



ORANGE COUNTY AFFORDABLE HOUSING NEEDS ASSESSMENT: RENTAL

Prepared For:

Orange County Partnership to End Homelessness

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Orange County Partnership to End Homelessness

The Orange County Partnership to End Homelessness is a broad group of individuals, organizations, institutions, and local governments that are actively working to alleviate homelessness in Orange County. The Partnership is lead by an executive team and four work groups that focus on specific aspects of homelessness outreach and alleviation. These four work groups are housing, employment, access to services, and community participation. The Partnership sponsors outreach programs and events such as Project Homeless Connect Orange County, an annual event that provides social, health, and housing services to citizens that are currently homeless or at risk of becoming homeless. The Partnership also conducts studies and publishes reports on the current state of homelessness in the county.

Department of City and Regional Planning - UNC Chapel Hill

Students from the Department of City and Regional Planning at the University of North Carolina- Chapel Hill often work on local projects related to planning in order to benefit both the students and their community partners. The Orange County Partnership to End Homelessness and students from UNC Chapel Hill partnered together through Dr. William Rohe's Urban Neighborhood Revitalization class (PLAN 763-Fall 2010) to create this report. A team of four students generated this affordable housing needs assessment with valuable feedback and guidance from both Dr. Rohe, Dr. Spencer Cowan and the Partnership to End Homelessness.

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Introduction to Orange County

Orange County, North Carolina is located in central North Carolina, in the area known as the “Piedmont Region.” The county is approximately 401 square miles and had a 2009 population of 126,532 (US Census Bureau). Since 1990, Orange County has experienced an average annual growth rate of 1.79%, and an average annual housing unit growth rate of 2.05%. Despite a higher rate of growth for housing units, a lack of growth in affordable housing units has led to increased pressure on existing affordable housing units in the county.

The county seat of Orange County is the town of Hillsborough. The other two significant towns in the county are Chapel Hill, the home of the University of North Carolina, and Carrboro. According to the 2006-2008 American Community Survey, the population of Orange County is 76.2% White, 13% African-American, and 5.7% Asian, and 6% Hispanic.

Purpose of Assessment

This assessment is designed to analyze the need for affordable rental housing in Orange County. To accomplish this goal, we split affordable rental housing into two groups: subsidized affordable rental housing and market-rate affordable rental housing. Because subsidized rental housing is already well-covered in other available publications, this report focuses primarily on market-rate housing. For market-rate affordable housing data, we used existing data sets to analyze the number of households in Orange County that were currently burdened by their housing costs as well as the number of rental units that need to be built in the county to alleviate households that are burdened by housing costs.

Data Sources

All data cited in this report comes from existing data sources. The primary base data for this report is the American Community Survey (ACS) (2005 and 2009) and the US Decennial Census (2000).

Literature Review

In preparing this report, several similar documents were used as models for analysis or background information.

- Wake County Housing Affordability Task Force Report. March 2003
- Summary- The Orange County Ten Year Plan to End Homelessness
- Summary- Orange County Consolidated Plan
- A Long Way from Home: The Impact of a Limited Supply of Workforce Housing in the Asheville Metropolitan Area. William M. Rohe, Spencer Cowan, Daniel A. Rodriguez, and Peter Zambito. Center for Urban and Regional Studies, The University of North Carolina at Chapel Hill. Report prepared for the North Carolina Association of Community Development Corporations. May 2010. 64 pp. CURS Report No. 1-10.
- Workforce Housing Needs in Brunswick County, North Carolina. William M. Rohe & Spencer M. Cowan, Center for Urban and Regional Studies, The University of North Carolina at Chapel Hill. Prepared for the North Carolina Association of Community Development Corporations. July 2007. 55 pps. CURS Report# 2007-01.

AFFORDABLE HOUSING

Definition of Housing Affordability

Affordability in Orange County

Definition of Housing Affordability

Housing affordability is dependent upon several factors that often change over time. Factors that influence the affordability of housing for a household include, but are not limited to, development costs, land price, household income, and household size. The U.S. Department of Housing and Urban Development (HUD) states that no household should spend over 30% of their income to pay for housing (HUD, 2010). Orange County considers affordable housing as housing that costs less than 30% of the income for persons earning 80% of the area median income (AMI). As part of its list of suggestions, the Orange County Ten Year Plan to End Chronic Homelessness cites the need to change the County's definition of affordable housing to include people who earn less than 80% of AMI (Orange County, 2007). This report assesses the need for affordable housing for low-income households, very low-income households, and extremely low-income households; households earning less than 80%, 50%, 30% of the median household income (MHI) in the county respectively.

