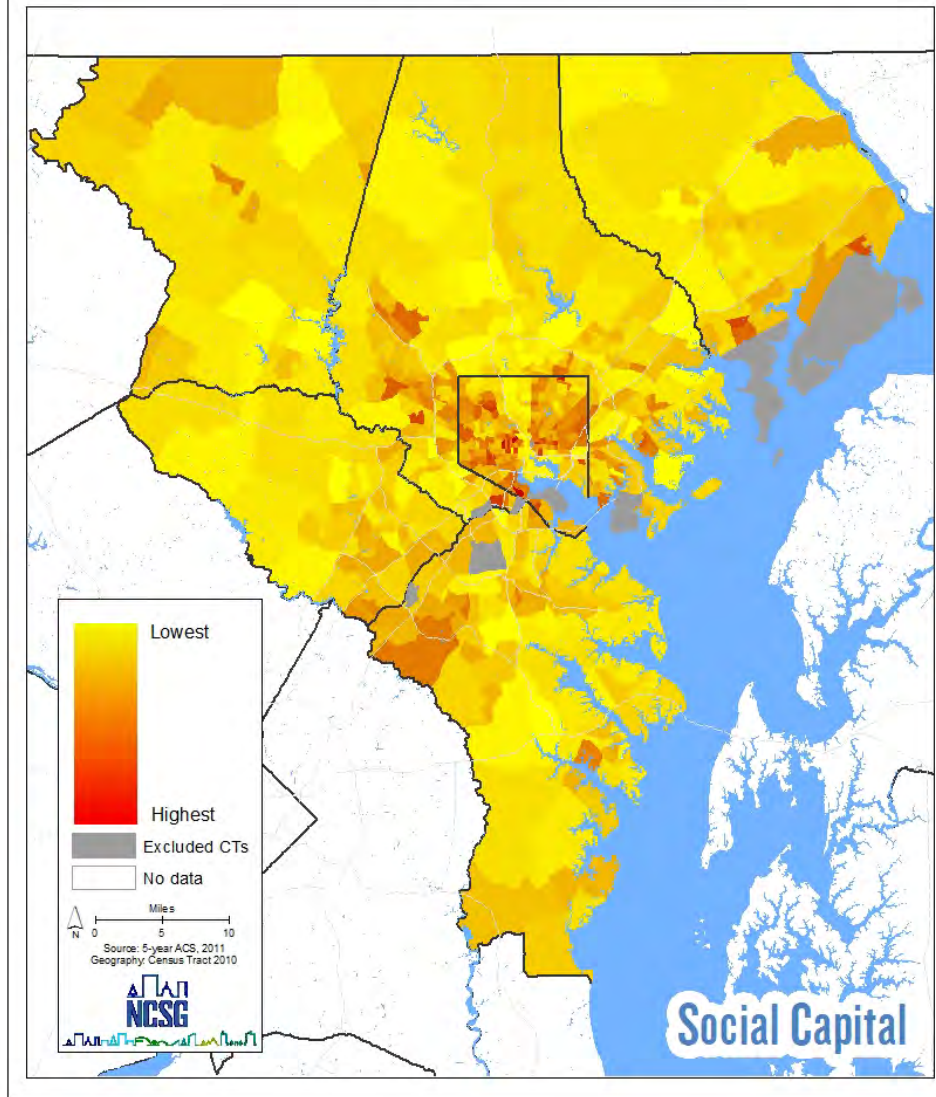
Percent Single Parent Households

Percent of households in a census tract head by a single parent.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

Region	4.6%
Anne Arundel	3.2%
Baltimore	4.0%
Carroll	2.3%
Harford	2.2%
Howard	1.8%
Baltimore City	7.7%

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011

HISTOGRAM
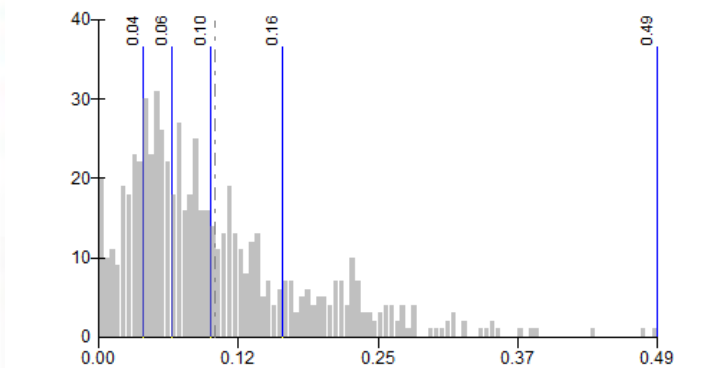
PUBLIC HEALTH & SAFETY INDICATORS

Subcategory	Indicator Title	Description
Public Health	Cancer Risk	Estimated statistical probability of developing cancer over a lifetime by combining the information from modeled exposure estimates and the dose-response assessment to provide a quantitative estimate of potential cancer risk associated with real-world exposure to air toxics.
	Neurological Disease Risk	Estimated statistical probability of developing a neurological disease over a lifetime by combining the information from modeled exposure estimates and the dose-response assessment to provide a quantitative estimate of potential non-cancer risk associated with real-world exposure to air toxics.
	Respiratory Disease Risk	Estimated statistical probability of developing a respiratory disease over a lifetime by combining the information from modeled exposure estimates and the dose-response assessment to provide a quantitative estimate of potential non-cancer risk associated with real-world exposure to air toxics.
	Infant Mortality Rates	Number of infant deaths per 1,000 live births. Infants are defined as children under one year of age.
	Teen Birth Rates	Percent of all births that are to mothers 15 to 19 years old. The U.S. average in 2011 was 3.13% according to the U.S. Center for Disease Control and Prevention.
	Percent of Births to Women Receiving Late or No Prenatal Care	Percent of births to women receiving late (from third trimester) or no prenatal care. According to Child Health USA, the national rate in 2008 was estimated to be 7.0%.
	Rate of Low Birth Weight	Percent of all births that are babies of low birth weight (less than 2,500 grams or 5.5 pounds). According to the CDC, 8.2% of babies across the U.S. were born with a low birth weight in 2010.
	Access to Emergency Services	A gravity based measure that captures the distance to locations of emergency ambulance service providers and fire stations.
	Emergency Services Coverage Areas	The percent of each census tract's land area that falls with a 10 minute drive from an emergency ambulance service provider or fire station.
	Access to Social Services	A gravity based measure that captures the distance to locations of social assistance services providers. These do not include providers of residential or accommodation services, except on a short stay basis. They do include food banks and soup kitchens.
	Access to Hospitals	A gravity based measure that captures the distance to locations of hospitals.
	Access to Freestanding Ambulatory Surgical and Emergency Centers	A gravity based measure that captures the distance to locations of surgical and emergency centers.
	Access to All Other Outpatient Care Centers	A gravity based measure that captures the distance to locations of outpatient care centers.
	Access to Food Swamps	A gravity based measure that captures the distance to locations of limited-service restaurants, which primarily provide food services where patrons generally order and pay for meals before eating. These include carryout restaurants, fast-food restaurants, and pizza delivery shops.

Subcategory	Indicator Title	Description
Environment	Watershed Failure	Percent of each census tract's land area that falls within a watershed with failing levels of either phosphorous, nitrogen, or both.
	Access to Parks	A gravity based measure that captures the distance to federal, state, and some local parks.
	Percent Park	The percent of each census tract's land area that is parkland (includes federal, state, and some local parks).
Crime	Crime Risk Index: Total Crime	CrimeRisk is a measure based on detailed modeling of the relationships between crime and demographics.

Additional public health and safety indicators considered by the OMAP include:
- Access to Emergency Services (controlled for Population Density)
- Emergency Services Coverage Areas (controlled for Population Density)
- Access to Grocery Stores
- Access to Physicians Office
- Crime Risk Index: Property Crime
- Crime Risk Index: Personal Crime
- Crime Risk Index: Murder
- Crime Risk Index: Rape
- Crime Risk Index: Robbery

Cancer Risk
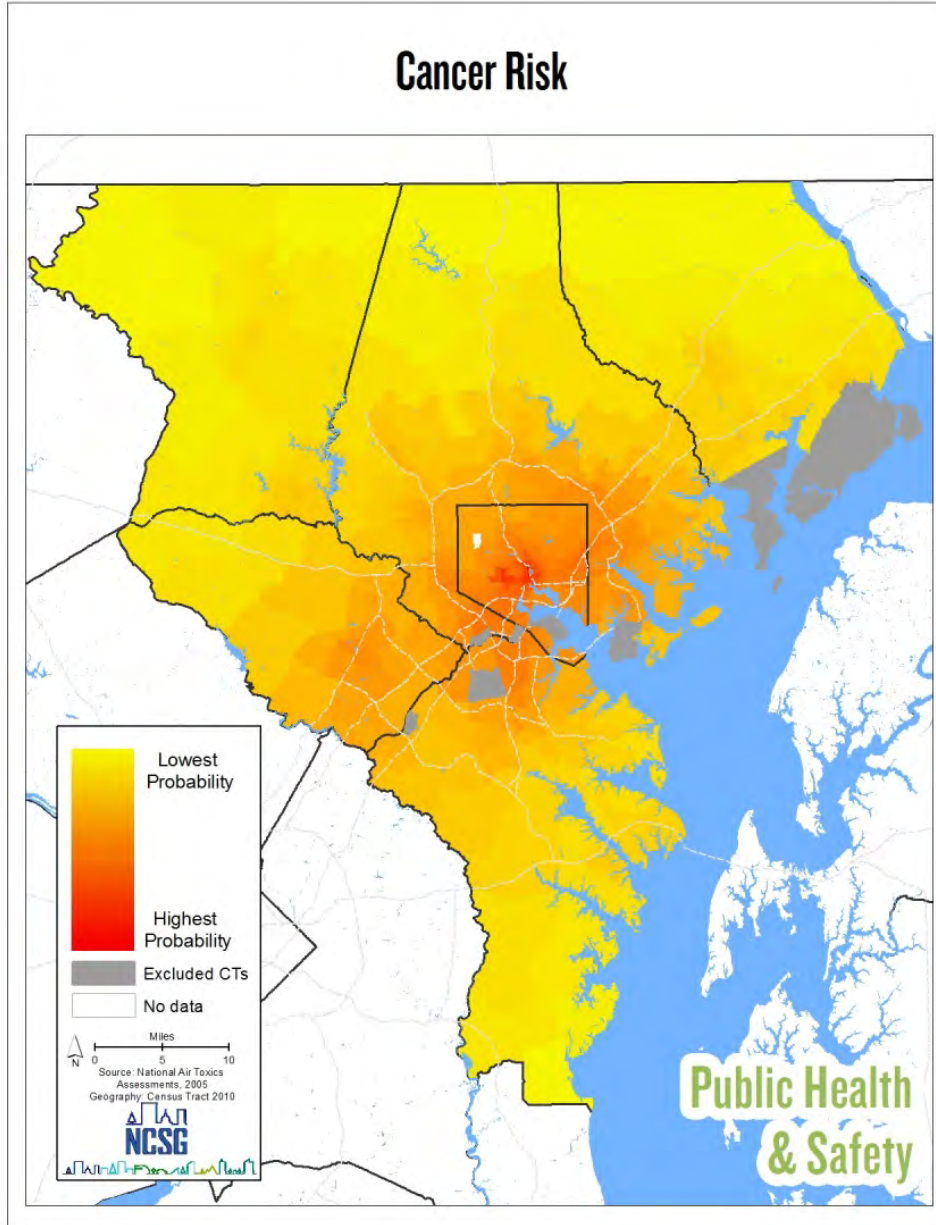
Cancer Risk

Estimated statistical probability of developing cancer over a lifetime by combining the information from modeled exposure estimates and the dose-response assessment to provide a quantitative estimate of potential cancer risk associated with real-world exposure to air toxics. The relative risk is calculated per million people.

METHODOLOGY
Mapped as reported by NATA.

SUMMARY DATA (per million)

Anne Arundel	53
Baltimore	61
Carroll	42
Harford	46
Howard	60
Baltimore City	74

DATA SOURCE
National Air Toxics Assessments, 2005

HISTOGRAM
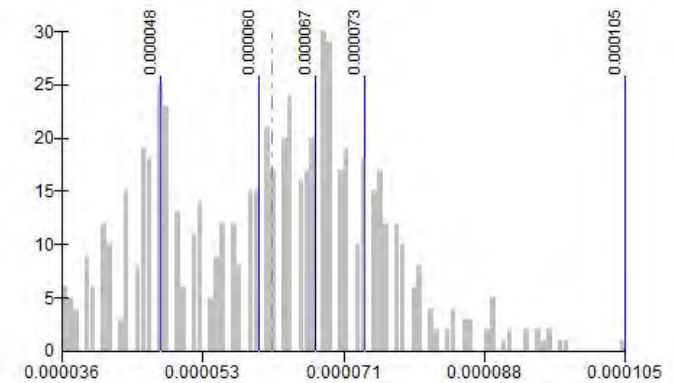
Neurological Disease Risk
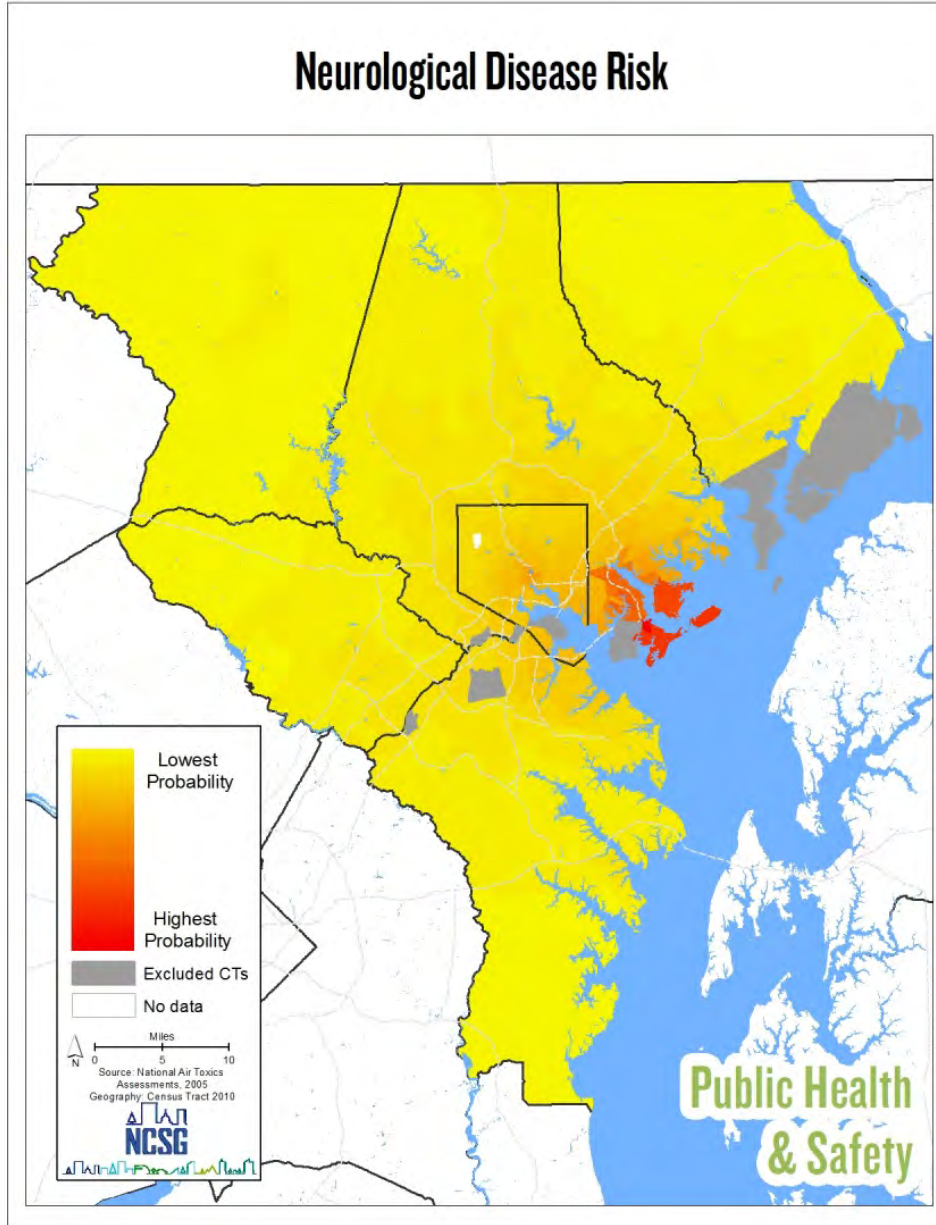
Neurological Disease Risk

Estimated statistical probability of developing a neurological disease over a lifetime by combining the information from modeled exposure estimates and the dose-response assessment to provide a quantitative estimate of potential non-cancer risk associated with real-world exposure to air toxics. Values over 1.00 are typically areas of concern.

METHODOLOGY
Mapped as reported by NATA.

SUMMARY DATA

Anne Arundel	0.06
Baltimore	0.10
Carroll	0.04
Harford	0.05
Howard	0.06
Baltimore City	0.11

DATA SOURCE
National Air Toxics Assessments, 2005
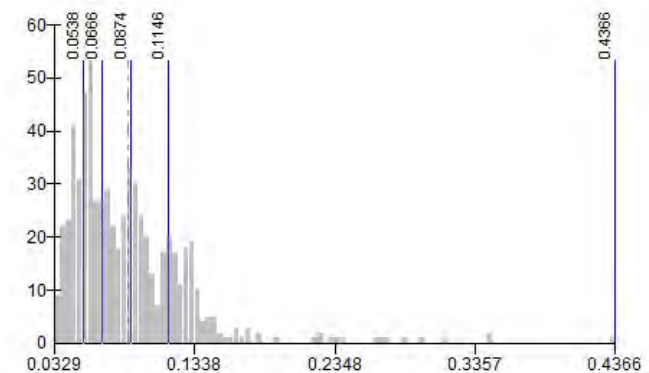
HISTOGRAM

Respiratory Disease Risk
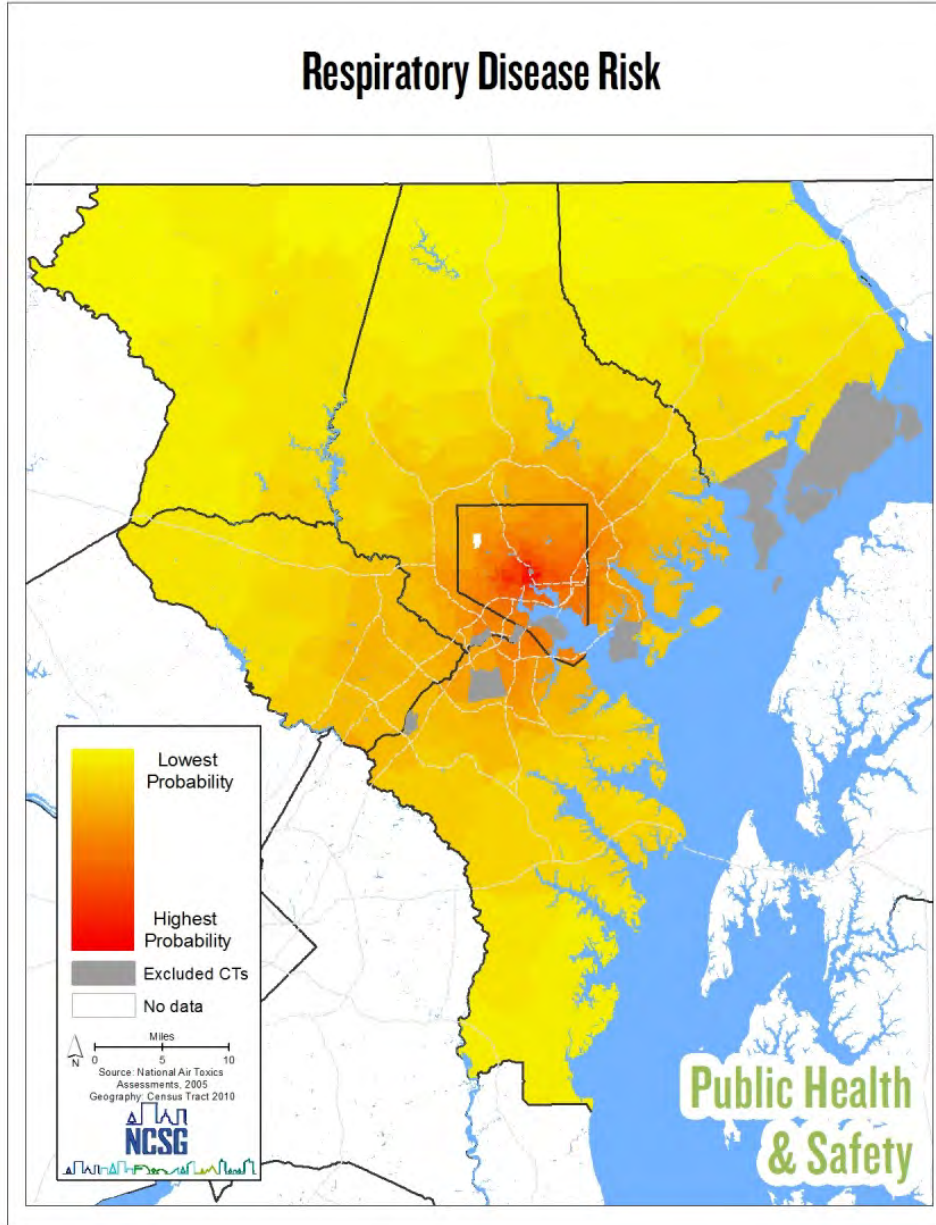
Estimated statistical probability of developing a respiratory disease over a lifetime by combining the information from modeled exposure estimates and the dose-response assessment to provide a quantitative estimate of potential non-cancer risk associated with real-world exposure to air toxics. Values over 1.00 are typically areas of concern.

Pollutants include: Carbon Monoxide, Lead, Nitrogen Dioxide, Ozone, Particle pollution, Sulfur Dioxide.

METHODOLOGY
Mapped as reported by NATA.

SUMMARY DATA

Anne Arundel	2.47
Baltimore	2.99
Carroll	1.70
Harford	1.92
Howard	2.66
Baltimore City	4.68

DATA SOURCE
National Air Toxics Assessments, 2005

HISTOGRAM
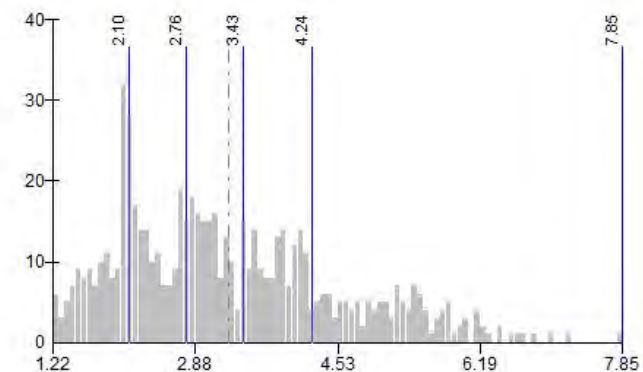
Infant Mortality Rates
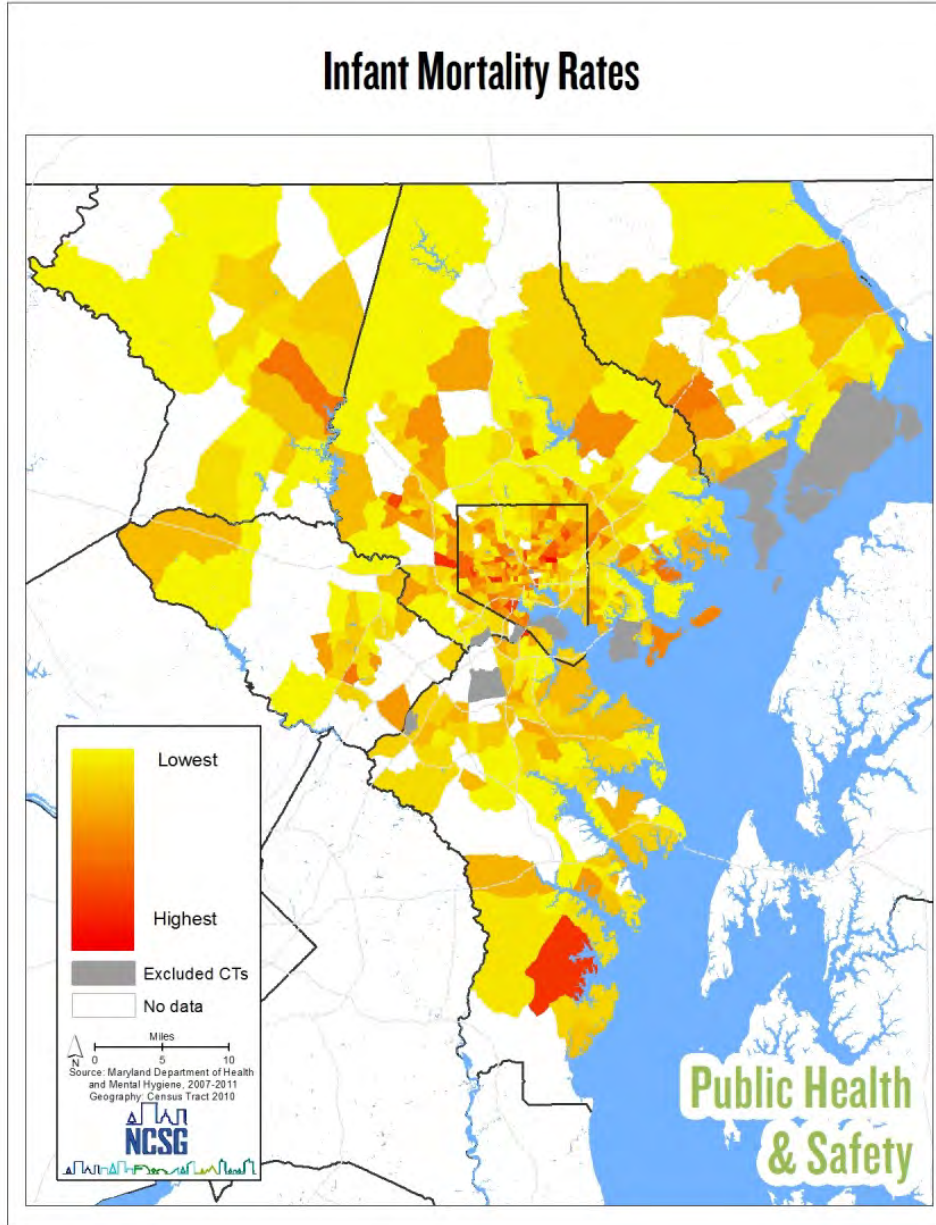
Infant Mortality Rates

Number of infant deaths per 1,000 live births. Infants are defined as children under one year of age. The U.S. average in 2011 was 6.05 according to the U.S. Center for Disease Control and Prevention.

METHODOLOGY
Mapped as reported by DHMH.

SUMMARY DATA (per 1,000 live births)

Region	7.6
Anne Arundel	6.0
Baltimore	7.0
Carroll	4.1
Harford	5.3
Howard	5.4
Baltimore City	11.7

DATA SOURCE
Maryland Department of Health and Mental Hygiene, 2007-2011

HISTOGRAM
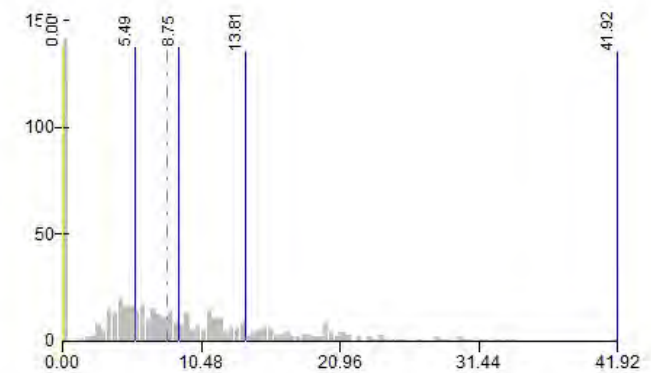
Teen Birth Rates
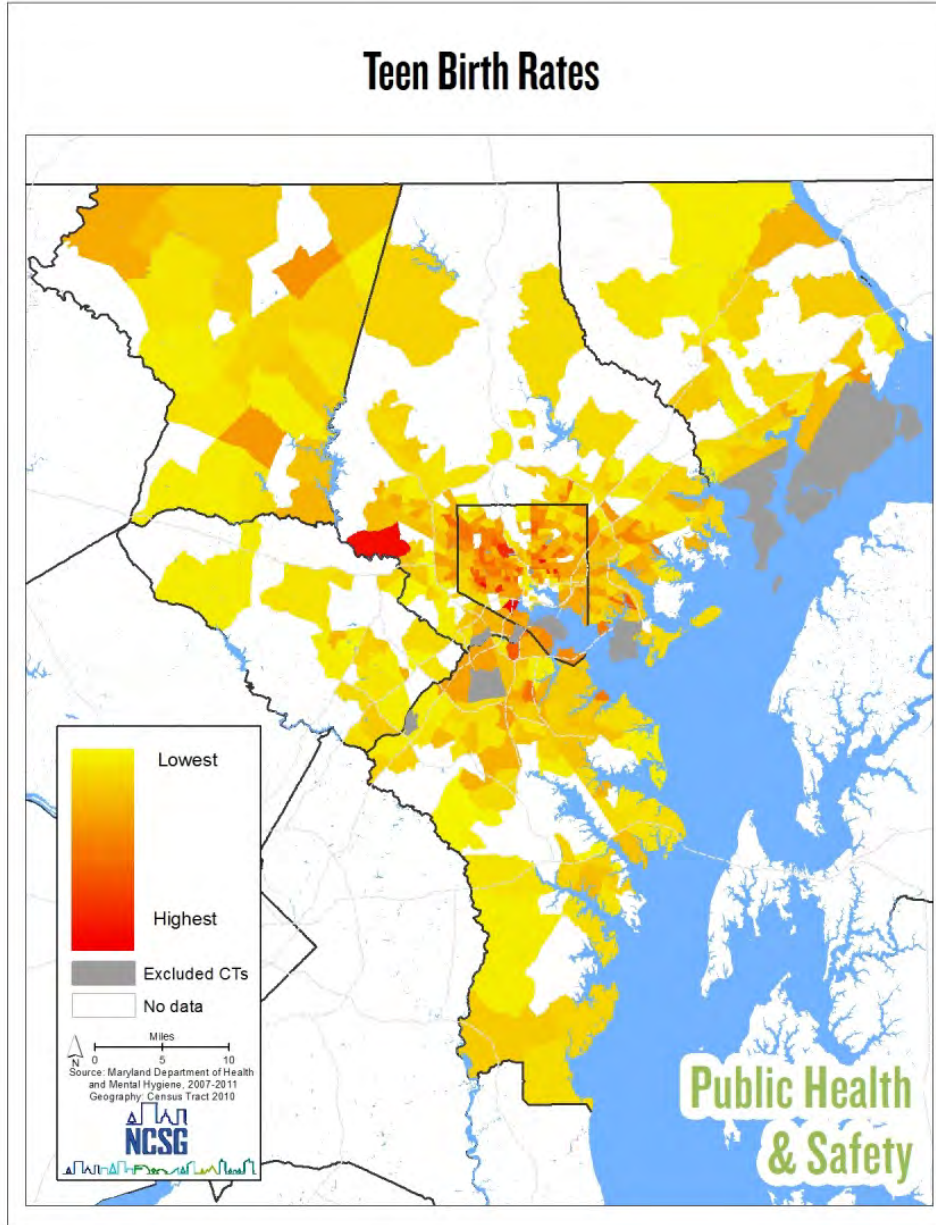
Percent of all births that are to mothers 15 to 19 years old. The U.S. average in 2011 was 3.13% according to the U.S. Center for Disease Control and Prevention.

METHODOLOGY
Mapped as reported by DHMH.

SUMMARY DATA

Region	6.88%
Anne Arundel	5.33%
Baltimore	5.96%
Carroll	4.63%
Harford	3.86%
Howard	2.61%
Baltimore City	12.5%

DATA SOURCE
Maryland Department of Health and Mental Hygiene, 2011
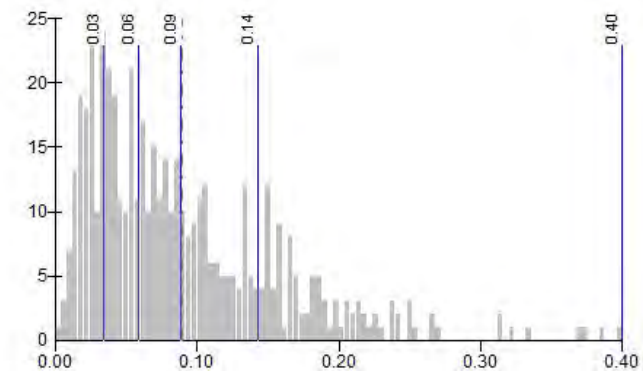
HISTOGRAM

Percent of Births to Women Receiving Late or No Prenatal Care
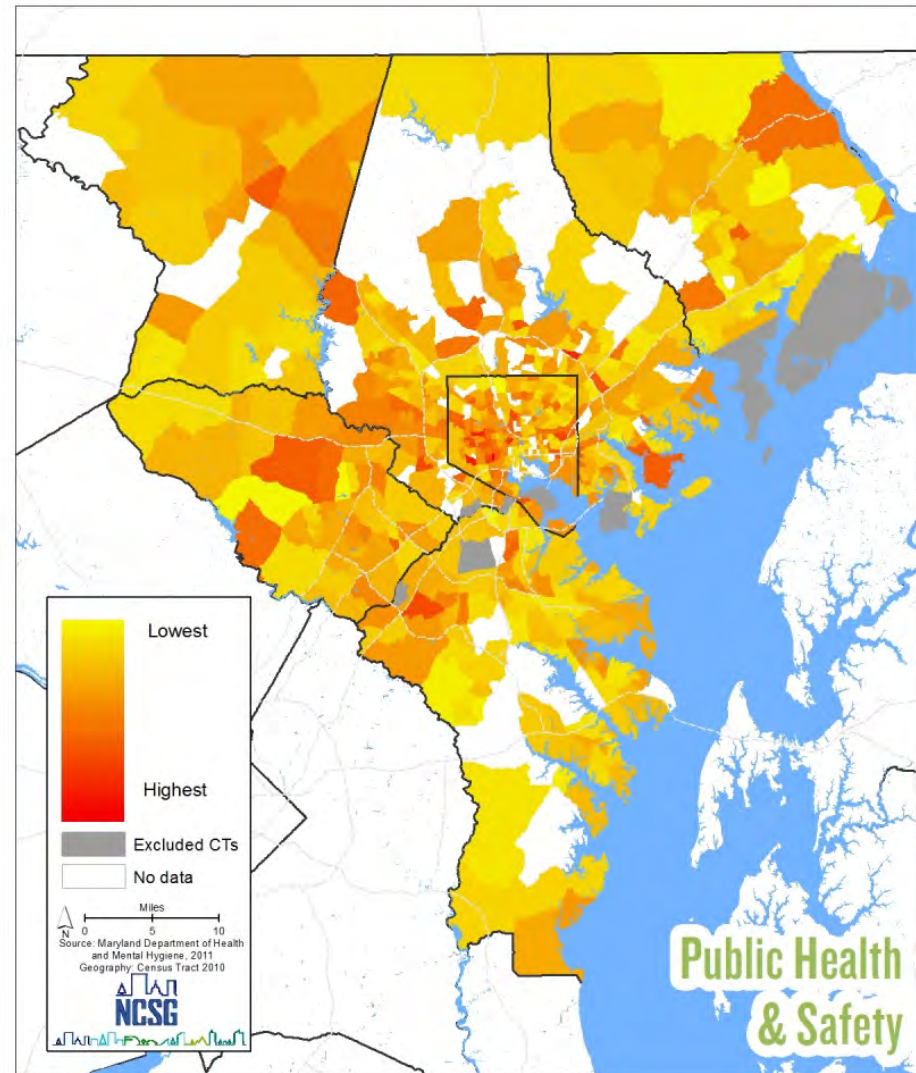
Percent of Births to Women Receiving Late or No Prenatal Care

Percent of births to women receiving late (from third trimester) or no prenatal care. According to Child Health USA, the national rate in 2008 was estimated to be 7.0%.

METHODOLOGY
Mapped as reported by DHMH.

SUMMARY DATA

Region	6.89%
Anne Arundel	5.74%
Baltimore	6.82%
Carroll	6.11%
Harford	4.45%
Howard	7.64%
Baltimore City	8.46%

DATA SOURCE
Maryland Department of Health and Mental Hygiene, 2011

HISTOGRAM
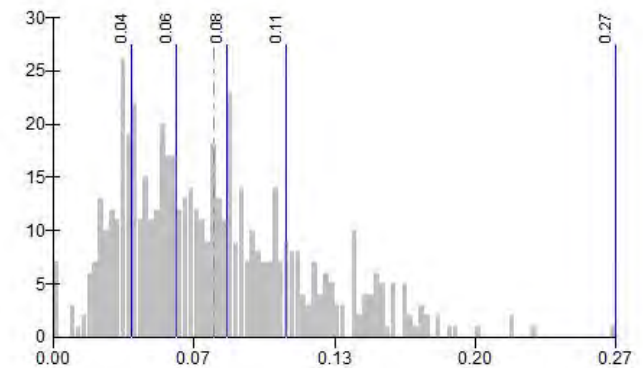
Rate of Low Birth Weight
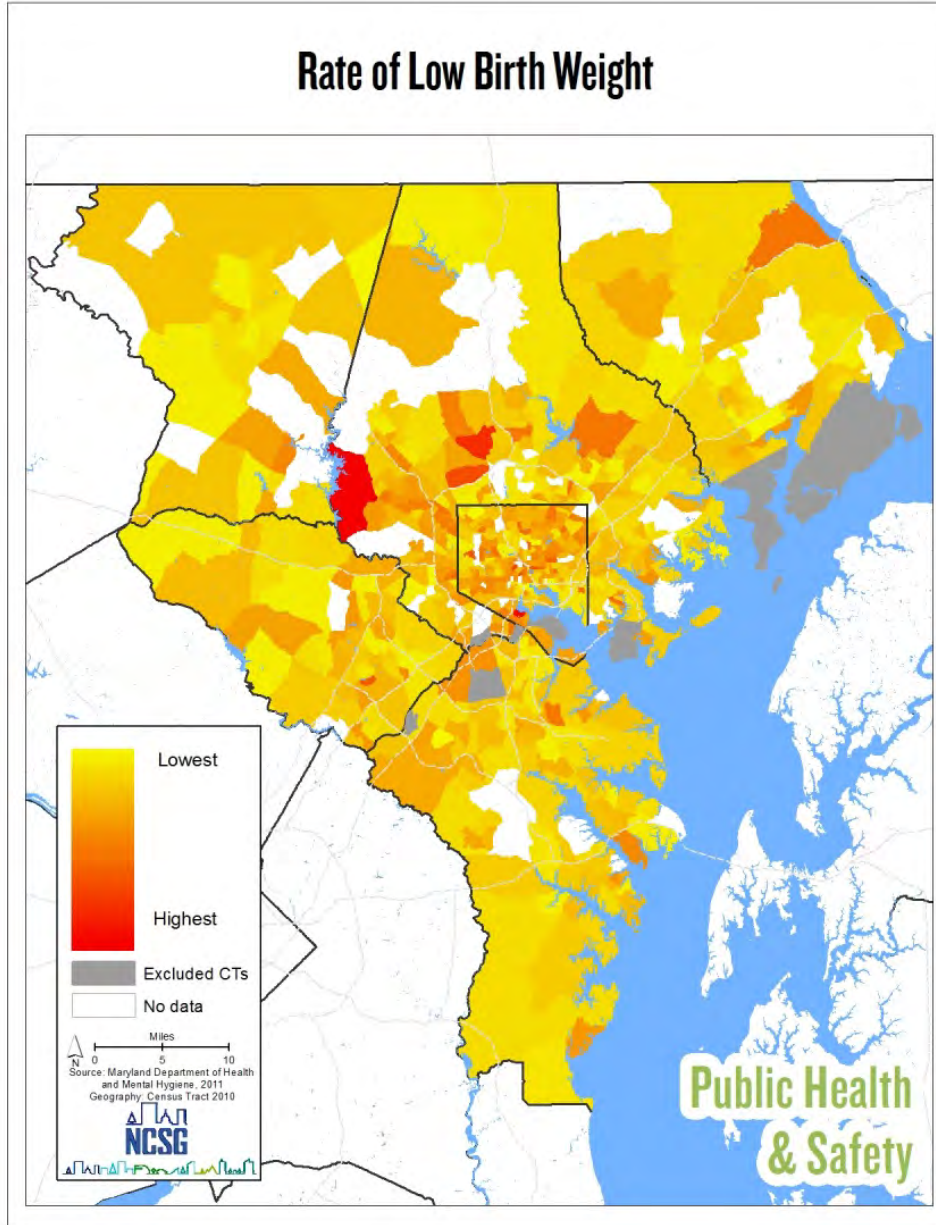
Rate of Low Birth Weight

Percent of all births that are babies of low birth weight (less than 2,500 grams or 5.5 pounds). According to the CDC, 8.2% of babies across the U.S. were born with a low birth weight in 2010.

METHODOLOGY
Mapped as reported by DHMH.

SUMMARY DATA

Region	9.17%
Anne Arundel	8.12%
Baltimore	9.07%
Carroll	5.78%
Harford	7.72%
Howard	8.28%
Baltimore City	11.61%

DATA SOURCE
Maryland Department of Health and Mental Hygiene, 2011
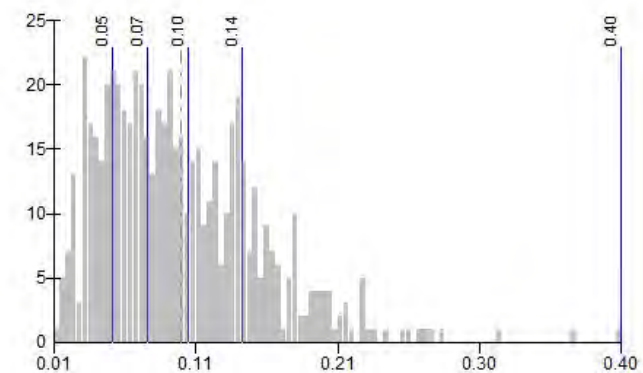
HISTOGRAM

Access to Emergency Services
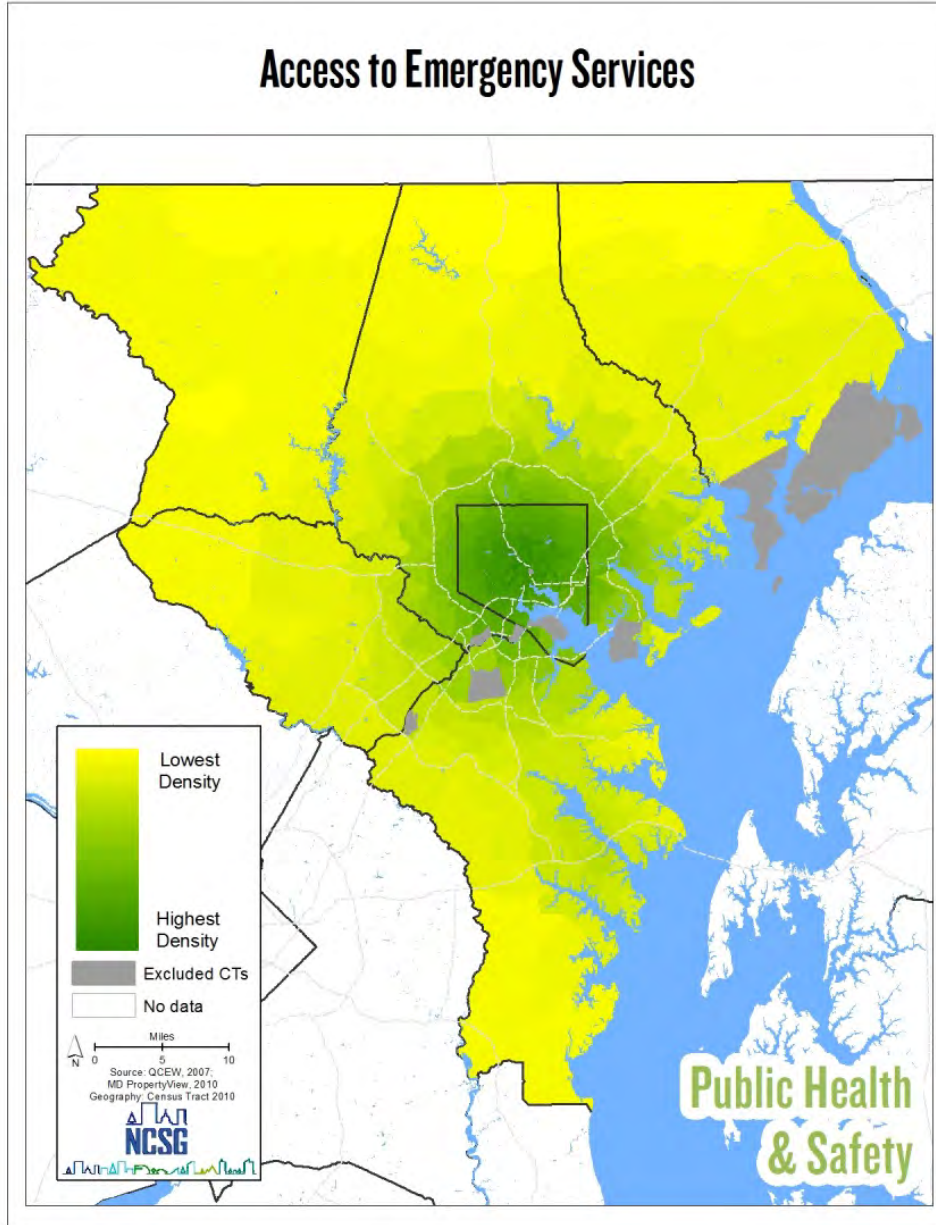
A gravity based measure that captures the distance to locations of emergency ambulance service providers (NAICS Code 621910) and fire stations (identified in Maryland PropertyView).

METHODOLOGY
Kernel density, no weighting, 10-mile search radius.

SUMMARY DATA (number of locations)

Region	212
Anne Arundel	45
Baltimore	69
Carroll	20
Harford	25
Howard	12
Baltimore City	41

DATA SOURCE
Quarterly Census of Employment and Wages, 2007; Maryland PropertyView, 2010

HISTOGRAM
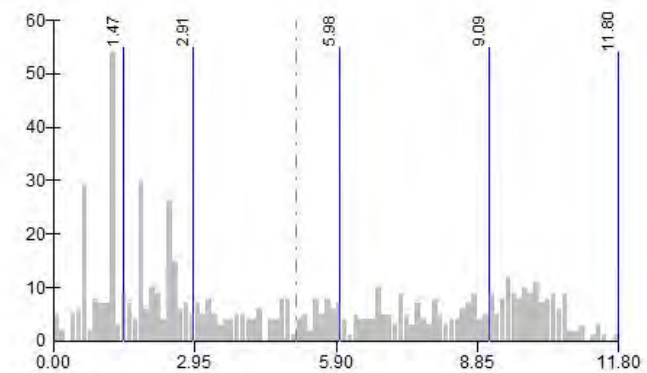
Emergency Services Coverage Areas
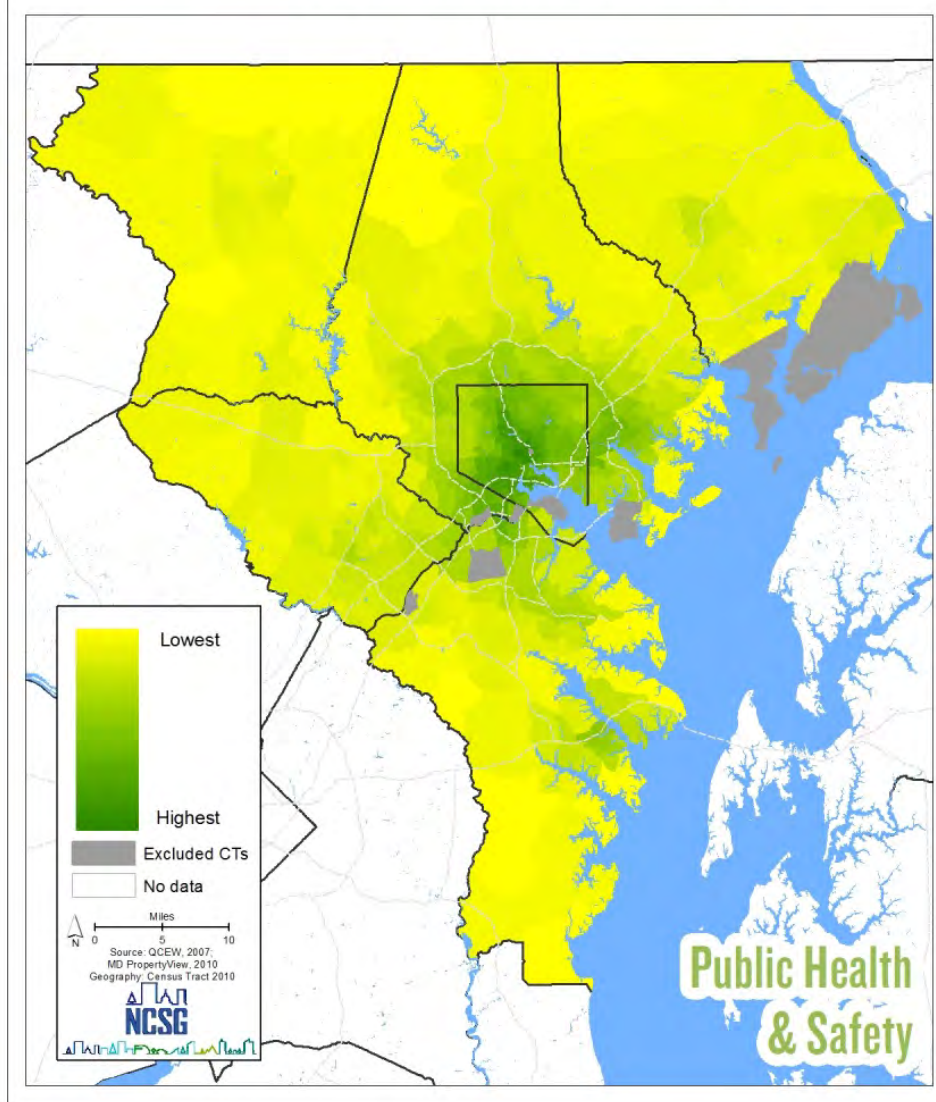
Emergency Services Coverage Area

The percent of each census tract's land area that falls with a 10 minute drive from an emergency ambulance service provider (NAICS Code 621910) or fire station (identified in Maryland PropertyView).