Housing Affordability in Orange County

Affordable housing is needed in Orange County for multiple reasons. A lack of affordable housing leads to increased levels of homelessness, a fact that is reiterated in Orange County's Ten Year Plan to End Chronic Homelessness. During focus group meetings held to generate input for the plan, ten of the eighteen groups explicitly cited the lack of affordable housing in the county as a contributing factor to issues of homelessness¹. Furthermore, four of the focus groups specifically identified increasing the amount of affordable housing in Orange County as an idea for preventing and alleviating homelessness in the county.

Affordable housing is also important for supporting economically diverse communities. An adequate and equal spatial distribution of affordable housing can also cut down the daily commute by making it more affordable to live closer to a central business district where living expenses tend to be higher.

Lastly, relieving housing burden by strategically increasing affordable housing makes it easier for families and individuals to allocate their income towards other basic needs such as health care, education, food, and childcare.

¹ Focus groups were comprised of Orange County residents and professionals from pertinent industries.

HOUSING ASSESSMENT

Demographics

Household Characteristics

Percentage of Income Spent on Housing

Affordable Rental Housing Need

Affordable Rental Housing Supply

Gap Analysis

Demographics

Between the 2000 Census and the 2009 American Survey, Orange County experienced an estimated 9.18% growth in population; increasing from 118,227 to 129,083 total persons. Table 1 (pg. 14) shows that this growth is moderate compared to the 16.54% population growth for the state of North Carolina during the same time period. Population growth rate between 2000-2009 in Orange County is less than the 26% increase in total population between the 1990 and 2000 Census. In spite of the recent recession the county will most likely continue to experience an increase in total population over the next decade.

Table 2 (pg. 15) shows that as of the 2009 American Community Survey, the largest racial group in Orange County was White (77.5%) followed by Black (13.65%), Asian (6.7%), and Hispanic (6.3%). Between 2000-2009 the county has experienced some diversification, specifically with the growth of Asian and Latino communities. While the racial and ethnic composition of Orange County is fairly similar to that of the entire state of North Carolina, there are a few key differences. The 2009 American Community Survey estimates that 6.7% of Orange County's population is Asian compared to 2.3% for North Carolina. The Black population as a percentage of the total population is consistently lower for Orange County than it is for the state. This trend is visible in Figure 2 on page 15.

Figure 1: Population Change: Orange County
 (Source 2000 Census, 2005 and 2009 ACS)