METHODOLOGY
Estimated 10 minute service area using the Maryland Statewide Transportation Model street network, then calculated the percent of census tract land area that falls within a service area (can be larger than 100%).

SUMMARY DATA (number of locations)

Region	212
Anne Arundel	45
Baltimore	69
Carroll	20
Harford	25
Howard	12
Baltimore City	41

DATA SOURCES
Quarterly Census of Employment and Wages, 2007; Maryland PropertyView, 2010
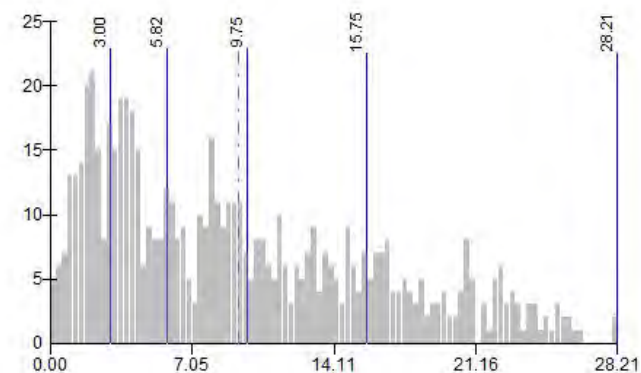
HISTOGRAM

Access to Social Services
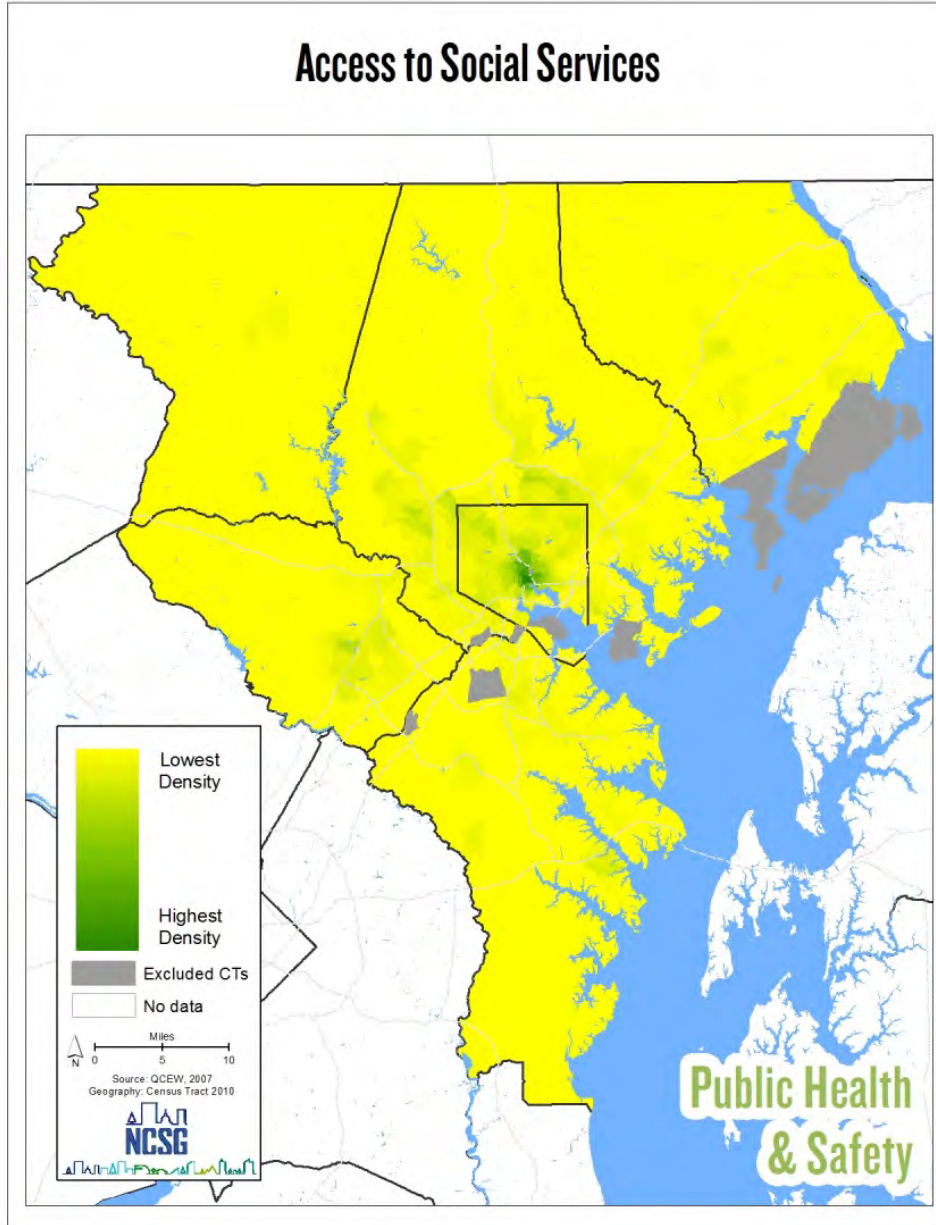
A gravity based measure that captures the distance to locations of social assistance services providers (NAICS Codes 624XXX). These do not include providers of residential or accommodation services, except on a short stay basis. They do include food banks and soup kitchens.

METHODOLOGY
Kernel density, no weighting, 0.5-mile search radius.

SUMMARY DATA (number of locations)

Region	1,277
Anne Arundel	197
Baltimore	407
Carroll	73
Harford	92
Howard	158
Baltimore City	350

DATA SOURCE
Quarterly Census of Employment and Wages, 2007
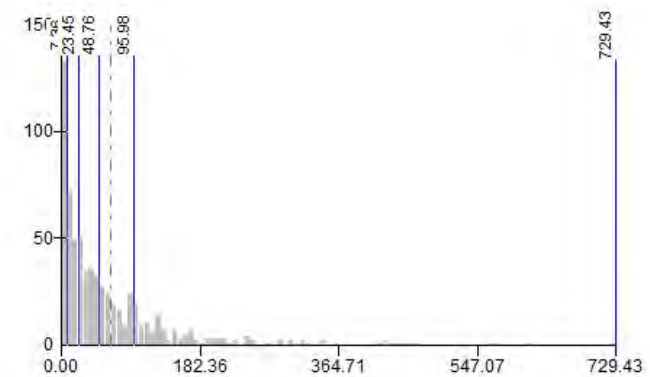
HISTOGRAM

Access to Hospitals
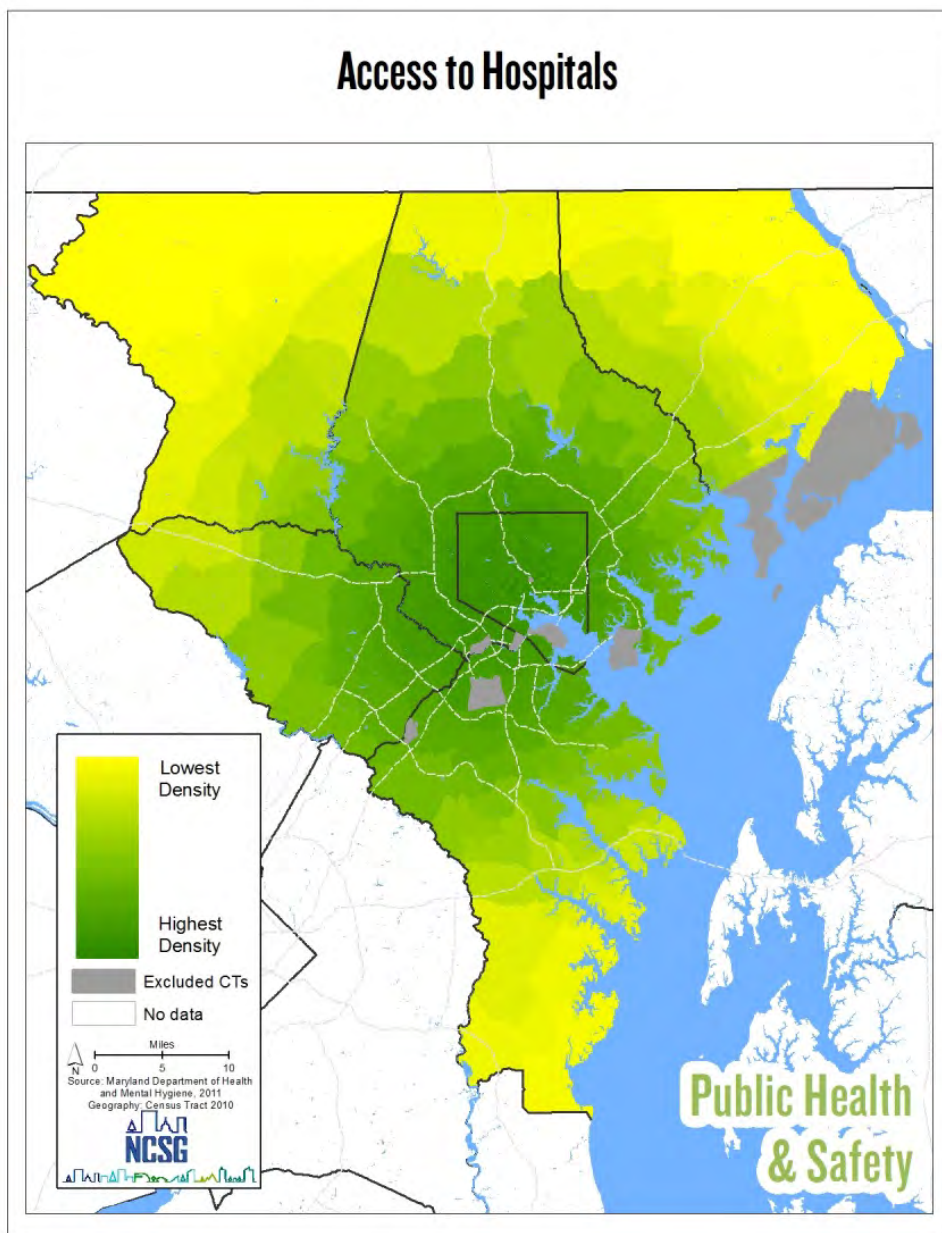
A gravity based measure that captures the distance to locations of hospitals.

METHODOLOGY
Kernel density, weighted by number of beds, 30-mile search radius.

SUMMARY DATA (number of locations, with bed counts)

Region	31	8,615
Anne Arundel	2	644
Baltimore	8	2,073
Carroll	1	711
Harford	1	283
Howard	3	341
Baltimore City	16	4,563

DATA SOURCE
Maryland Department of Health and Mental Hygiene

HISTOGRAM
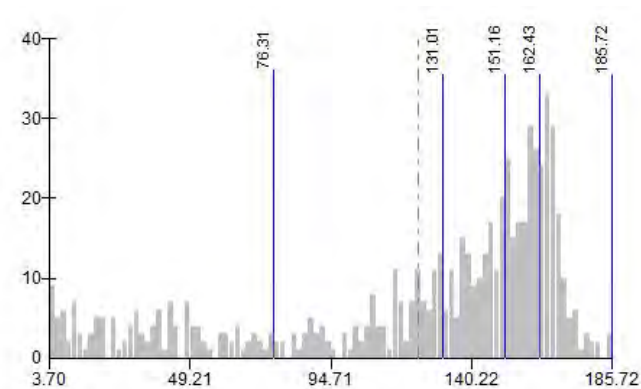
Access to Freestanding Ambulatory Surgical and Emergency Centers
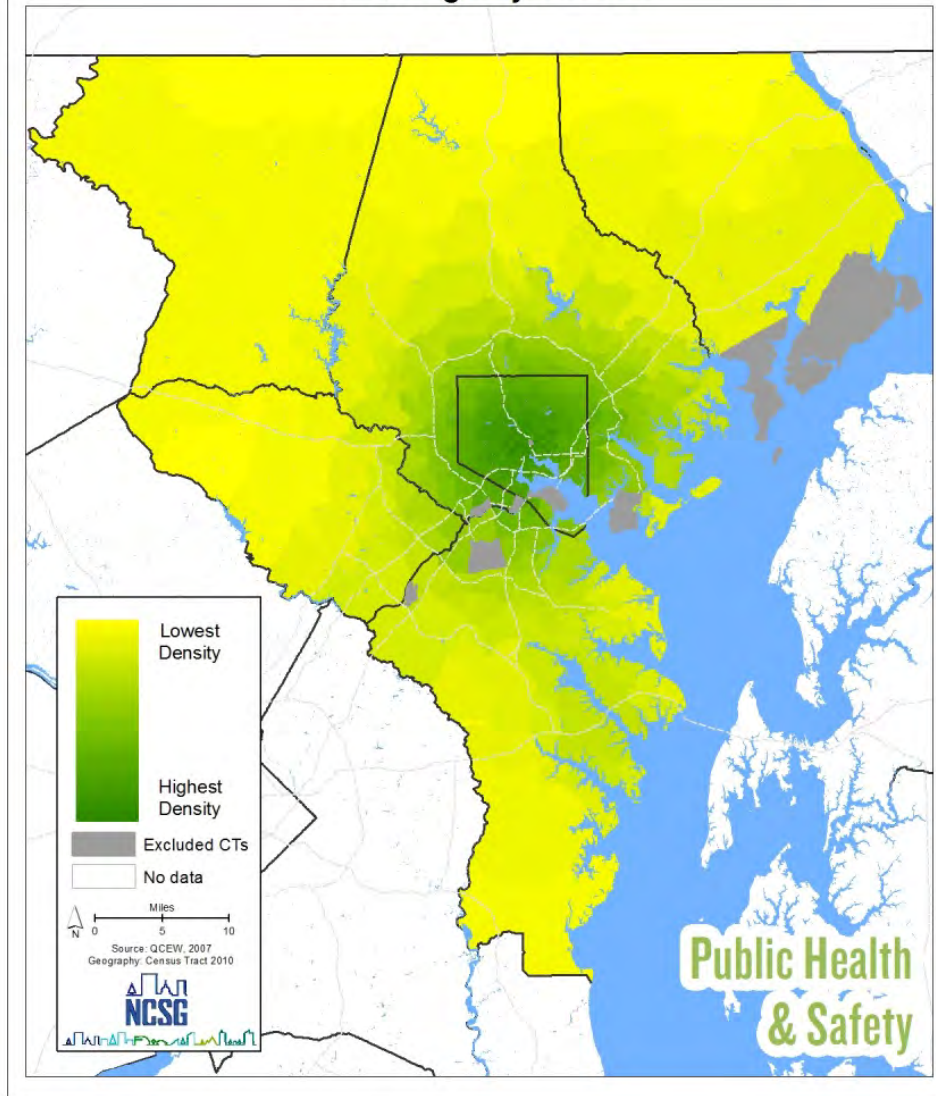
Access to Freestanding Ambulatory Surgical and Emergency Centers

A gravity based measure that captures the distance to locations of surgical and emergency centers (NAICS Code 621493).

METHODOLOGY
Kernel density, no weighting, 10-mile search radius.

SUMMARY DATA (number of locations)

Region	39
Anne Arundel	9
Baltimore	14
Carroll	1
Harford	4
Howard	8
Baltimore City	3

DATA SOURCE
Quarterly Census of Employment and Wages, 2007
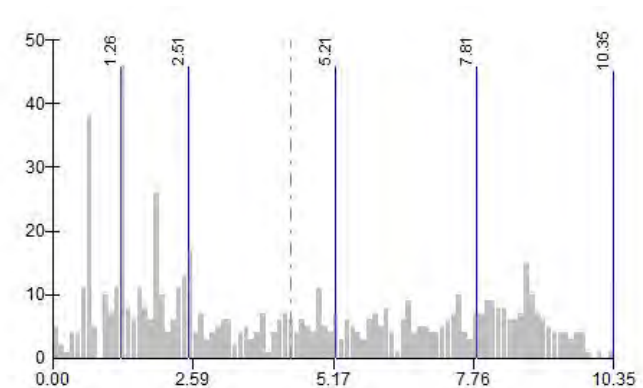
HISTOGRAM

Access to All Other Outpatient Care Centers
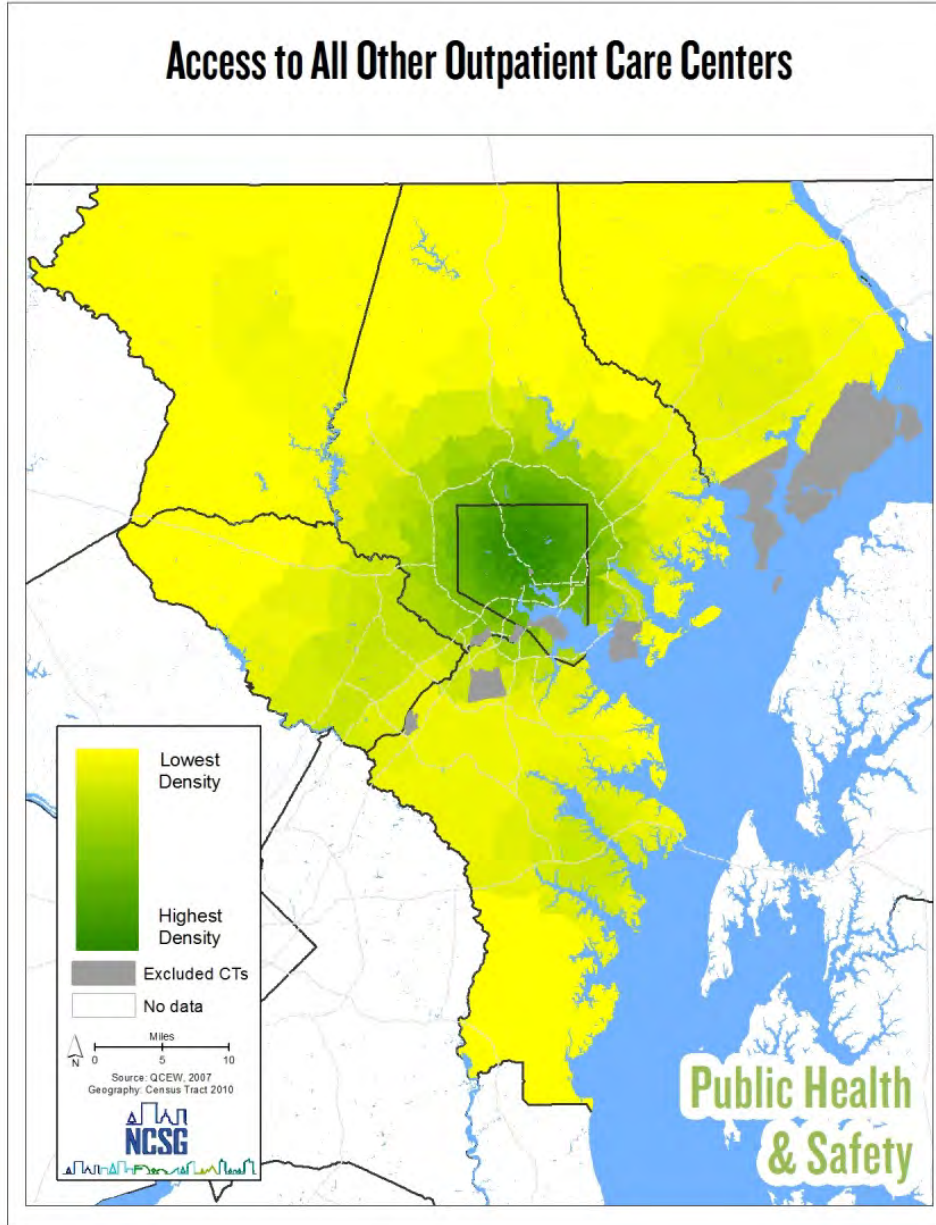
Access to All Other Outpatient Care Centers

A gravity based measure that captures the distance to locations of outpatient care centers.

METHODOLOGY

Kernel density, no weighting, 10-mile search radius.

SUMMARY DATA (number of locations)

Region	45
Anne Arundel	4
Baltimore	10
Carroll	2
Harford	4
Howard	4
Baltimore City	20

DATA SOURCE

Quarterly Census of Employment and Wages, 2007
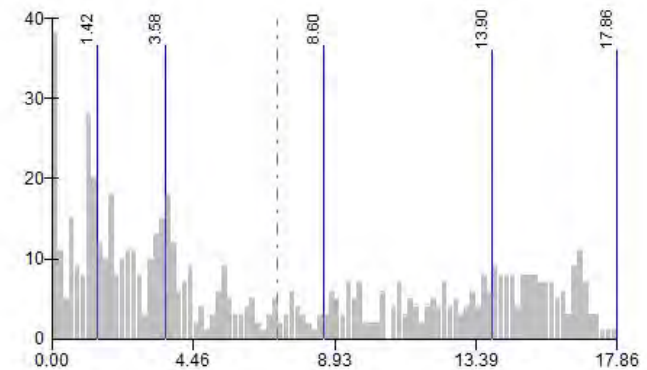
HISTOGRAM

Access to Food Swamps
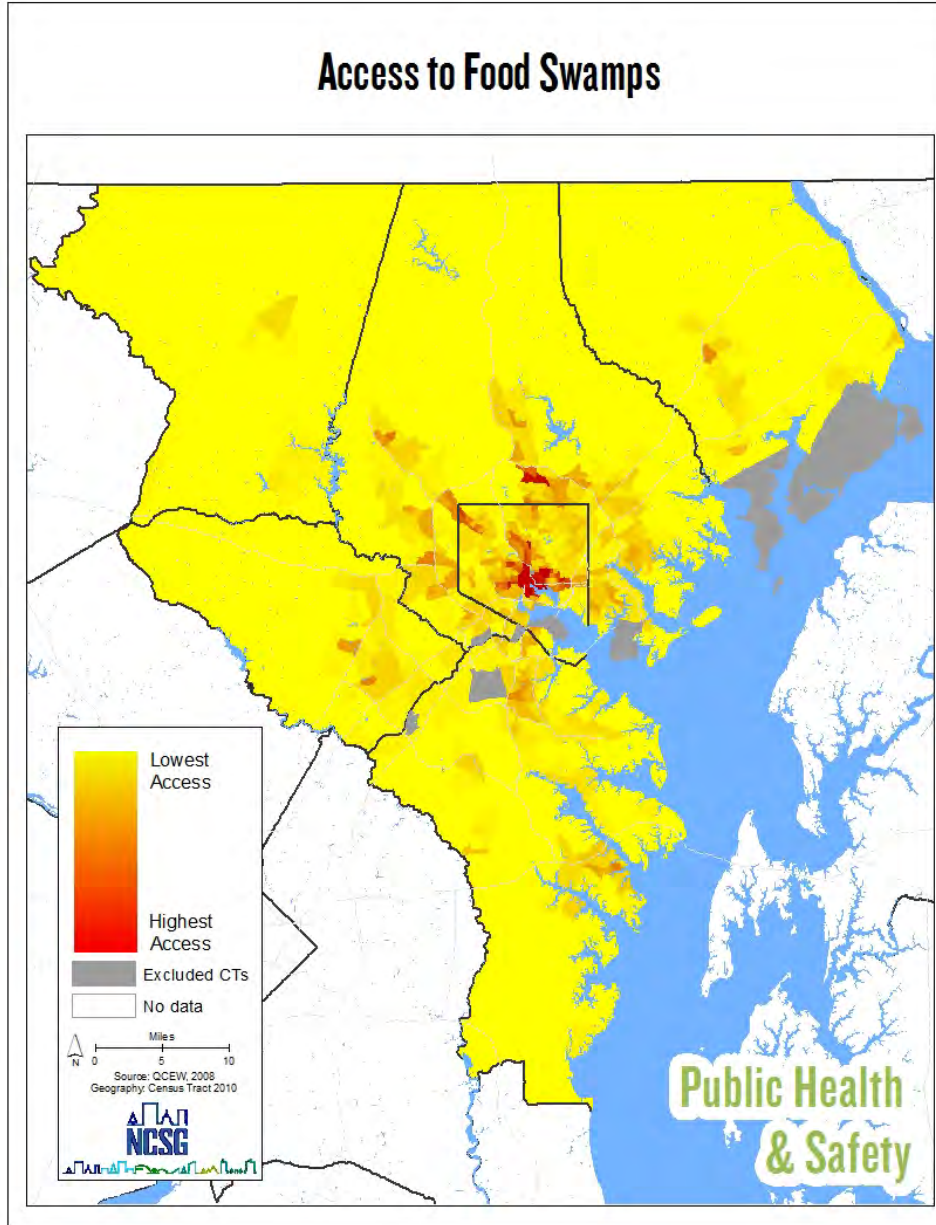
A gravity based measure that captures the distance to locations of limited-service restaurants (NAICS Code 722211), which primarily provide food services where patrons generally order and pay for meals before eating. These include carryout restaurants, fast-food restaurants, and pizza delivery shops.

METHODOLOGY
Kernel density, no weighting, 0.5-mile search radius. These data have been capped at a kernel density value of 2,000 for mapping purposes (13 census tracts were capped).

SUMMARY DATA (kernel density measure)

Anne Arundel	47.61
Baltimore	58.64
Carroll	38.47
Harford	34.17
Howard	46.07
Baltimore City	118.06

DATA SOURCE
Quarterly Census of Employment and Wages, 2008

HISTOGRAM
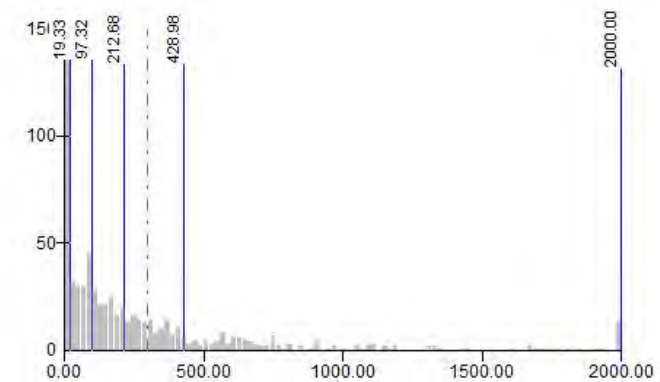
Watershed Failure
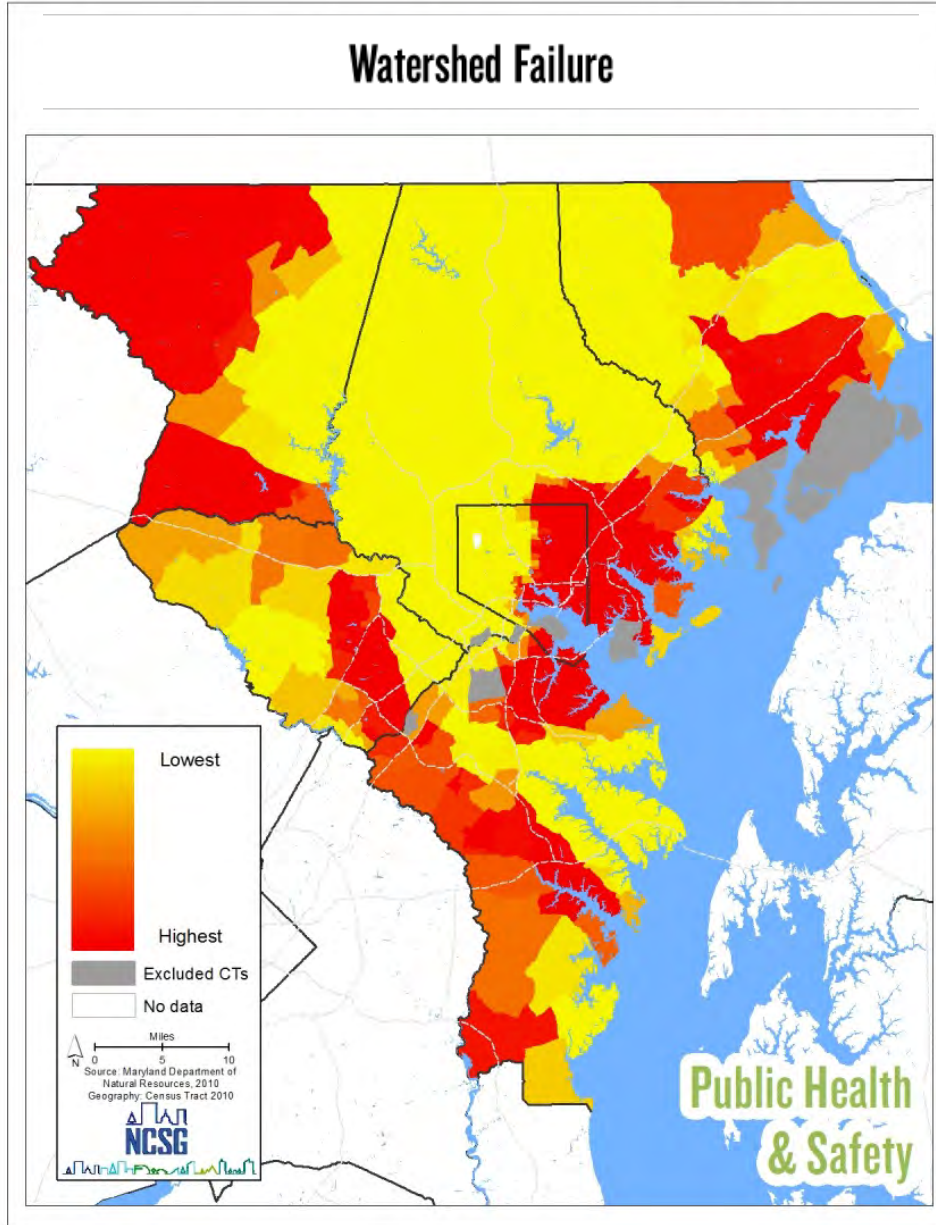
Watershed Failure

Percent of each census tract's land area that falls within a watershed with failing levels of either phosphorous, nitrogen, or both.

METHODOLOGY
Calculated percentage of census tract covered by a failing watershed.

SUMMARY DATA

Region	49.3%
Anne Arundel	47.7%
Baltimore	36.7%
Carroll	60.9%
Harford	53.8%
Howard	49.4%
Baltimore City	47.2%

DATA SOURCE
Maryland Department of Natural Resources, 2010
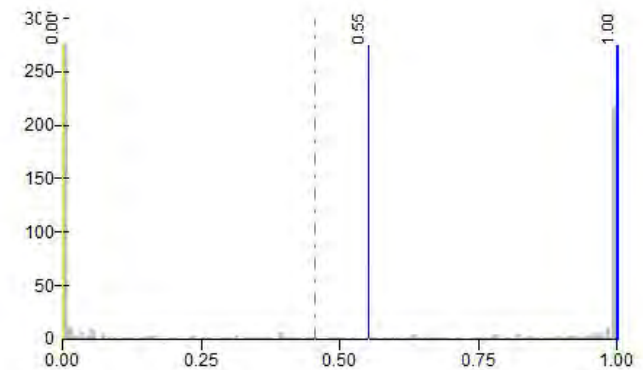
HISTOGRAM

Access to Parks
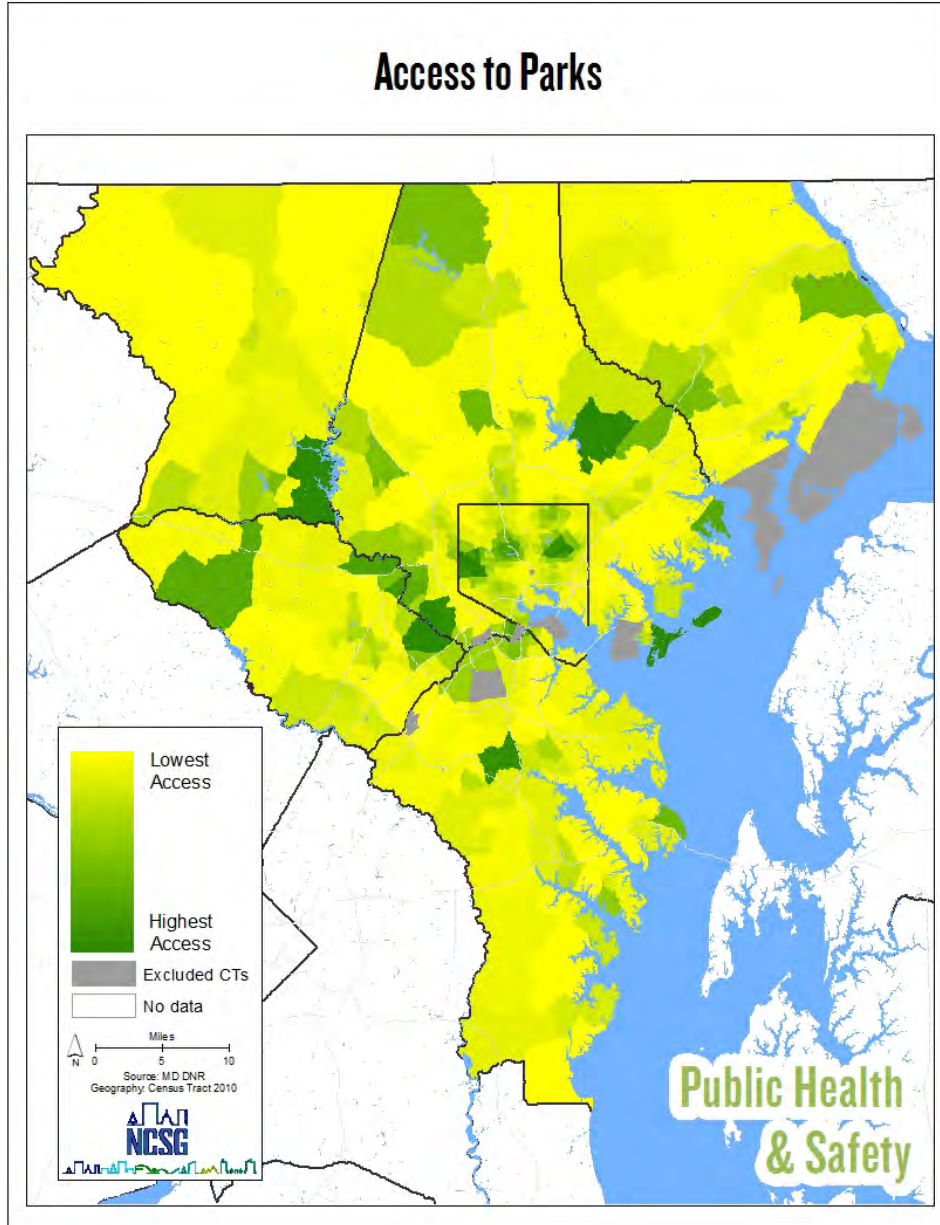
Source: MD DNR
Geography: Census Tract 2010

Access to Parks

A gravity based measure that captures the distance to federal, state, and some local parks. This is a measure of the "exposure" to parks giving more weight to larger parks.

METHODOLOGY

Kernel density, weighted by size of park, 0.5-mile search radius. These data have been capped at a kernel density value of 5,000 for mapping purposes (12 census tracts were capped).

SUMMARY DATA (total park acres)

Region	98,775
Anne Arundel	10,272
Baltimore	46,809
Carroll	14,372
Harford	9,433
Howard	12,936
Baltimore City	4,953

DATA SOURCE

Maryland Department of Natural Resources, 2010

HISTOGRAM
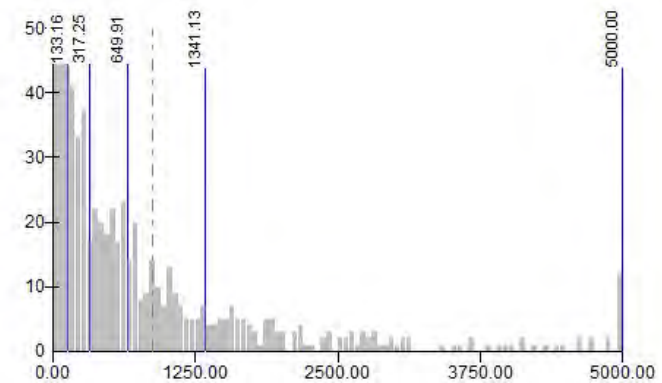
Percent Park
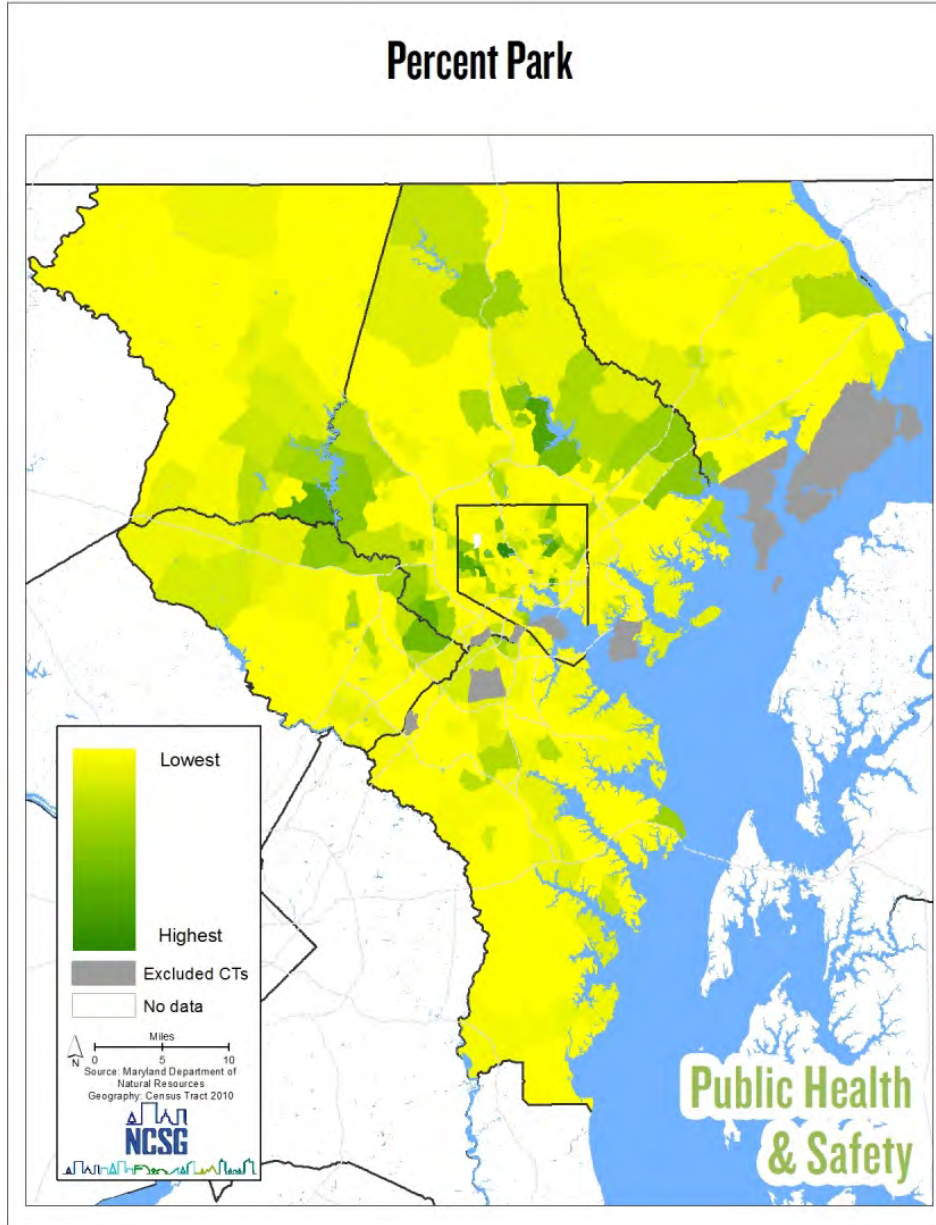
Percent Park

The percent of each census tract's land area that is parkland (includes federal, state, and some local parks).

METHODOLOGY
Calculated percentage of census tract covered by a park.

SUMMARY DATA

Region	7.07%
Anne Arundel	4.55%
Baltimore	7.52%
Carroll	8.15%
Harford	5.65%
Howard	9.89%
Baltimore City	6.70%

DATA SOURCE
Maryland Department of Natural Resources

HISTOGRAM
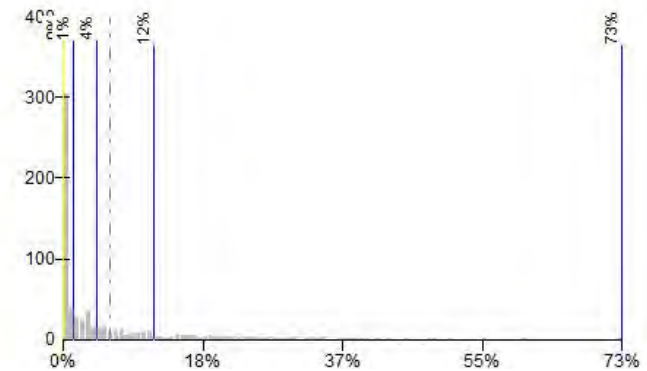
Crime Risk Index: Total Crime
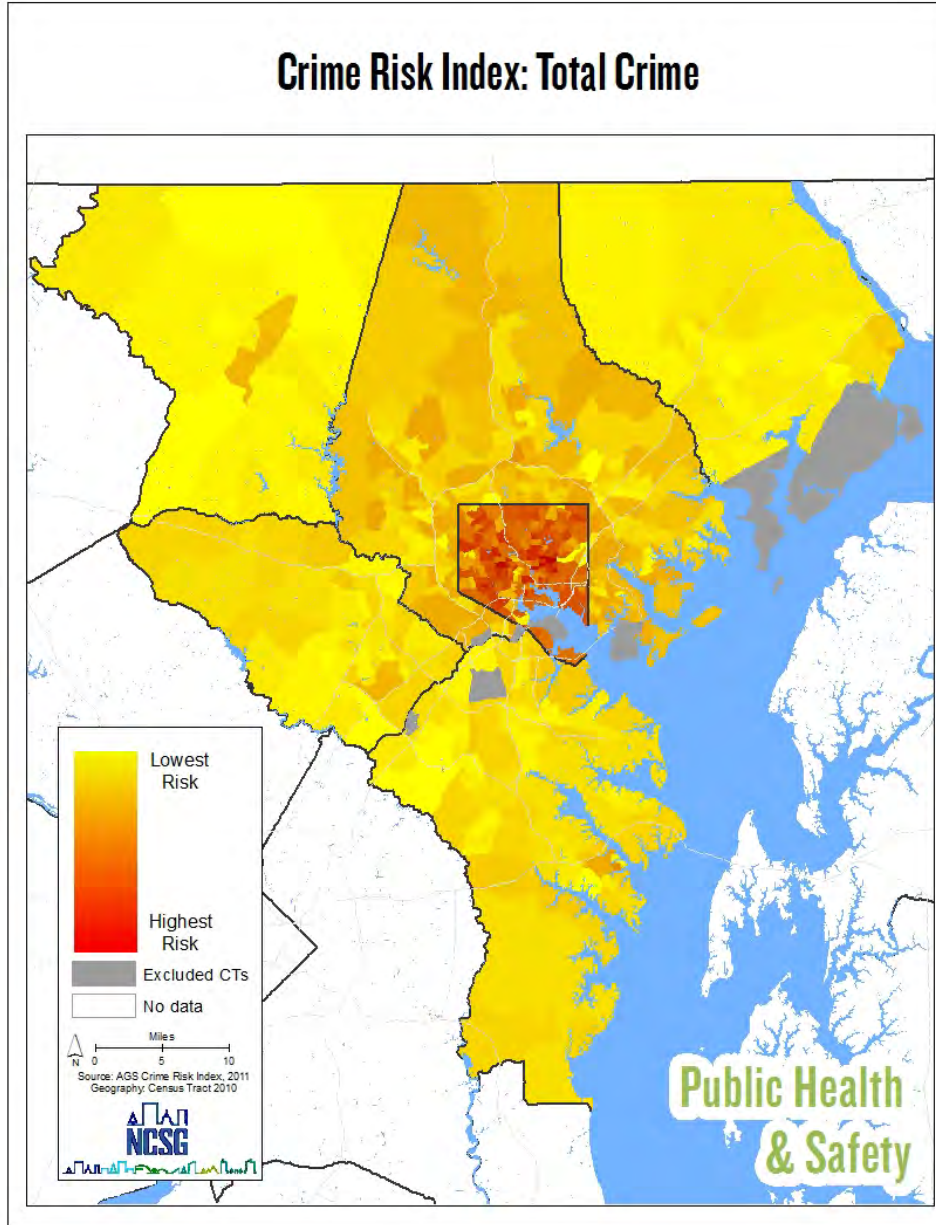
Crime Risk Index: Total Crime

From the AGS website: CrimeRisk is the result of an extensive analysis of a rolling seven years of FBI crime statistics. Based on detailed modeling of the relationships between crime and demographics, CrimeRisk provides an accurate view of the relative risk of specific crime types at the block group level. A number of updates were made to this database to include the latest national and metropolitan trends from the UCR (Uniform Crime Reports) publications. (http://www.appliedgeographic.com/ags_data_software.html).

METHODOLOGY
Mapped as reported by AGS.

SUMMARY DATA*

Region	163
Anne Arundel	70
Baltimore	118
Carroll	35
Harford	43
Howard	57
Baltimore City	346

DATA SOURCE
Applied Geographic Systems Crime Risk Index, 2011

HISTOGRAM
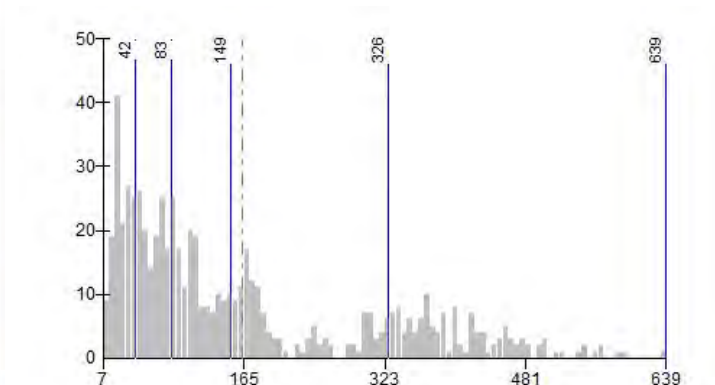
Summary data indicate the average of census tract values in each jurisdiction.

EMPLOYMENT & WORKFORCE INDICATORS

Subcategory	Indicator Title	Description
Jobs	Total Job Density	The concentration of jobs across the region by calculating the number of jobs in the census tract divided by the census tract's land area.
	Total Jobs Accessible by Auto	The number of jobs that can be accessed within 30 minutes auto travel time (approximately the average auto commute length), using MSTM street network data.
	Total Jobs Accessible by Transit	The number of jobs that can be accessed within 45 minutes transit travel time (approximately the average transit commute length).
	Accessibility Gap between Transit and Auto	A measure of the difference between the number of jobs accessible from a census tract by auto vs. by transit.
	Change in Job Density (2002-2010)	The change (increase or decrease) between 2002 and 2010 in the density of jobs located in the census tract.
	Percent Change in Total Jobs (2002-2010)	The percent change (increase or decrease) between 2002 and 2010 in the number of jobs located in the census tract.
Workforce	Low Skill Workers	Count of low-skill workers in the census tract. Based solely on educational attainment levels, this includes all people 25 and older that have no more than a high school education (high school diploma or less).
	Middle Skill Workers	Count of middle-skill workers in the census tract. Based solely on educational attainment levels, this includes all people 25 and older that have earned a post-secondary certificate or associate degree.
	High Skill Workers	Count of high-skill workers in the census tract. Based solely on educational attainment levels, this includes all people 25 and older that have earned a bachelor's degree or higher.
	Percent Low Skill Workers	Based solely on educational attainment levels. Of all potential workers 25 and older, the percent that have no more than a high school education (high school diploma or less).
	Percent Middle Skill Workers	Based solely on educational attainment levels. Of all potential workers 25 and older, the percent that have earned a post-secondary certificate or associate degree.
	Percent High Skill Workers	Based solely on educational attainment levels. Of all potential workers 25 and older, the percent that have earned a bachelor's degree or higher.
	Job Access Ratio	This measures the balance between the skill levels of the workforce in a census tract to the skill levels of jobs accessible from the census tract within a 30 auto commute.

Additional employment and workforce indicators considered by the OMAP include:
- Change in Total Jobs (2002-2010)
- Total Jobs of Construction Cluster
- Total Jobs of Hospitality & Tourism
- Total Jobs of Information Technology

- Total Jobs of Healthcare Cluster
- Auto Accessibility of High Wage Jobs
- Transit Accessibility of High Wage Jobs
- Auto Accessibility of Middle Wage Jobs
- Transit Accessibility of Middle Wage Jobs
- Auto Accessibility of Low Wage Jobs
- Transit Accessibility of Low Wage Jobs
- Auto Accessibility of High-skill Jobs
- Transit Accessibility of High-skill Jobs
- Auto Accessibility of Middle-skill Jobs
- Transit Accessibility of Middle-skill Jobs
- Auto Accessibility of Low-skill Jobs
- Transit Accessibility of Low-skill Jobs
- Job Access Ratio - Low Skill
- Job Access Ratio - Middle Skill
- Job Access Ratio - High Skill

Total Job Density
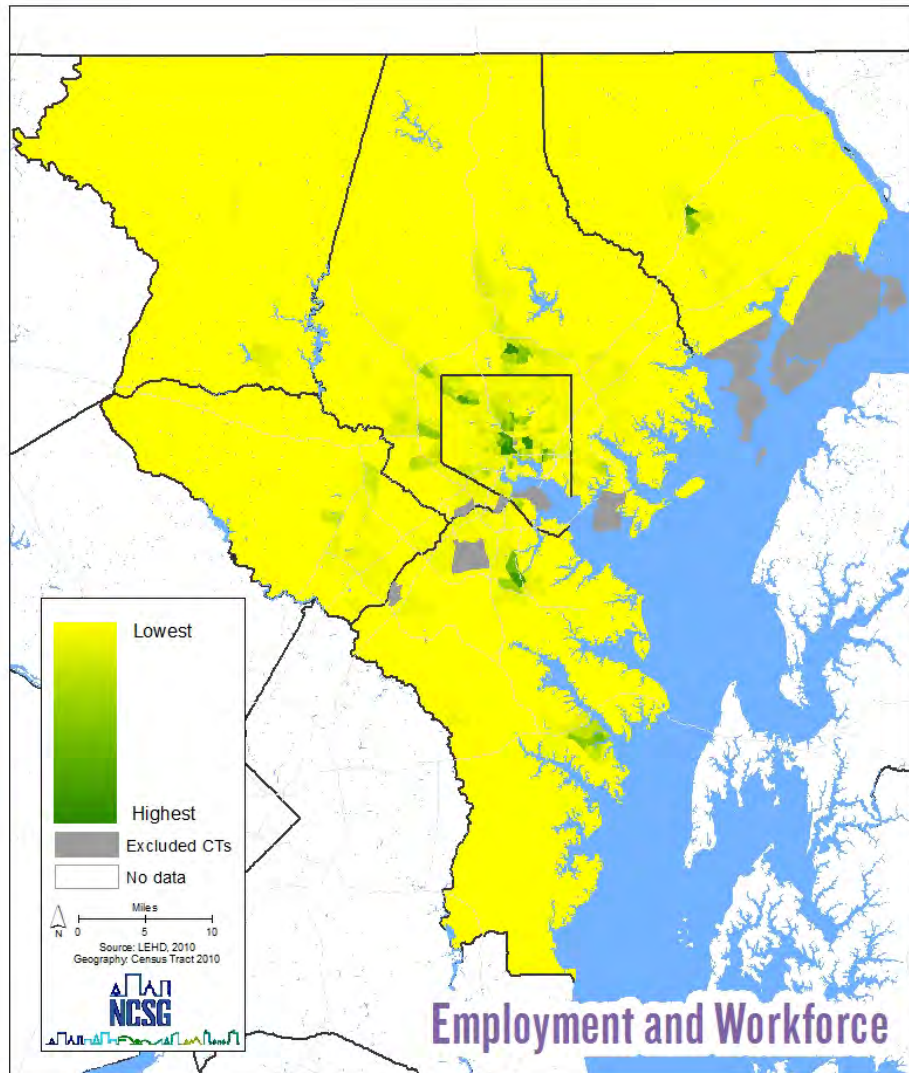
The concentration of jobs across the region by calculating the number of jobs in the census tract divided by the census tract's land area.