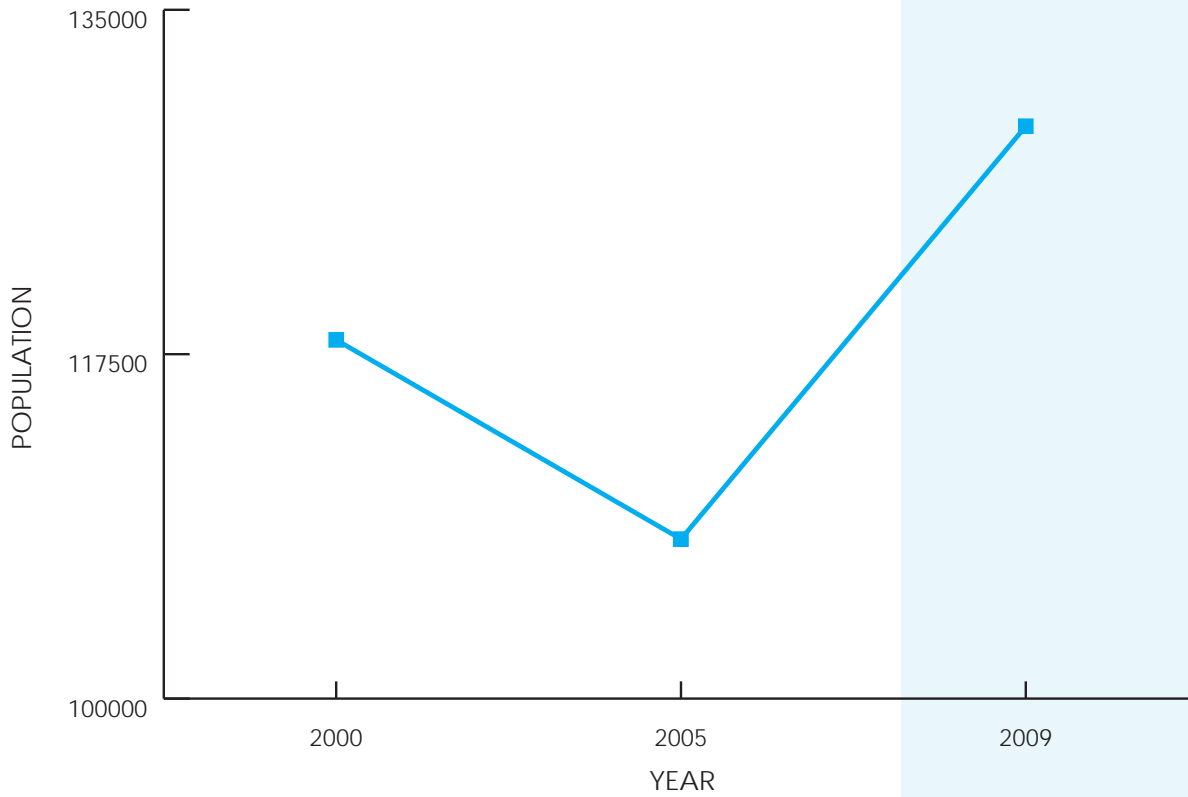


Table 1: Population Change: Orange County
 (Source 2000 Census, 2005 and 2009 ACS)

Population Change		
Year	Population: Orange County	Population: North Carolina
2000	118,227	8,049,313
2005	108,104	8,411,041
2009	129,083	9,380,884

Figure 2: Population Demographics
(Source 2000 Census, 2005 and 2009 ACS)