METHODOLOGY
(# of Jobs) / (Land Area)
These data have been capped at 75 jobs per acre for mapping purposes (10 census tracts were capped).

SUMMARY DATA (jobs per acre)

Region	1.14
Anne Arundel	1.07
Baltimore	1.21
Carroll	0.26
Harford	0.56
Howard	0.84
Baltimore City	8.79

DATA SOURCE
LEHD, 2010

HISTOGRAM
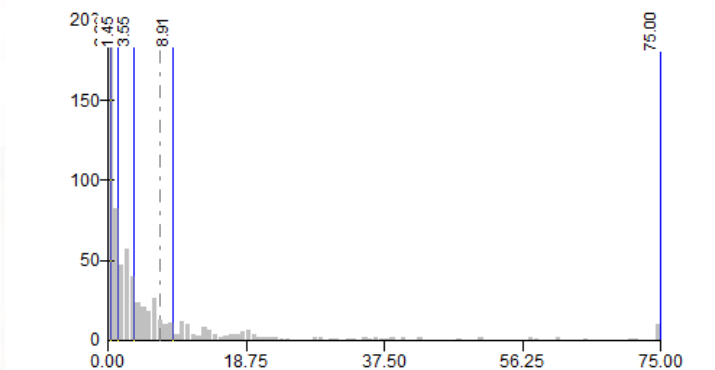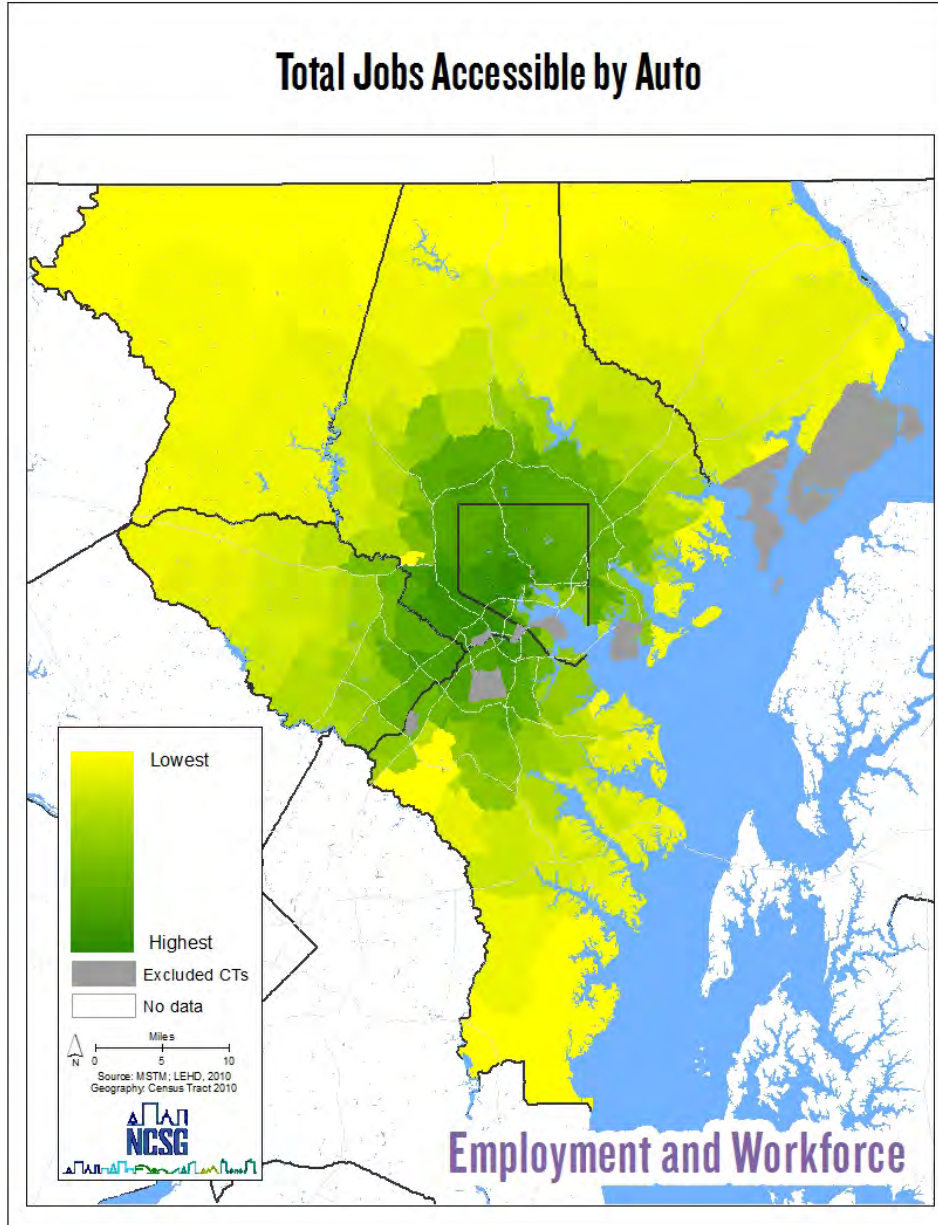
Total Jobs Accessible by Auto

The number of jobs that can be accessed within 30 minutes auto travel time (approximately the average auto commute length), using the Maryland Statewide Transportation Model street network data.

METHODOLOGY
Calculate the number of jobs accessible within a 30 minute auto commute during AM peak for each state modeling zone (SMZ). Aggregate SMZ level data to census tracts.

SUMMARY DATA (total job count)

Region	1,800,375
Anne Arundel	410,239
Baltimore	526,892
Carroll	75,058
Harford	142,323
Howard	136,904
Baltimore City	517,958

DATA SOURCES
Maryland Statewide Transportation Model, 2007; LEHD, 2010

HISTOGRAM
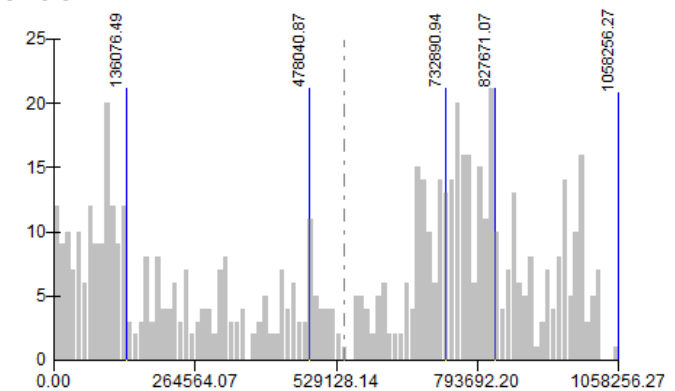
Total Jobs Accessible by Transit
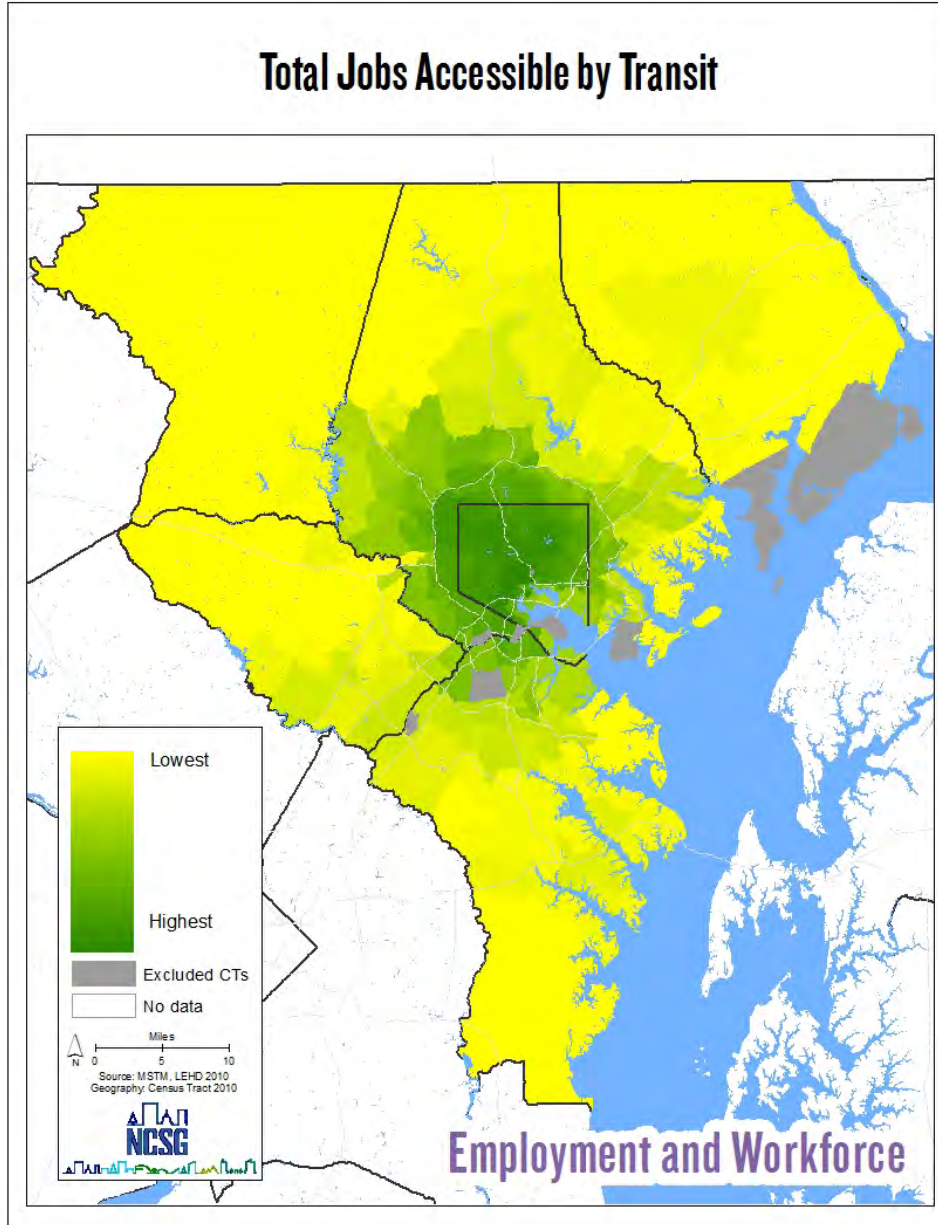
Total Jobs Accessible by Transit

The number of jobs that can be accessed within 45 minutes transit travel time (approximately the average transit commute length).

METHODOLOGY

Calculate the number of jobs accessible within a 45 minute transit commute during AM peak for each state modeling zone (SMZ). Aggregate SMZ level data to census tracts.

SUMMARY DATA (total job count)

Region	1,800,375
Anne Arundel	410,239
Baltimore	526,892
Carroll	75,058
Harford	142,323
Howard	136,904
Baltimore City	517,958

DATA SOURCES

Maryland Statewide Transportation Model, 2007; LEHD, 2010

HISTOGRAM
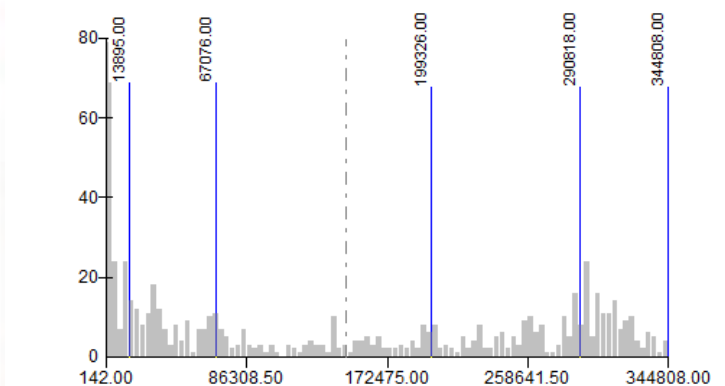
Accessibility Gap between Transit and Auto
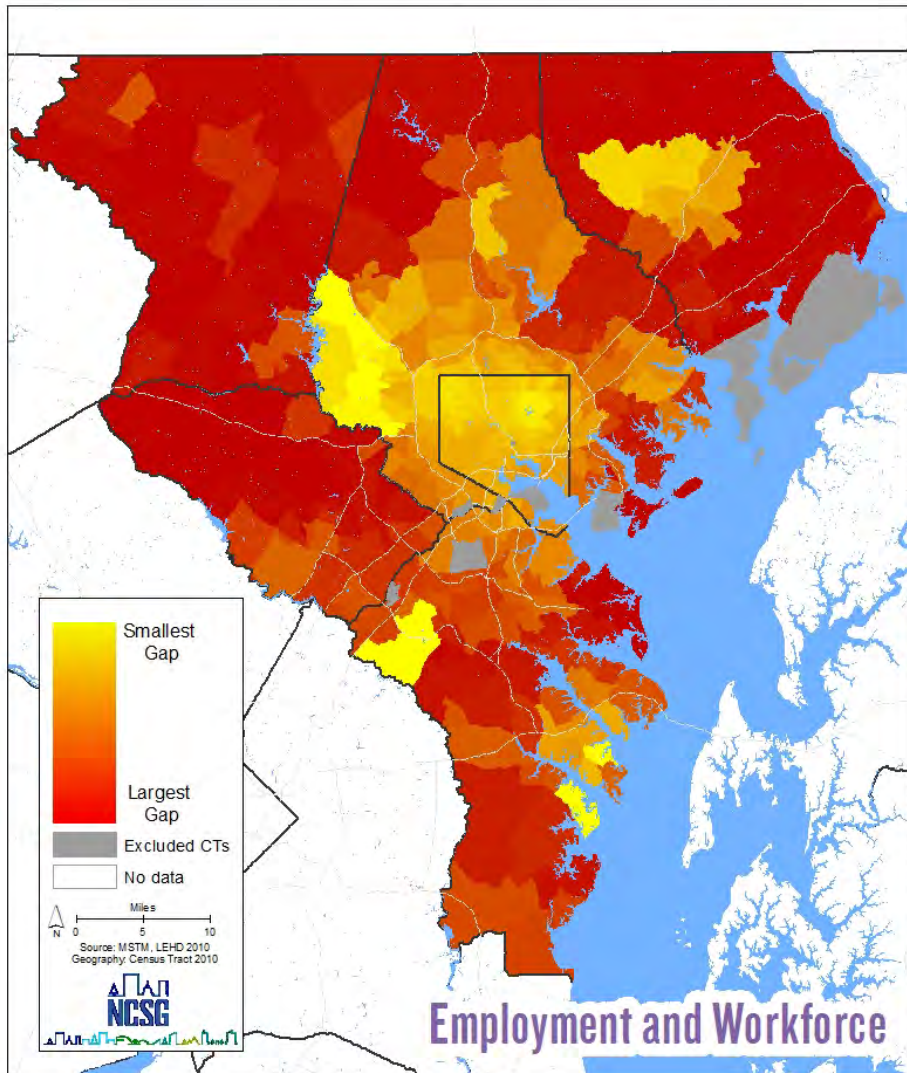
Accessibility Gap between Transit and Auto

A measure of the difference between the number of jobs accessible from a census tract by auto vs. by transit.

METHODOLOGY

Calculated a ratio of the jobs that can be accessed within 30 minutes travel by auto and 45 minutes by transit:

GAP= (Auto30 - Transit45)/(Auto30 + Transit45)

These data have been capped at a minimum ratio of 0.35 for mapping purposes (9 census tracts were capped).

SUMMARY DATA (total job count)

Region	1,800,375
Anne Arundel	410,239
Baltimore	526,892
Carroll	75,058
Harford	142,323
Howard	136,904
Baltimore City	517,958

DATA SOURCES

Maryland Statewide Transportation Model, 2007; LEHD, 2010

HISTOGRAM

Change In Job Density (2002-2010)

Source: LEHD, 2002, 2010
Geography: Census Tract 2010

Legend:
- Lowest / Highest (gradient)
- Excluded CTs
- No data

Miles
0   5   10

NCSG

Employment and Workforce
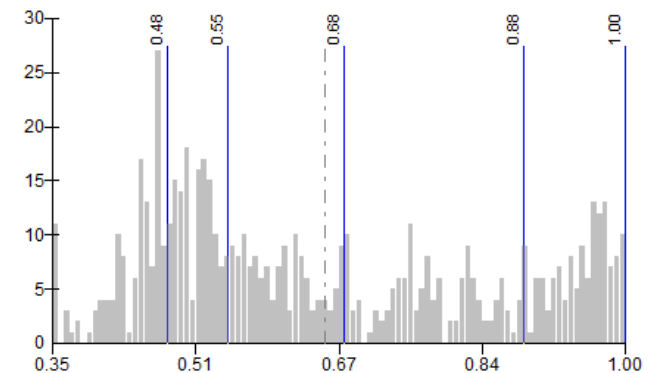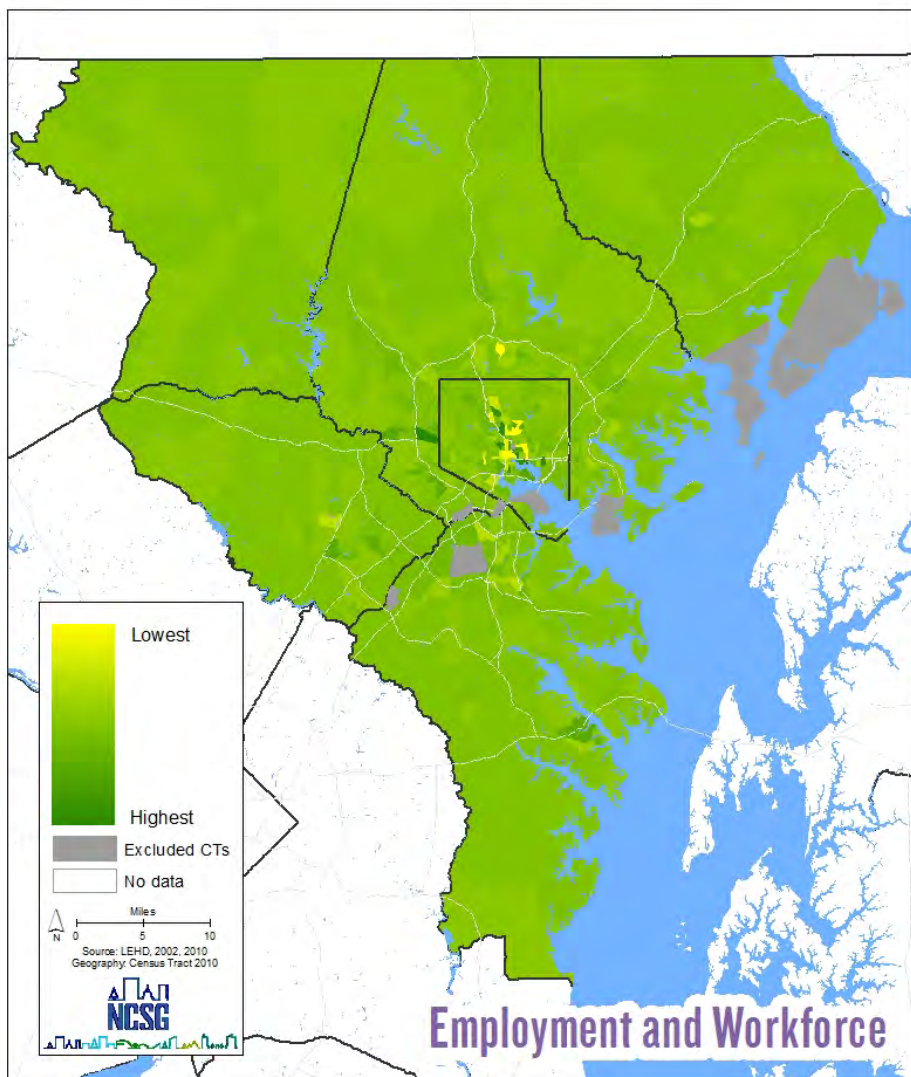
Change in Job Density

The change (increase or decrease) between 2002 and 2010 in the density of jobs located in the census tract.

METHODOLOGY
(Job 2010 – Job 2002) / Land Area
These data have been capped at both ends of the range for mapping purposes. The low end is capped at -10 jobs per acres and the high end is capped at +10 jobs per acre (13 census tracts were capped).

SUMMARY DATA (total job count)

Region	1,800,375
Anne Arundel	410,239
Baltimore	526,892
Carroll	75,058
Harford	142,323
Howard	136,904
Baltimore City	517,958

DATA SOURCE
LEHD, 2002 and 2010

HISTOGRAM
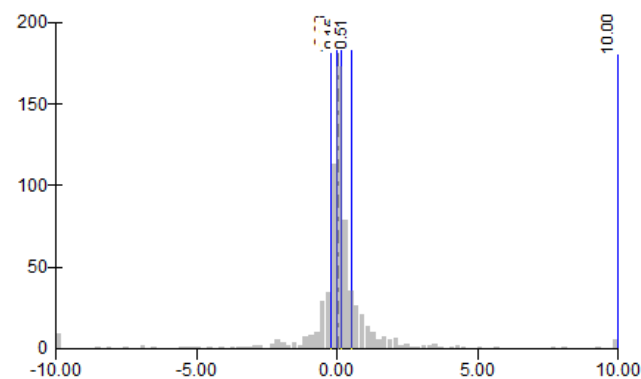
Percent Change in Total Jobs (2002-2010)
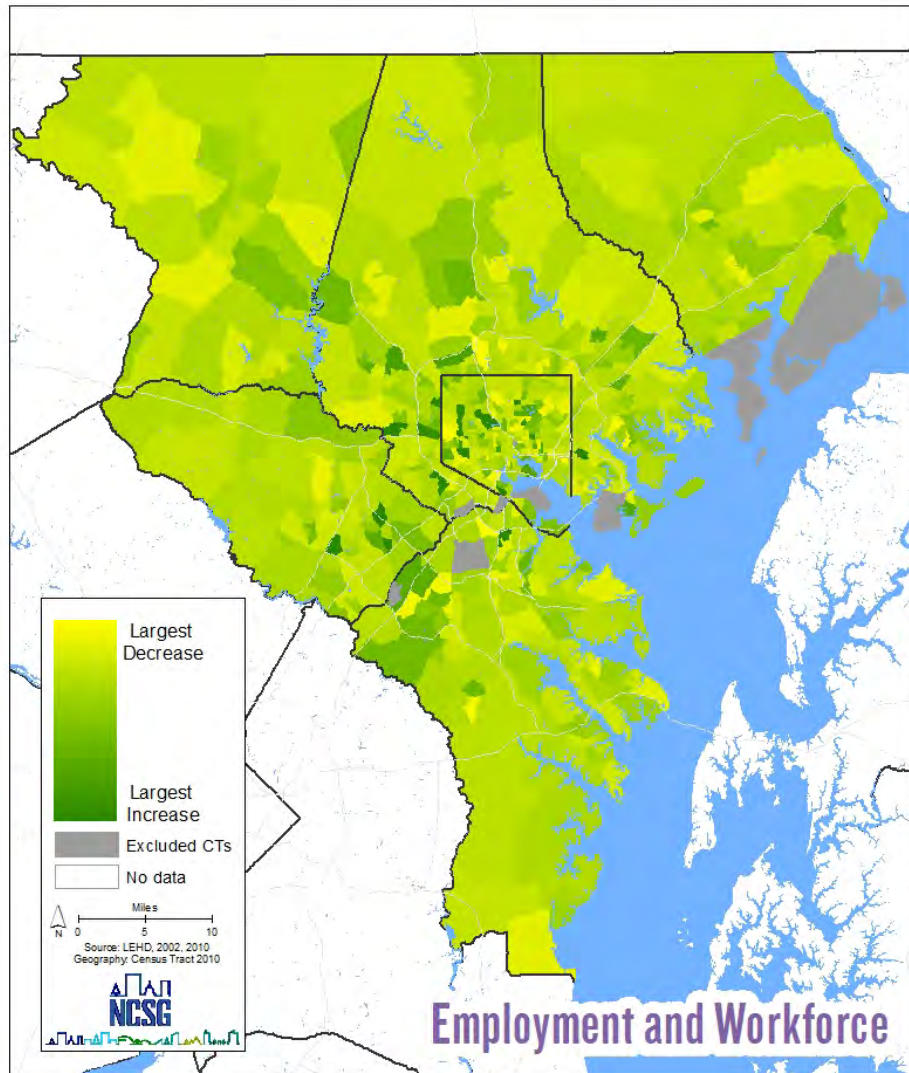
Percent Change in Total Jobs

The percent change (increase or decrease) between 2002 and 2010 in the number of jobs located in the census tract.