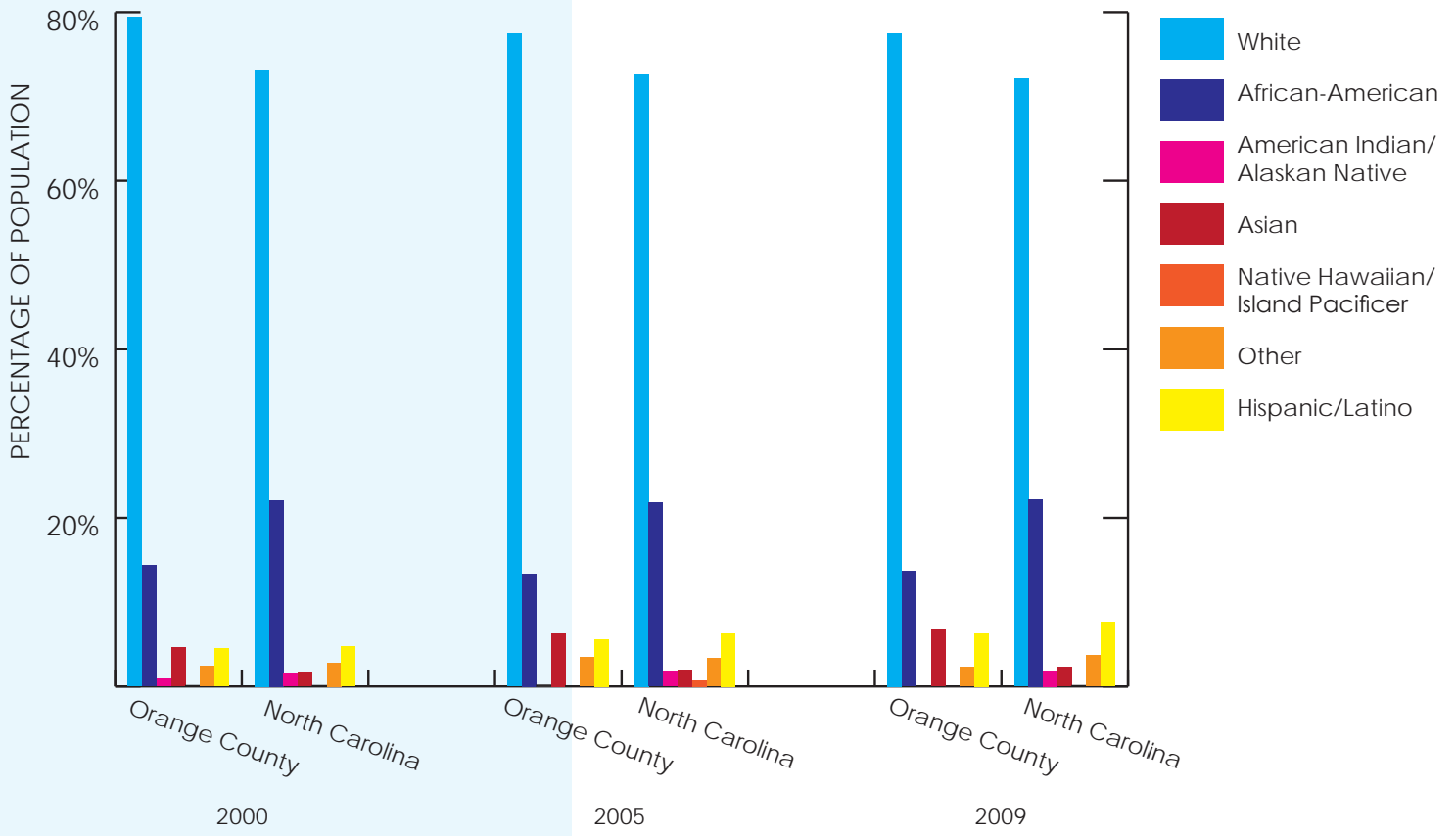


Table 2: Population Demographics
(Source 2000 Census, 2005 and 2009 ACS)

Population Demographics: Orange County							
Location		Orange County	North Carolina	Orange County	North Carolina	Orange County	North Carolina
Year		2000		2005		2009	
Race	White	79.40%	73.10%	77.40%	72.60%	77.50%	72.10%
	African-American	14.40%	22.10%	13.40%	21.80%	13.65%	22.20%
	American Indian/Alaska Native	0.90%	1.60%	0.15%	1.80%	N/A	1.90%
	Asian	4.60%	1.70%	6.30%	2%	6.70%	2.30%
	Native Hawaiian/Island Pacific	0.10%	0.10%	0.07%	0.70%	N/A	0.10%
	Other	2.40%	2.80%	3.47%	3.30%	2.30%	3.70%
	Hispanic/Latino	4.50%	4.70%	5.60%	6.30%	6.30%	7.60%

Household Characteristics

The median household income of Orange County in 2009 was \$50,159. This is \$6,485 greater than that of the state of North Carolina. Orange County's median household income has also experienced a higher rate of growth than that of North Carolina. Between 2005 and 2009 the median household income of Orange County increased by 14%, while the state's increased by only 7.2%.

In 2009, the number of households who rent in Orange County totaled 51,173. Of these 26.2% qualify as low-income. The specific number of households who rent in each low-income category was determined using a linear interpolation in order to adjust the ACS household income bracket categories to less than 30%, 31-50%, and 51-80% of MHI. Table 3 (pg. 17) shows that in 2009, 8.1% of Orange County households who rent were extremely low-income (earning 30% MHI or less), 6% were very low-income earning between 30-50% MHI), and 7.1% were low-income (earning between 50-80% MHI)¹. The total number in all categories of low-income households is slightly up from 2005, when 26% of Orange County households who rent qualified as low-income. In 2009, the percent of low-income renter households in Orange County was also higher than the percent in the state.

¹ The ACS household income brackets are a function of both income and household size. The income brackets are set at whole numbers such as \$5,000-\$9,999. These brackets do not perfectly match with the low-income categories of low-income, very low-income, and extremely low-income which change annually. The first step of the linear interpolation involved rounding the dollar value associated with each low-income category to the nearest thousand. When this rounded number fell within an ACS household income bracket, it represented only a fraction of the households in ACS household income bracket. This fraction was used to split number of households in the ACS household income bracket to find the number of households that rent by low-income category.

Figure 3: Low-Income Rental Households
(Source 2005 and 2009 ACS)

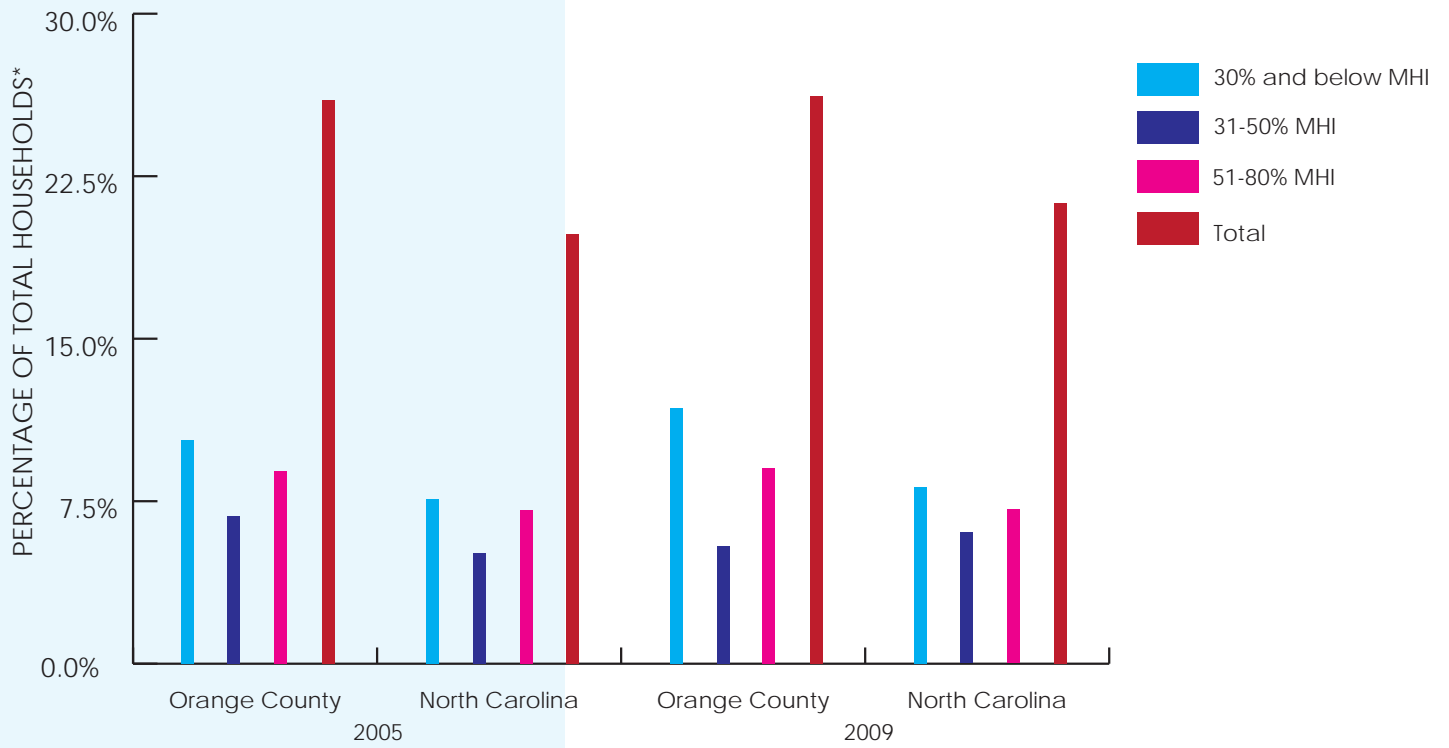


Table 3: Low Income Rental Households
(Source 2005 and 2009 ACS)

Low Income Rental Households*					
Year	Location	30% and below MHI	31-50% MHI	51-80% MHI	TOTAL
		2005	Orange County	10.30%	6.80%
	North Carolina	7.60%	5.10%	7.10%	19.80%
2009	Orange County	11.80%	5.40%	9.00%	26.20%
	North Carolina	8.10%	6.00%	7.10%	21.20%

* The table and graph indicate the percentage of low-income rental households compared to all households who rent or own.

Percentage of Income Spent on Housing

In order to assess the need for affordable housing in the area, we looked at the percentage of household income spent on housing in specific income brackets. As expected, the two lowest brackets had the highest percentage of households spending more than 30% of their income on housing.