METHODOLOGY

Percent change = (Jobs in 2010 – Jobs in 2002) / Jobs in 2002
These data have been capped at a 300% increase in jobs for mapping purposes (13 census tracts were capped).

SUMMARY DATA

Region	6.5%
Anne Arundel	12.6%
Baltimore	7.3%
Carroll	9.1%
Harford	10.8%
Howard	6.7%
Baltimore City	0.3%

DATA SOURCE

LEHD, 2002 and 2010

HISTOGRAM
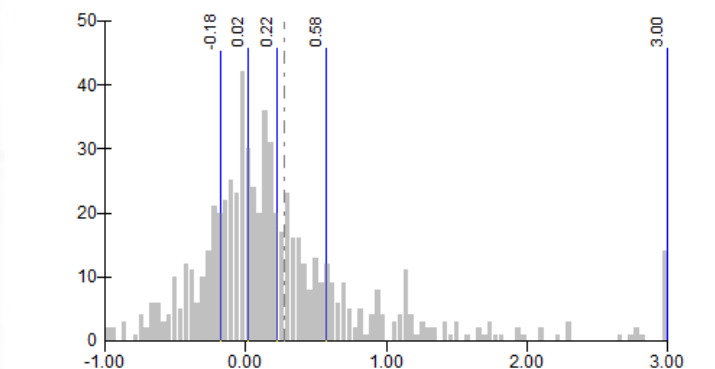
Low Skill Workers
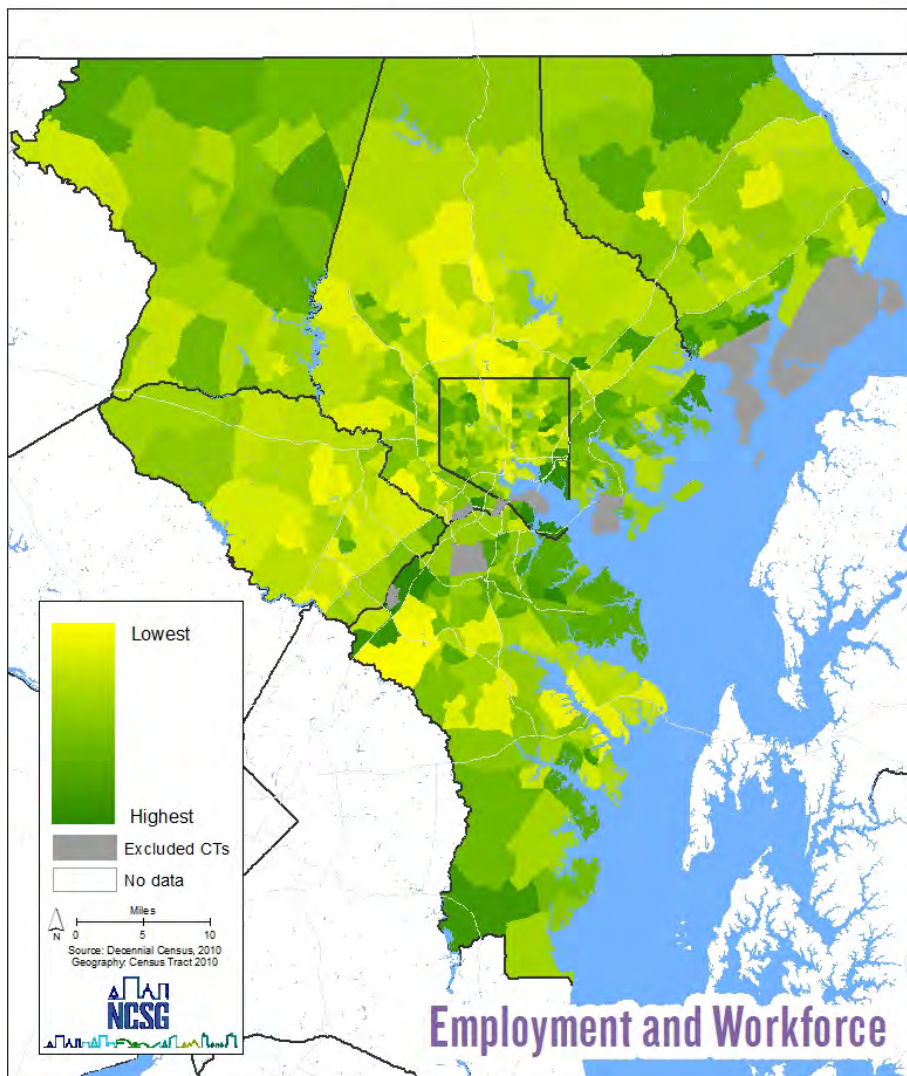
Low Skill Workers

Count of low-skill workers in the census tract. Based solely on educational attainment levels, this includes all people 25 and older that have no more than a high school education (high school diploma or less).

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA (number of potential workers)

Region	500,185
Anne Arundel	95,719
Baltimore	142,116
Carroll	31,792
Harford	44,308
Howard	27,496
Baltimore City	158,754

DATA SOURCE
U.S. Census Bureau, 2010 Census
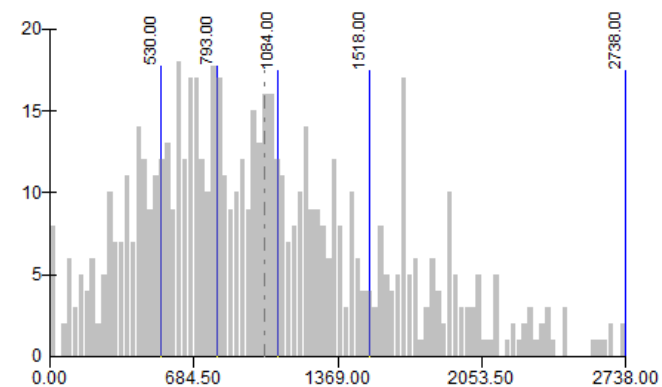
HISTOGRAM

Middle Skill Workers
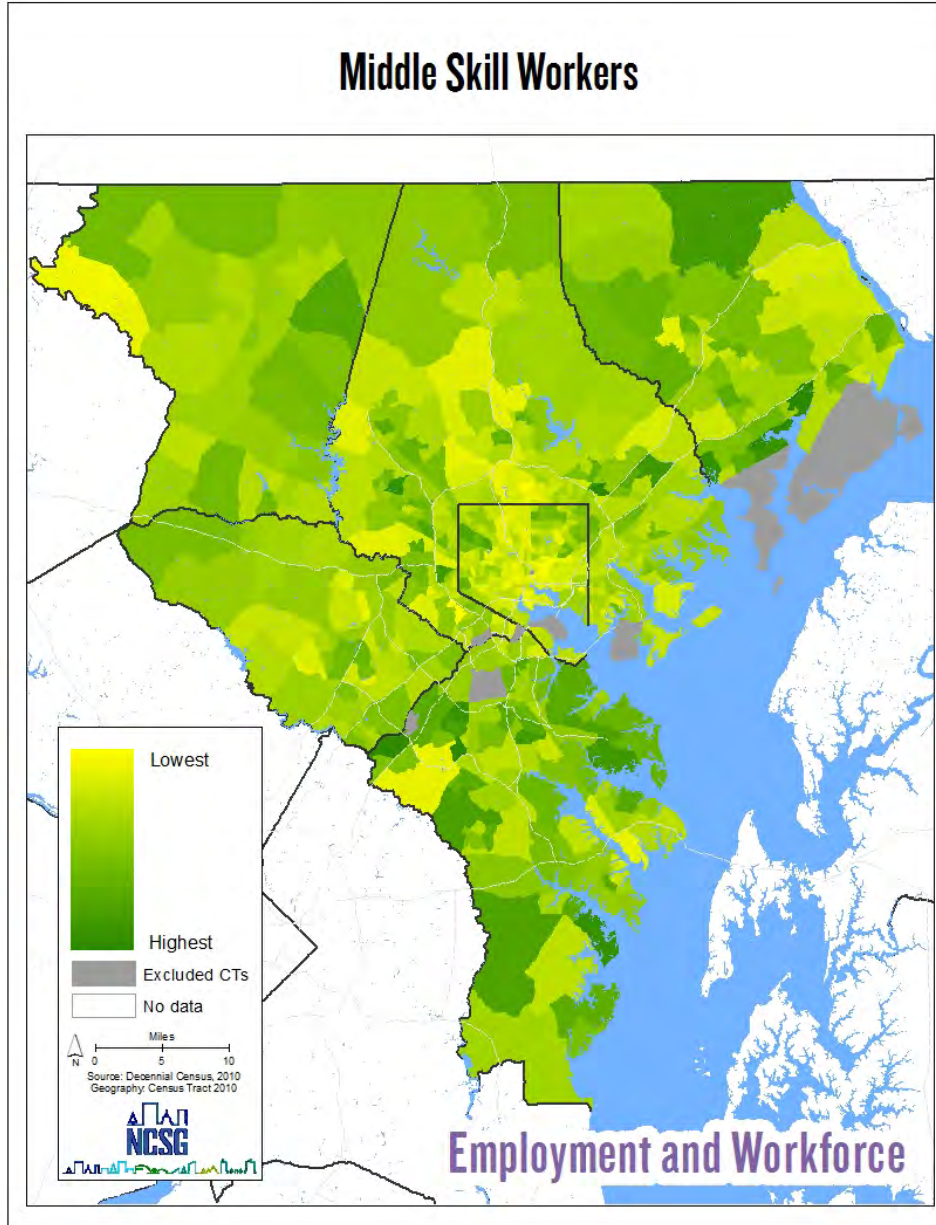
Middle Skill Workers

Middle Skill Workers

Count of middle-skill workers in the census tract. Based solely on educational attainment levels, this includes all people 25 and older that have earned a post-secondary certificate or associate degree.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA (number of potential workers)

Region	397,937
Anne Arundel	88,516
Baltimore	122,436
Carroll	26,655
Harford	43,461
Howard	34,404
Baltimore City	82,465

DATA SOURCE
U.S. Census Bureau, 2010 Census.
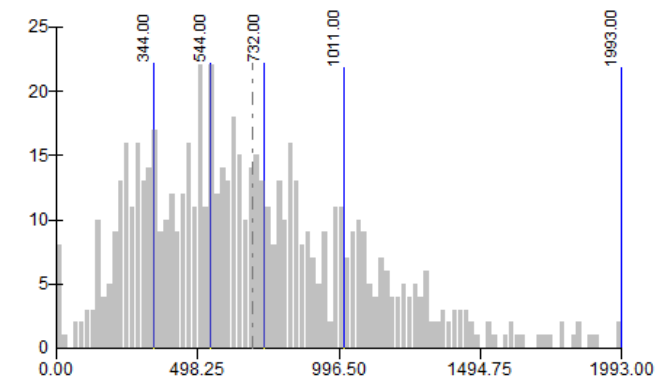
HISTOGRAM

High Skill Workers
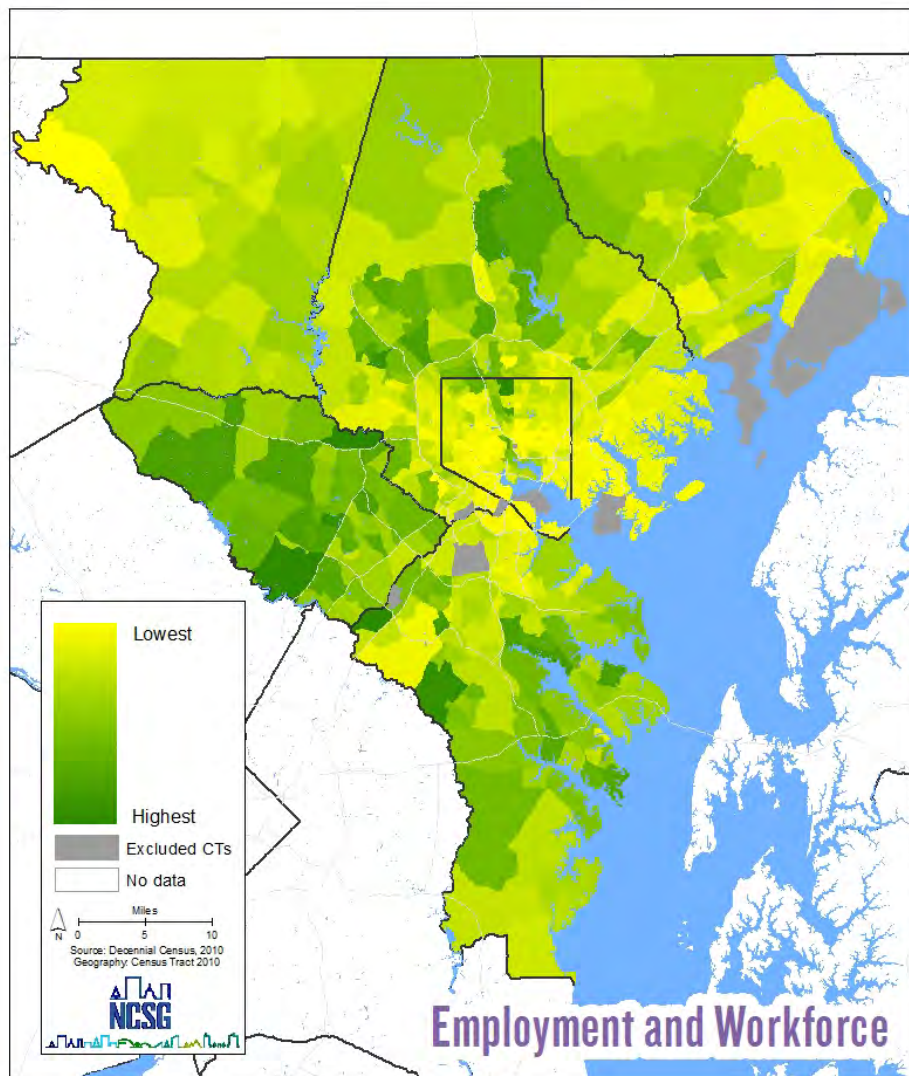
Count of high-skill workers in the census tract. Based solely on educational attainment levels, this includes all people 25 and older that have earned a bachelor's degree or higher.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA (number of potential workers)

Region	544,894
Anne Arundel	113,475
Baltimore	163,128
Carroll	31,413
Harford	44,625
Howard	98,946
Baltimore City	93,307

DATA SOURCE
U.S. Census Bureau, 2010 Census
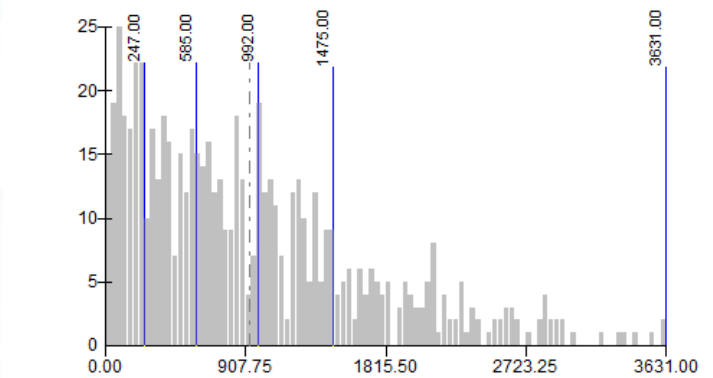
HISTOGRAM

Percent Low Skill Workers
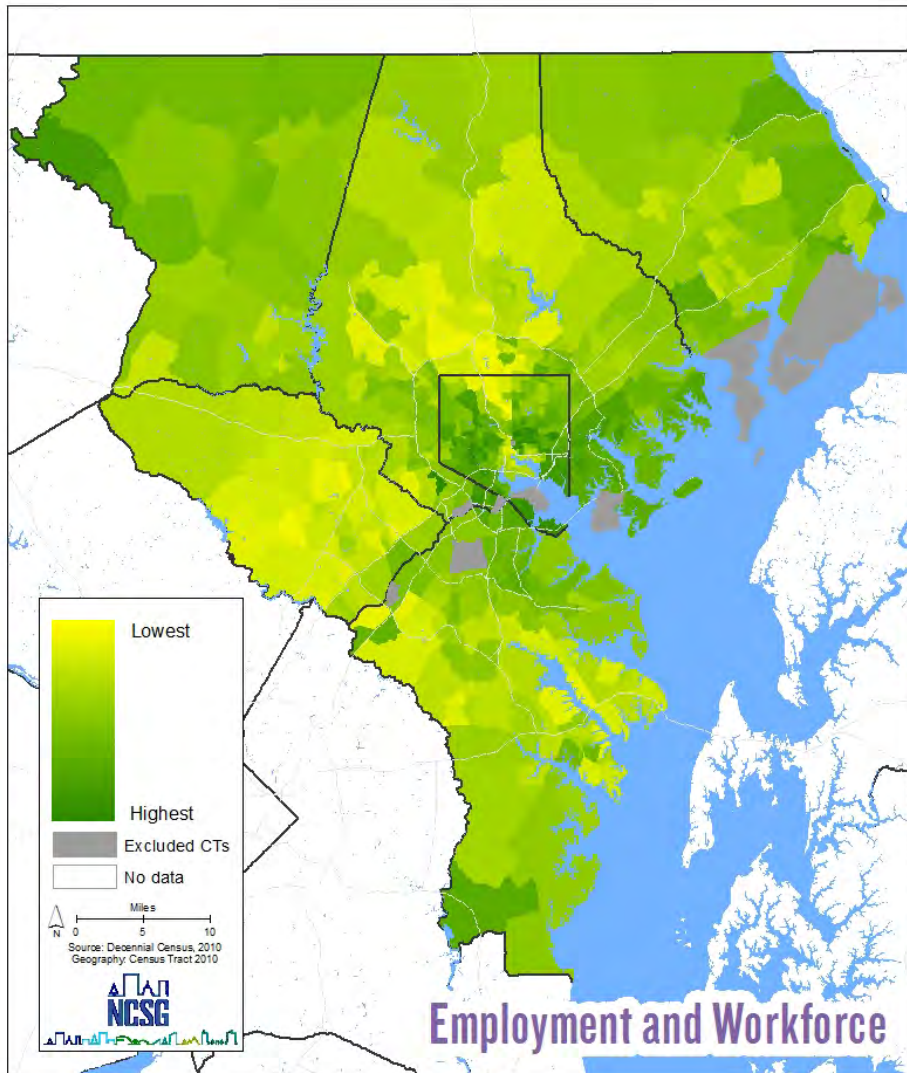
Based solely on educational attainment levels. Of all potential workers 25 and older, the percent that have no more than a high school education (high school diploma or less).

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

Region	34.7%
Anne Arundel	32.2%
Baltimore	33.2%
Carroll	35.4%
Harford	33.5%
Howard	17.1%
Baltimore City	47.5%

DATA SOURCE
U.S. Census Bureau, 2010 Census
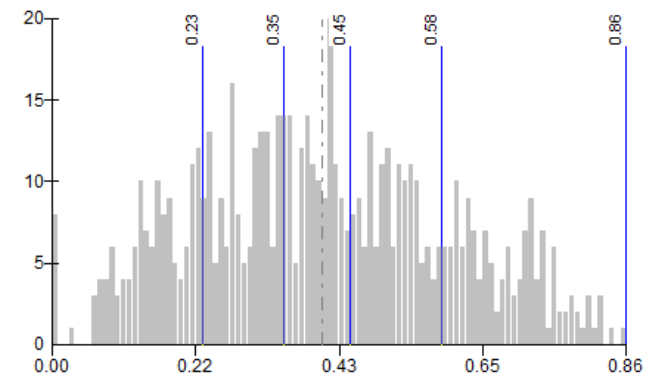
HISTOGRAM

Percent Middle Skill Workers
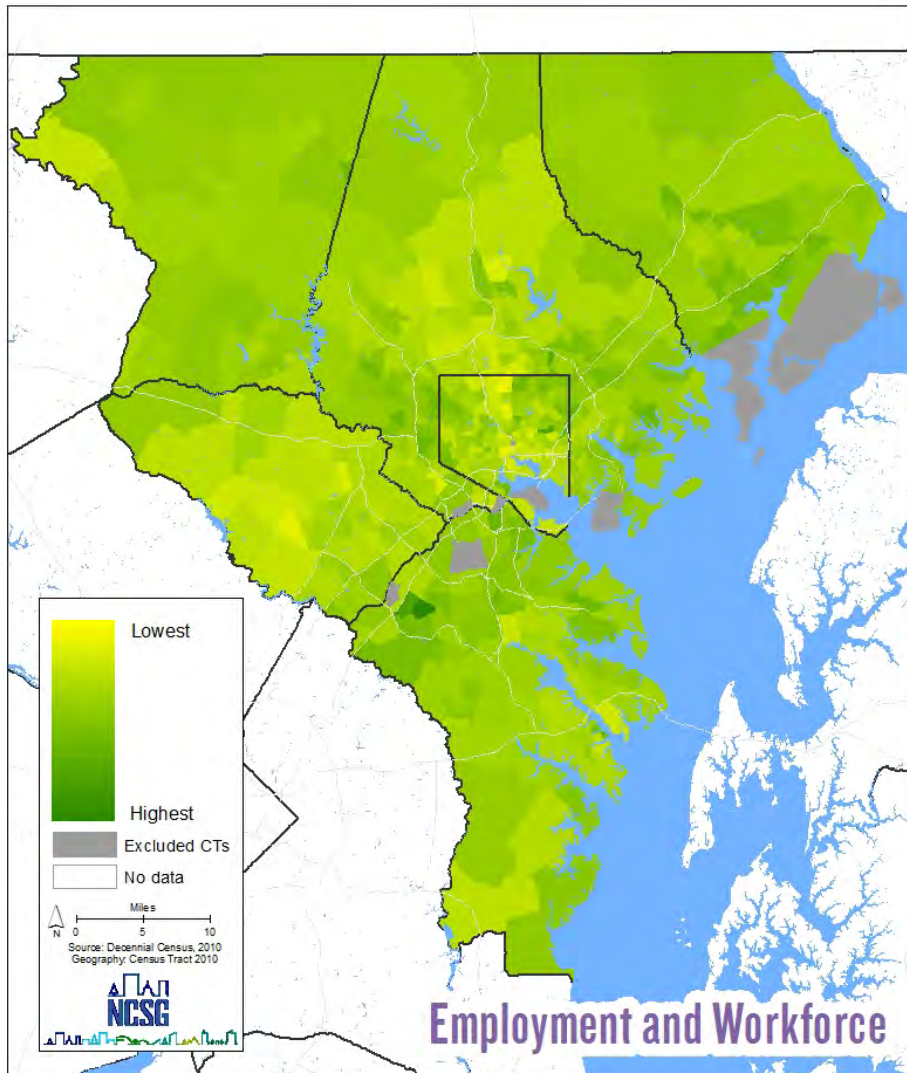
Percent Middle Skill Workers

Percent Middle Skill Workers

Based solely on educational attainment levels. Of all potential workers 25 and older, the percent that have earned a post-secondary certificate or associate degree.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

Region	27.6%
Anne Arundel	29.7%
Baltimore	28.6%
Carroll	29.7%
Harford	32.8%
Howard	21.4%
Baltimore City	24.7%

DATA SOURCE
U.S. Census Bureau, 2010 Census
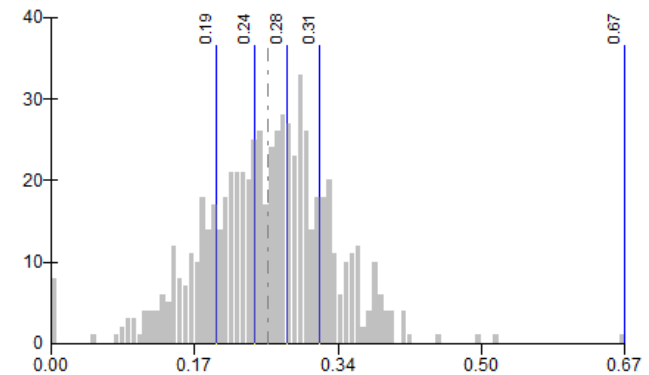
HISTOGRAM

Percent High Skill Workers
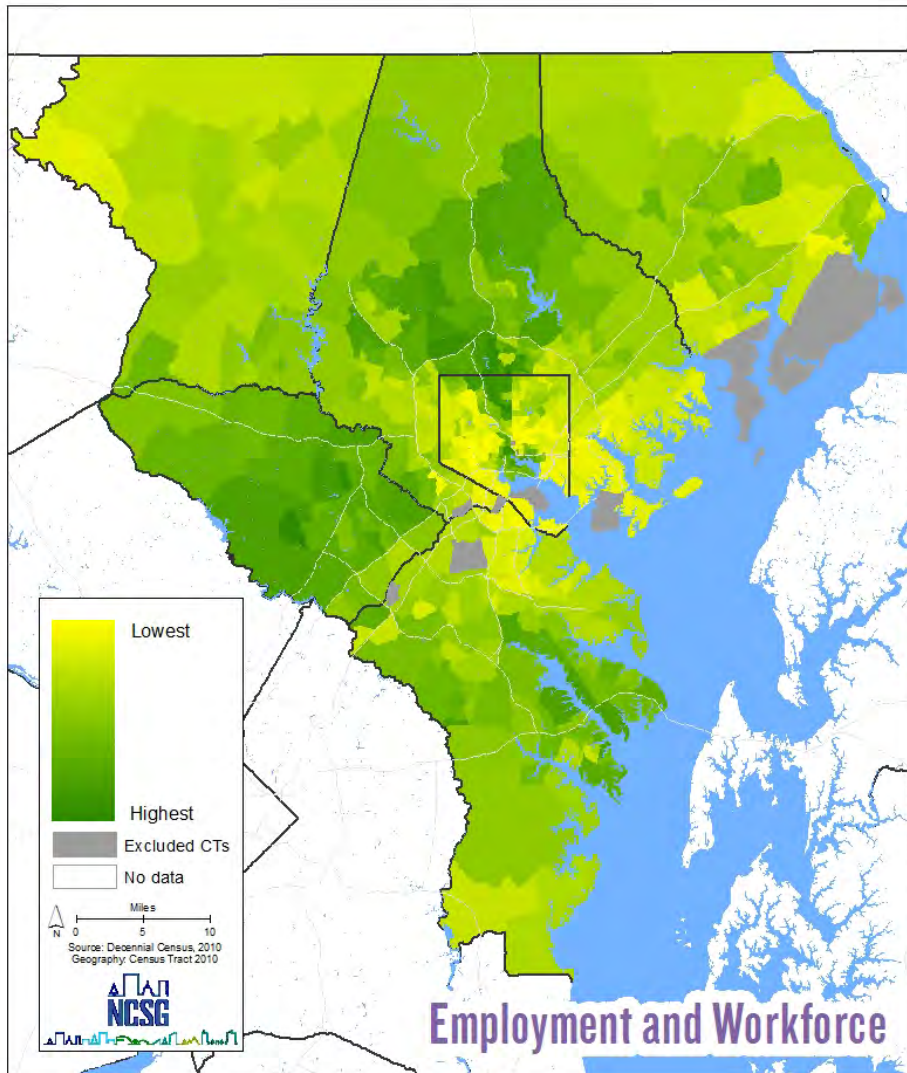
Percent High Skill Workers

Based solely on educational attainment levels. Of all potential workers 25 and older, the percent that have earned a bachelor's degree or higher.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

Region	37.8%
Anne Arundel	38.1%
Baltimore	38.1%
Carroll	35.0%
Harford	33.7%
Howard	61.5%
Baltimore City	27.9%

DATA SOURCE
U.S. Census Bureau, 2010 Census

HISTOGRAM
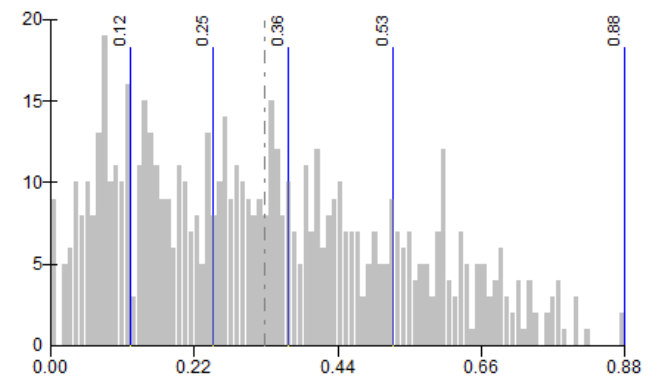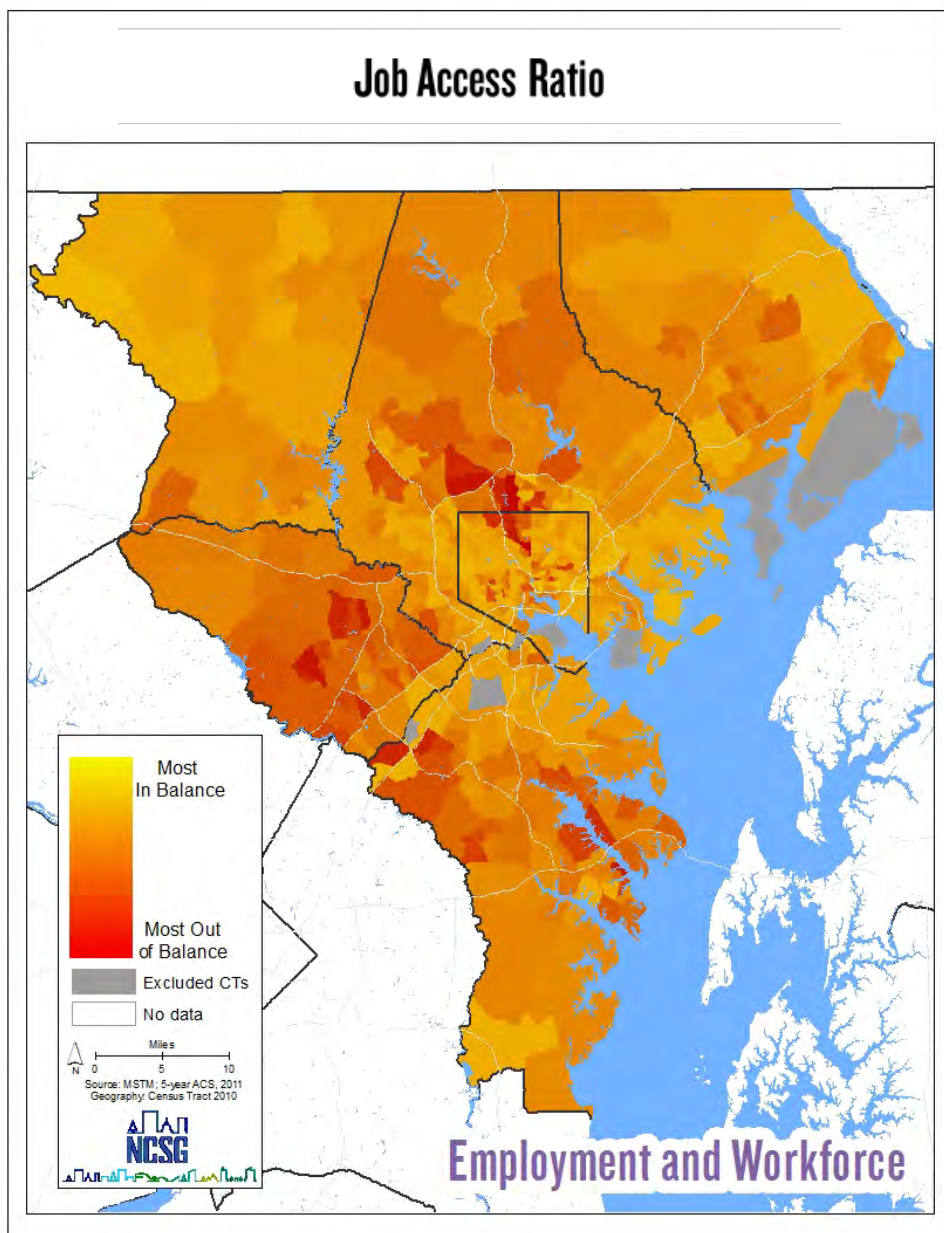
Job Access Ratio

Job Access Ratio demonstrates how well balanced the skill levels of a census tract's workforce is with the jobs that are accessible to that census tract.

METHODOLOGY

This measure compares the percentage of low, middle and high skill workers (age 25 and older) in the census tract to the percentage of low, middle and high skill jobs that are accessible from the census tract within a 30 auto commute. A value of 1 would suggest that the tract's workforce is in balance with the accessible jobs. Higher values suggest imbalance in the ratio. For mapping purposes, these data are calculated using capped data in the low skill JAR calculation (only 1 census tract was capped).

SUMMARY DATA*

Region	2.24
Anne Arundel	2.43
Baltimore	2.15
Carroll	2.04
Harford	2.23
Howard	3.01
Baltimore City	2.07

DATA SOURCES

Maryland Statewide Transportation Model, 2007; U.S. Census Bureau, American Community Survey 5-year Estimates, 2011; LEHD 2010

HISTOGRAM

Summary data indicate the average of census tract values in each jurisdiction.
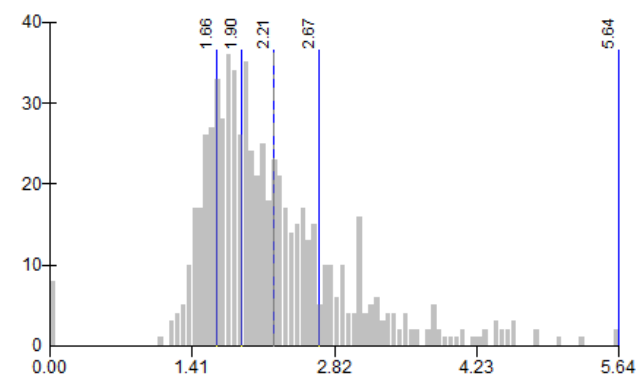
TRANSPORTATION & MOBILITY INDICATORS

| Subcategory	Indicator Title	Description
N/A	Travel Time Index	The ratio of travel time in the peak period to travel time at free-flow conditions. A Travel Time Index of 1.30 indicates a 20-minute free-flow trip takes 26 minutes in the peak period.
	Driving Commuters: Percent Driving Less Than 30 Minutes	This is the percent of all *driving* commuters that drive less than 30 minutes to work. Mapped as reported by Census.
	Commuters: Percent Taking Transit Less Than 45 Minutes	This is the percent of *all commuters* that take public transit to work for less than 45 minutes. Mapped as reported by Census.
	Transit Access	Percent of the census tract located with a ¼ mile of a transit stop (rail and bus).
	Transit Connectivity Index	The index shows the performance of large-scale multimodal transit networks on measures of connectivity at the node, line, transfer center, and regional level.
	Walk Score	A measure based on walking distances to particular amenities. The measure incorporates road connectivity metrics such as block length and intersection density.
	Transportation Trail Miles	The total number of trail miles in each census tract.
	Per Capita VMT for Home-Based Trips	The average per capita vehicle miles traveled for all trips originating from home, regardless of destination. Uses modeled data to estimate how far you would expect to travel from each census tract.
	Per Capita VHT for Home-Based Trips	The average per capita vehicle hours traveled for all trips originating from home, regardless of destination. Uses modeled data to estimate how long you would expect to travel from each census tract.

Additional transportation and mobility indicators considered by the OMAP include:
- Driving Commuters: Percent Driving Less Than 45 Minutes
- Driving Commuters: Percent Driving Less Than 60 Minutes
- Commuters: Percent Taking Transit Less Than 30 Minutes
- Commuters: Percent Taking Transit Less Than 60 Minutes
- Percent of Occupied Units with No Vehicle
- Owner Occupied Households - No Vehicle Available
- Renter Occupied Households - No Vehicle Available
- VMT per Lane Mile
- VHT per Lane Mile
- Mean Commute Time
- Trip Generation - Home Based Work Trips (Productions - Attractions)
- Trip Generation - Home Based Shopping Trips (Productions - Attractions)

Travel Time Index
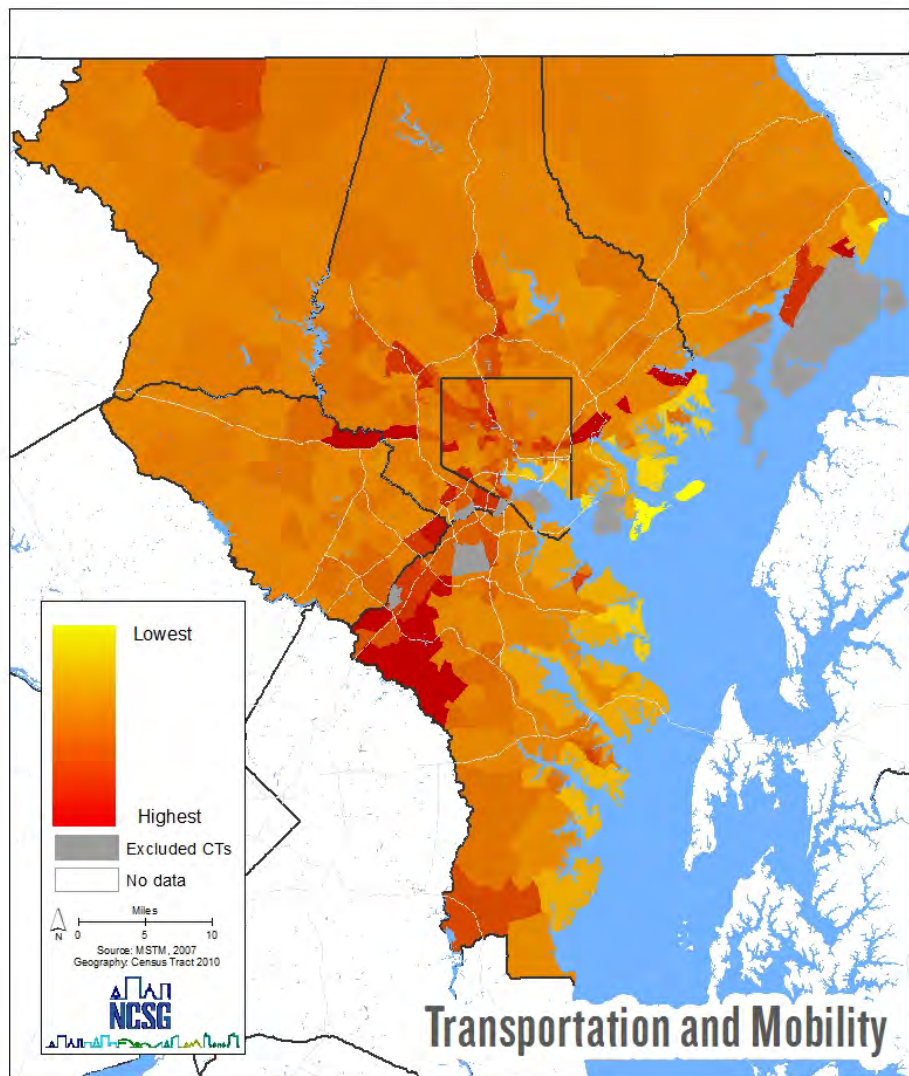
Travel Time Index

The ratio of travel time in the peak period to travel time at free-flow conditions. A Travel Time Index of 1.30 indicates a 20-minute free-flow trip takes 26 minutes in the peak period.

METHODOLOGY
Mapped as reported from the Maryland Statewide Transportation Model. These data have been capped at an index value of 2.5 for mapping purposes (10 census tracts were capped).

SUMMARY DATA*

Region	1.29
Anne Arundel	1.36
Baltimore	1.29
Carroll	1.23
Harford	1.23
Howard	1.26
Baltimore City	1.34

DATA SOURCE
Maryland Statewide Transportation Model, 2007

HISTOGRAM
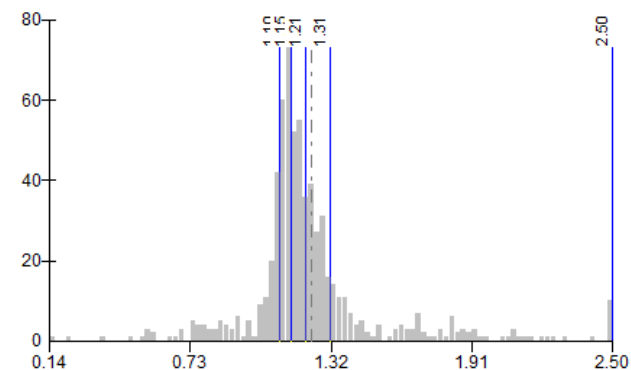
Summary data indicate the average of census tract values in each jurisdiction.

Driving Commuters: Percent Driving Less Than 30 Minutes
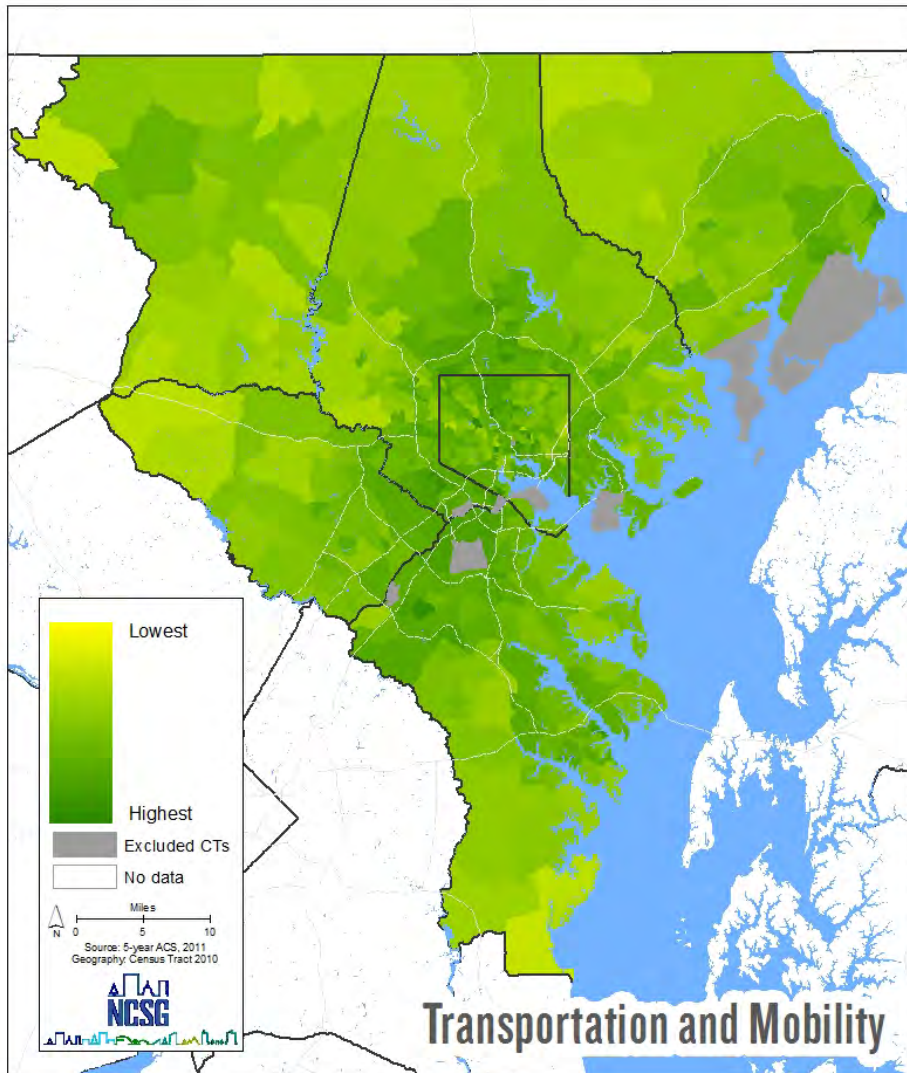
Lowest

Highest

Excluded CTs

No data

Miles

N   0   5   10

Source: 5-year ACS, 2011
Geography: Census Tract 2010

NCSG

Transportation and Mobility

Driving Commuters: Percent Driving Less than 30 Minutes

This is the percent of all *driving* commuters that drive less than 30 minutes to work.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

Region	55.7%
Anne Arundel	56.9%
Baltimore	57.2%
Carroll	42.0%
Harford	49.1%
Howard	54.9%
Baltimore City	61.6%

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011

HISTOGRAM
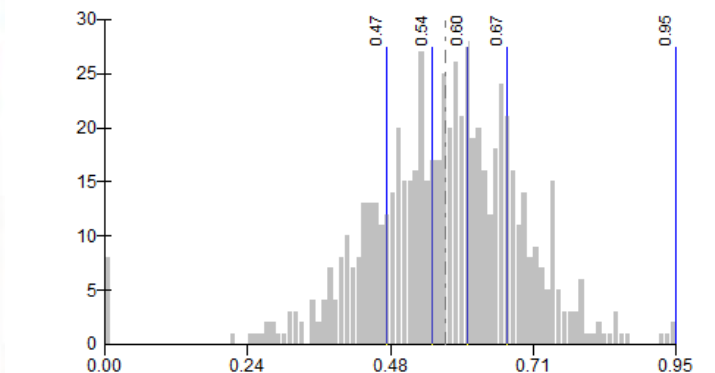
Commuters: Percent Taking Transit Less Than 45 Minutes
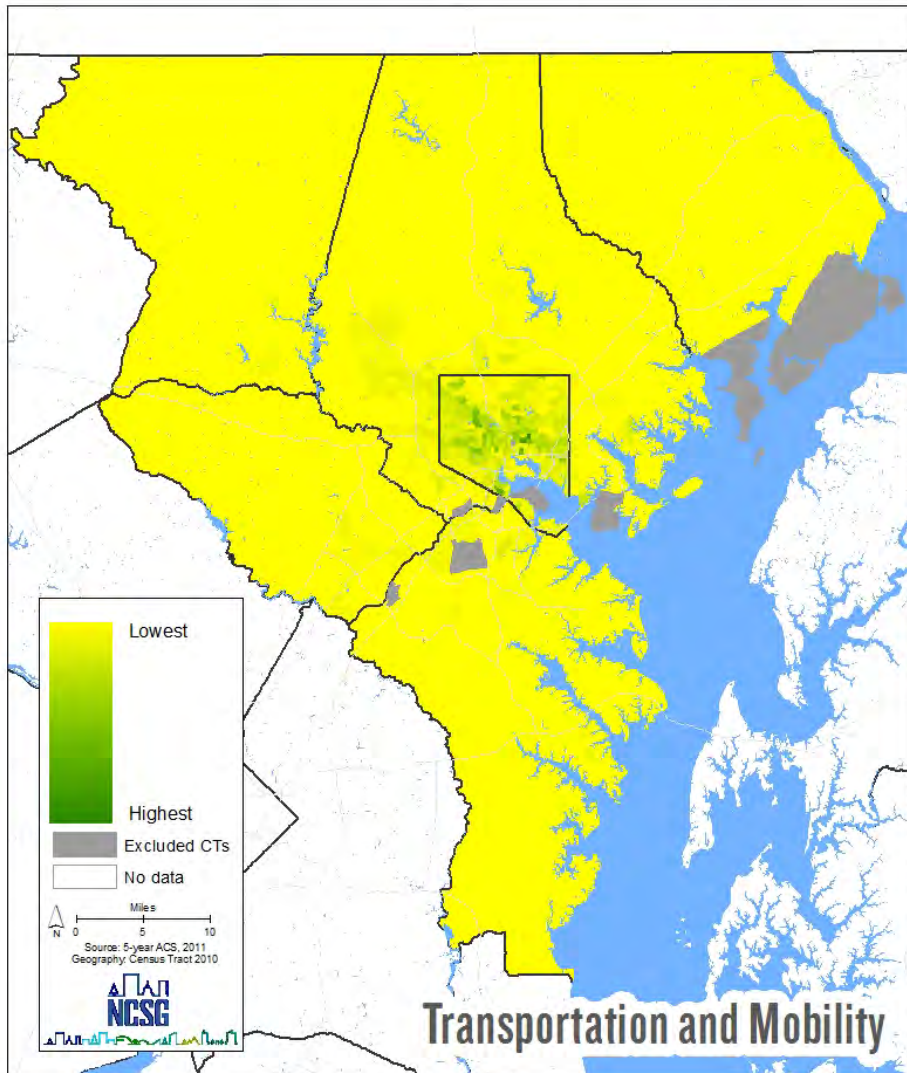
Commuters: Percent Taking Transit Less than 45 Minutes

This is the percent of *all commuters* that take public transit to work for less than 45 minutes.

METHODOLOGY
Mapped as reported by Census.

SUMMARY DATA

Region	2.8%
Anne Arundel	0.7%
Baltimore	1.6%
Carroll	0.3%
Harford	0.2%
Howard	0.7%
Baltimore City	9.6%

DATA SOURCE
U.S. Census Bureau, American Community Survey 5-year Estimates, 2011
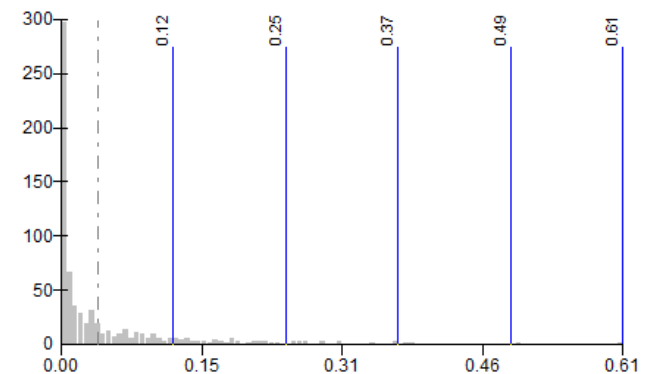
HISTOGRAM

Transit Access
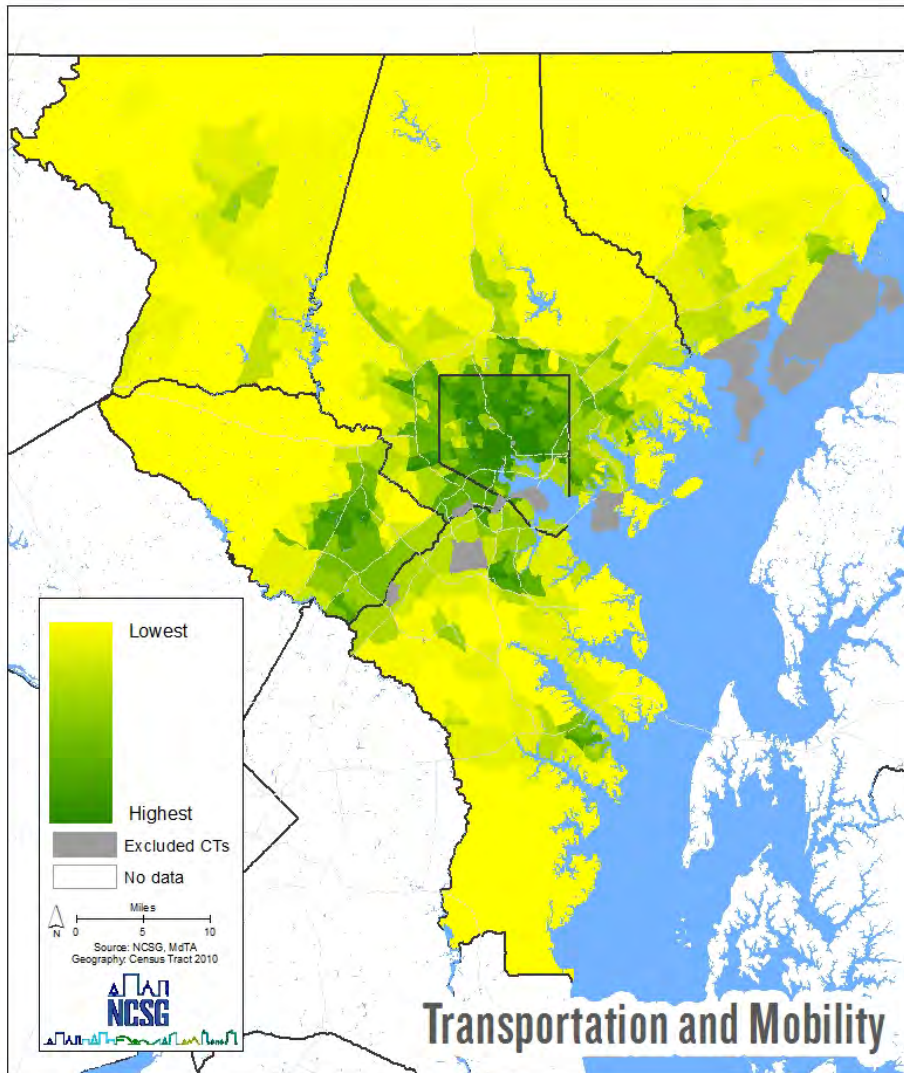
Percent of the census tract located with a ¼ mile of a transit stop (rail and bus).

SUMMARY DATA*

Region	43.6%
Anne Arundel	19.9%
Baltimore	34.2%
Carroll	9.1%
Harford	14.0%
Howard	36.4%
Baltimore City	82.8%

DATA SOURCE
NCSG; Maryland Transit Administration

HISTOGRAM
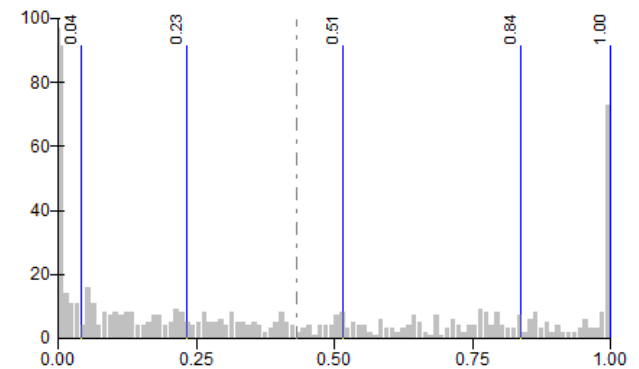
Summary data indicate the average of census tract values in each jurisdiction.

Transit Connectivity Index
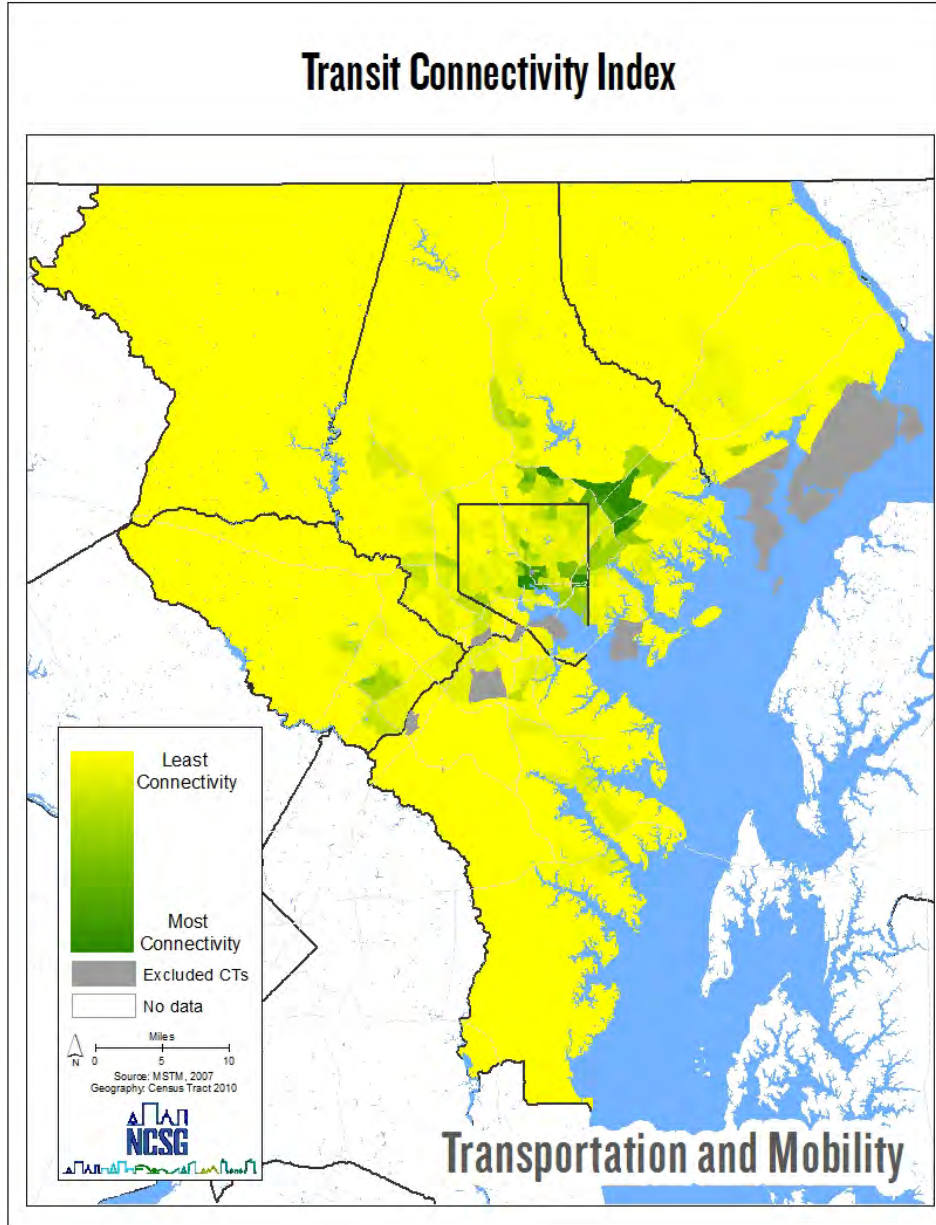
Transit Connectivity Index

The index shows the performance of large-scale multimodal transit networks on measures of connectivity at the node, line, transfer center, and regional level.

Reference: Mishra, Sabyasachee, Timothy F Welch, and Manoj K Jha. "Performance indicators for public transit connectivity in multi-modal transportation networks." *Transportation Research Part A: Policy and Practice* 46.7 (2012): 1066-1085.

METHODOLOGY
Mapped as reported from the Maryland Statewide Transportation Model. These data have been capped at an index value of 1.5 for mapping purposes (9 census tracts were capped).

SUMMARY DATA*

Region	0.201
Anne Arundel	0.038
Baltimore	0.203
Carroll	0.000
Harford	0.039
Howard	0.071
Baltimore City	0.402

DATA SOURCE
Maryland Statewide Transportation Model, 2007

HISTOGRAM
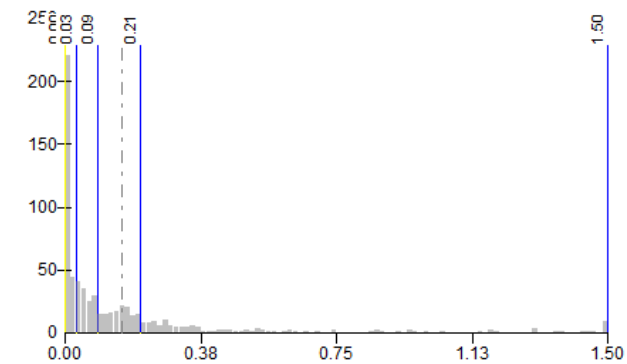
Summary data indicate the average of census tract values in each jurisdiction.

Walk Score
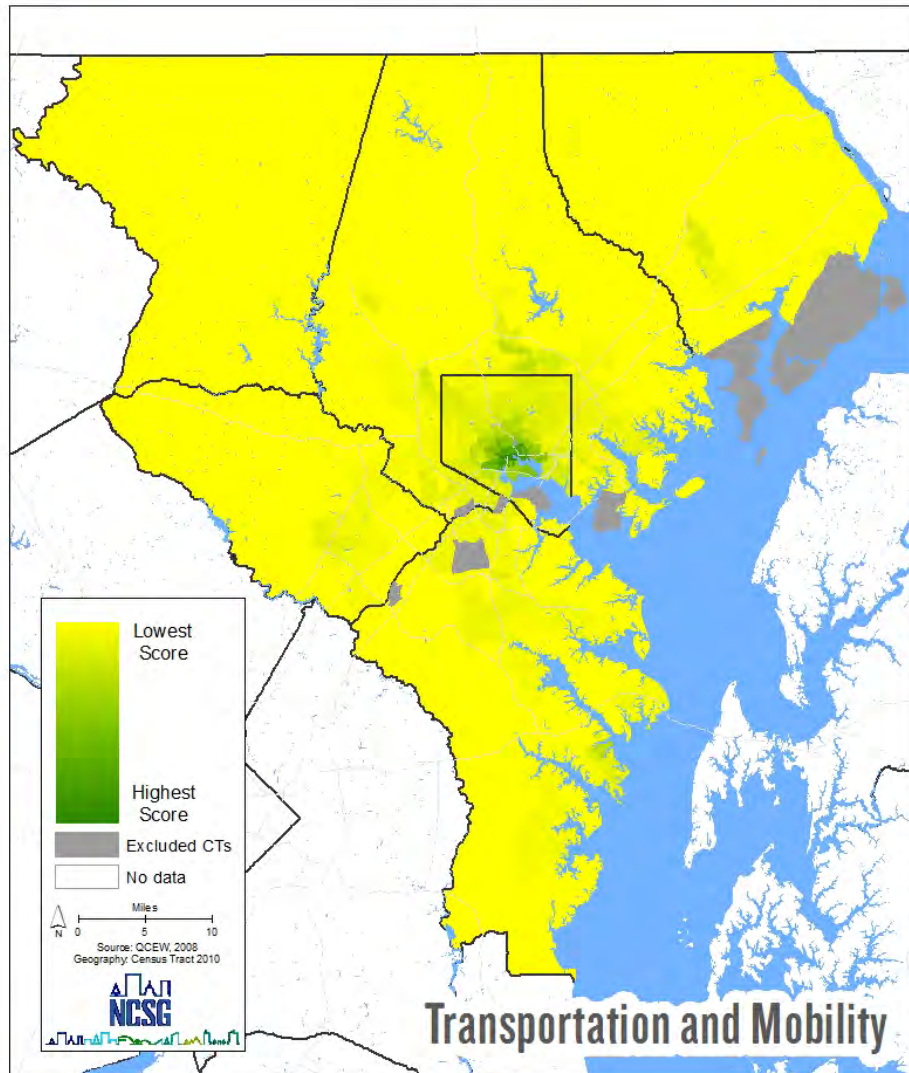
Walk Score

A measure based on walking distances to particular amenities. The measure incorporates road connectivity metrics such as block length and intersection density.

METHODOLOGY

The distance to a location, counts, and weights determine a base score of an address, which is then normalized to a score from 0 to 100. After this, an address may receive a penalty for having poor pedestrian friendliness metrics, such as having long blocks or low intersection density.
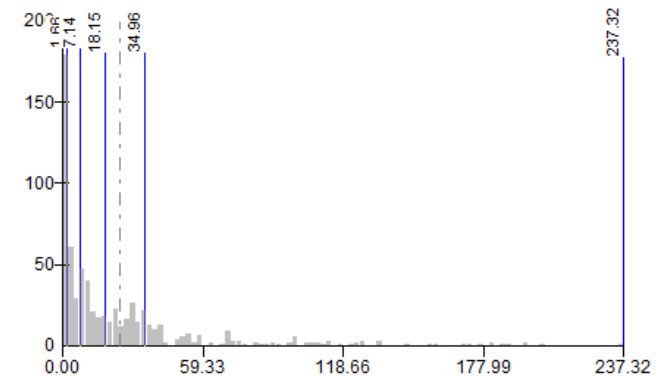
SUMMARY DATA

Anne Arundel	10.20
Baltimore	15.45
Carroll	1.42
Harford	6.55
Howard	8.56
Baltimore City	61.81

DATA SOURCE

Quarterly Census of Employment and Wages, 2008

HISTOGRAM

Transportation Trail Miles
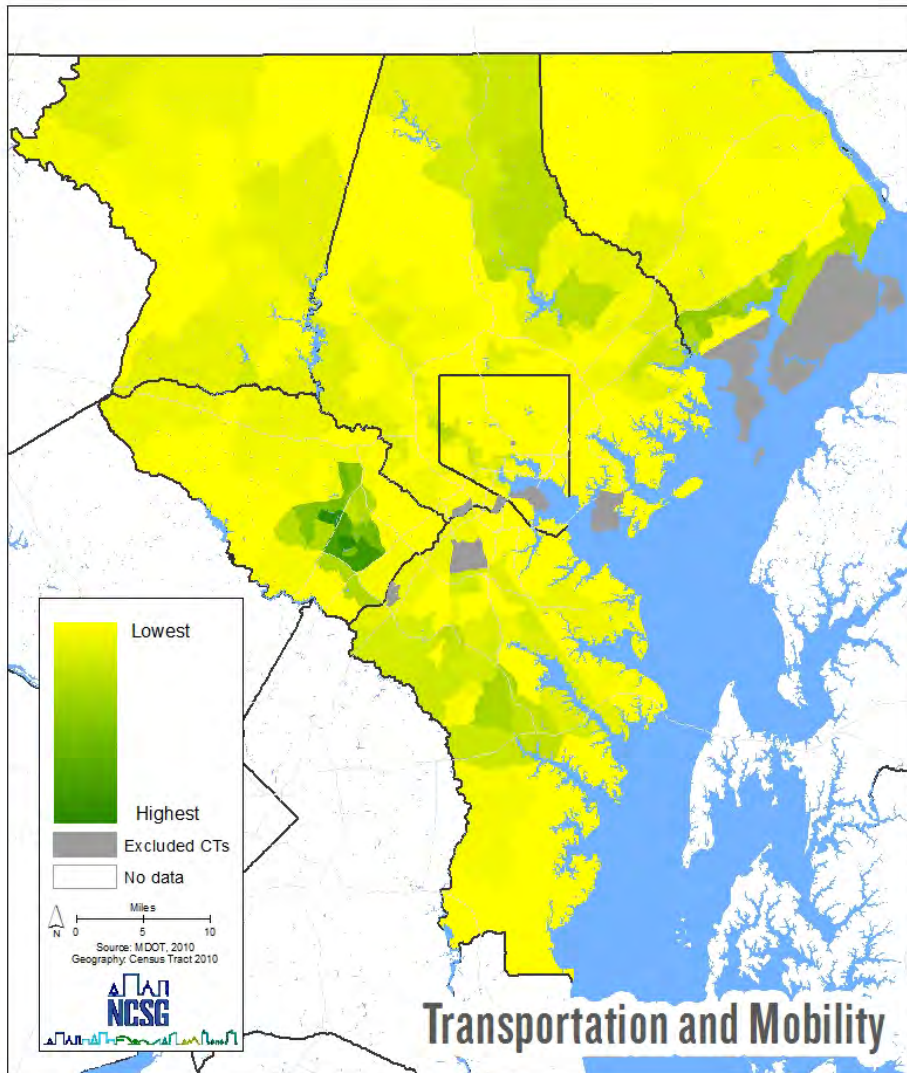
The total number of transportation trail miles in each census tract.

METHODOLOGY
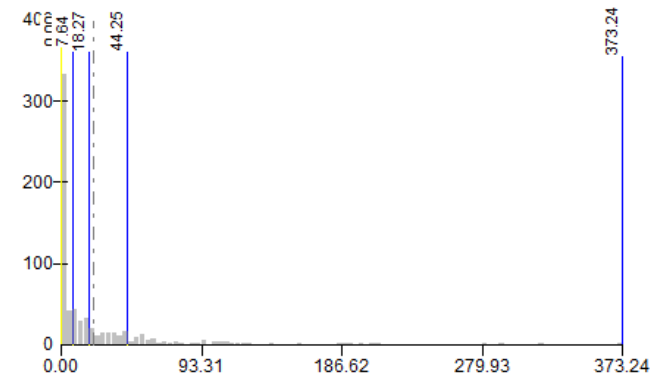Mapped as reported by the Maryland Department of Transportation.

SUMMARY DATA

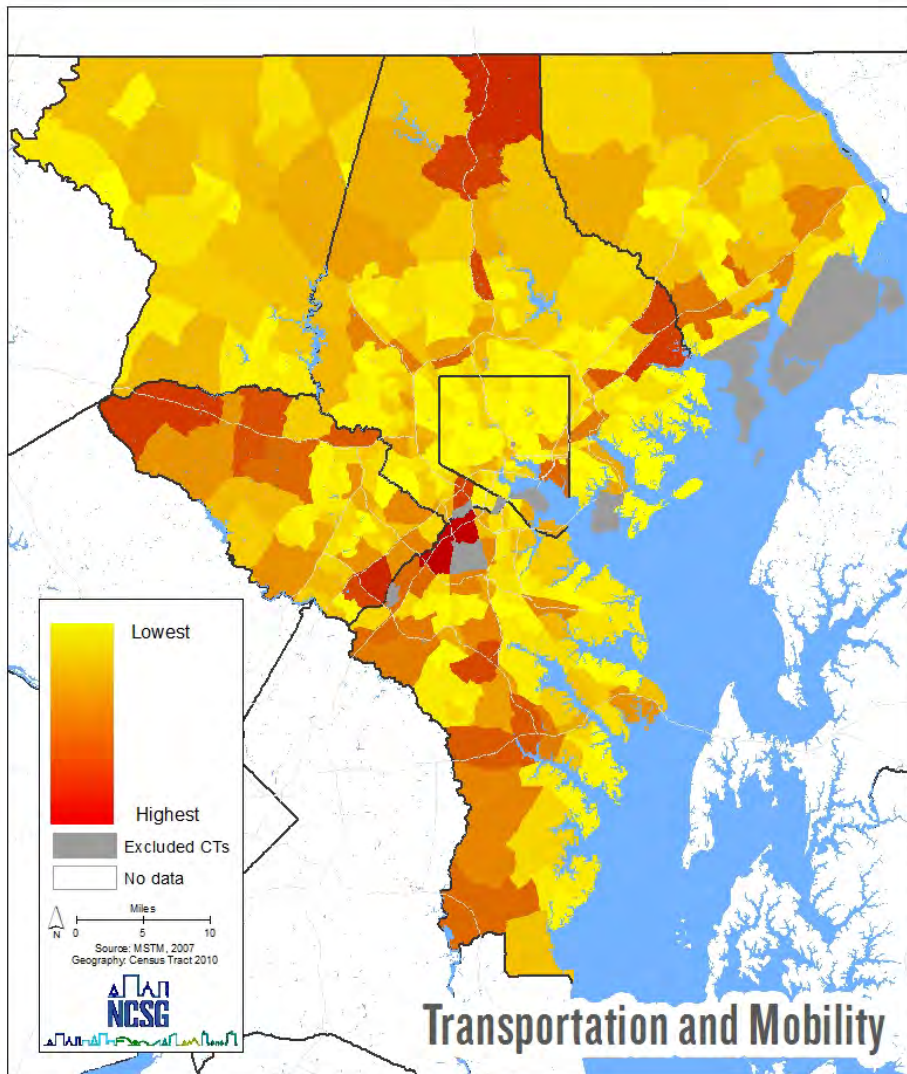|	
Anne Arundel	2,327.3
Baltimore	2,891.8
Carroll	760.1
Harford	1,599.9
Howard	4,948.3
Baltimore City	1,579.1

DATA SOURCE
Maryland Department of Transportation, 2010

HISTOGRAM

Per Capita VMT for Home-Based Trips

The average per capita vehicle miles traveled for all trips originating from home, regardless of destination. Uses modeled data to estimate how far you would expect to travel from each census tract.
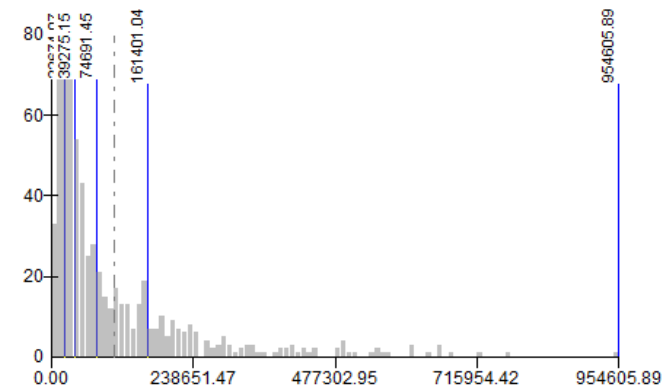
SUMMARY DATA (VMT per capita)

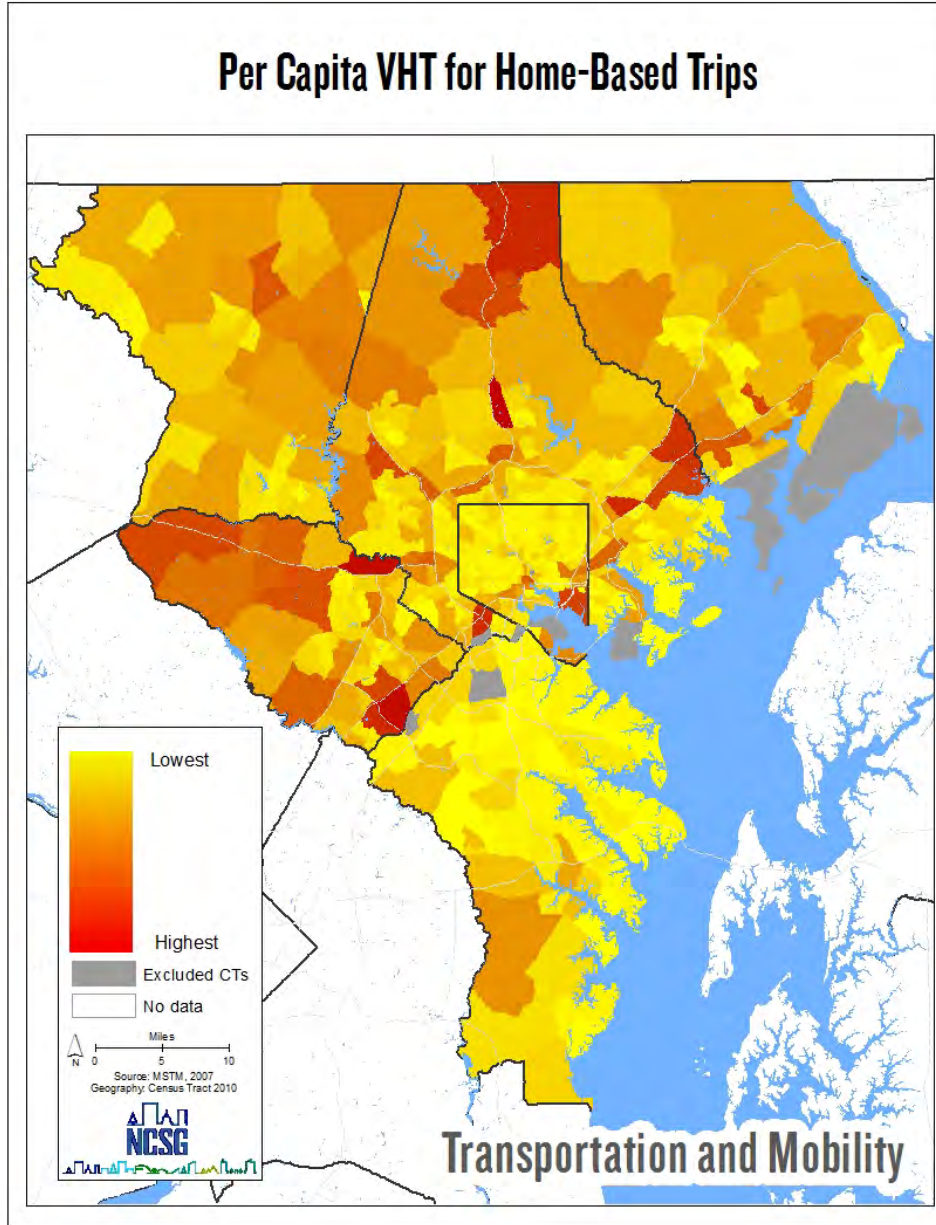|	
Anne Arundel	144,704.7
Baltimore	207,747.1
Carroll	131,787.0
Harford	103,368.5
Howard	196,240.2
Baltimore City	46,305.6

DATA SOURCE
Maryland Statewide Transportation Model, 2007

HISTOGRAM

Per Capita VHT for Home-Based Trips

Per Capita VHT for Home-Based Trips

The average per capita vehicle hours traveled for all trips originating from home, regardless of destination. Uses modeled data to estimate how long you would expect to travel from each census tract.

SUMMARY DATA (VHT per capita)

Anne Arundel	1,074.9
Baltimore	3,312.5
Carroll	4,578.6
Harford	3,833.3
Howard	5,668.4
Baltimore City	1,635.7

DATA SOURCE

Maryland Statewide Transportation Model, 2007

HISTOGRAM