For our household demand numbers, our goal was to find the total number of households at or below various income levels. Using data from the ACS, we added all the households together for each income level. For example, in order to get the household demand at 100% of median household income, \$50,159, we summed all numbers at or below an income of \$49,000. We repeated the same step for the other income levels.

For households earning between \$10,000 and \$19,999, 92% spent more than 30% of their income on housing in 2009. This represents a steady increase from 76% of households in 2005 and 88% in 2007. For households earning between \$20,000 and \$34,999, 48% spent more than 30% of their income on housing in 2009. While this is a decrease from 67% of households in 2007, it is also a return to 2005 numbers, where 48% of households in this bracket spent more than 30% of their income on housing. Finally, for households earning between \$35,000 and \$49,999, 18% spent more than 30% of their income on housing in 2009. This represents a steady increase from 15% of households in 2007 and 11% of households in 2005.

As expected almost no household earning \$75,000 or more spent more than 30% of their income on housing.

Table 4: Renters Spending More than 30% of Income on Housing By Income Bracket (Source 2005, 2007 and 2009 ACS)

Renters Spending More than 30% of Income on Housing by Income Bracket			
Income Bracket	Percentage of renters spending more than 30% of their income on rent		
	2009	2007	2005
<\$10,000	83%	73%	94%
\$10,000 to \$19,999:	92%	89%	77%
\$20,000 to \$34,999:	48%	67%	48%
\$35,000 to \$49,999:	18%	15%	11%
\$50,000 to \$74,999:	13%	8%	3%
\$75,000 or more:	0%	0%	3%

Affordable Rental Housing Need

In order to estimate a need for affordable housing, we started with the 2009 Census table titled "Household Income by Tenure." This table shows the number of renters at various income levels.

Table 5: Rental Household Income by Tenure in 2009 (Source 2009 ACS)

2009: Rental Household Income by Tenure	
Income Level	Rental Households
Less than \$5,000	2,168
\$5,000 to \$9,999	1,831
\$10,000 to \$14,999	2,058
\$15,000 to \$19,999	1,442
\$20,000 to \$24,999	1,338
\$25,000 to \$34,999	3,577
\$35,000 to \$49,999	3,162
\$50,000 to \$74,999	2,776
\$75,000 to \$99,999	1,079
\$100,000 to \$149,999	304
\$150,000 or more	372
Total Renter occupied:	20,107

In order to separate the renter population by income level, we took the Orange County median household income of \$50,159 and used it to generate 80%, 50% and 30% of Median Household Income (MHI).

One difficulty with this demand analysis is that the levels of rent represented on the table do not directly fit into our computed income levels. For example, a household at 80% of the median household income earns \$40,127, annually. However, the income bracket where this number is falls between the \$35,000 to \$49,000 range. If we included the full 3,162 households that make up this range, we would be over counting. In order to remedy this problem, we took the proportion of income of the range and applied it to the number of households within that range. Since 80% of the median income, \$40,127, cut into the \$35,000 to \$49,000 range by about \$5000, we applied a 35% proportion to the amount of households. Thus we took $3,162 \times 35\%$, or 1,106, and included it in our total number of rental households for the 80% income bracket.

Table 6: Rental Housing Demand Analysis in 2009

2009: Demand Analysis		
Percent of Median Household Income	Household Income	Household Demand at Various Income Levels
100%	\$50,159	15,576
80%	\$40,127	13,521
50%	\$25,080	8,837
30%	\$15,048	6,057

Affordable Rental Housing Supply

The next step was to determine the number of affordable rental units in Orange County. The 2009 Census table titled Rent for Occupied Units gave the number of units in Orange County at each rent level.

Table 7: Rent for Occupied Units in 2009 (Source 2009 ACS)

2009: Rent for Occupied Units		
Rent Level	Occupied Units	Percentage
No rent paid	1018	5%
Less than \$200	40	0%
\$200 to \$299	0	0%
\$300 to \$499	1,575	8%
\$500 to \$749	6,410	32%
\$750 to \$999	7,110	35%
\$1,000 to \$1,499	2,366	12%
\$1,500 or more	1,588	8%
Total Occupied Units	20,107	100%

Similar to our demand analysis, we began by using Orange County median income of \$50,159 as our base. Since the rent levels on our Rent for Occupied Units table are in monthly amounts, we divided by 12 to convert annual income to monthly income. These monthly income numbers were multiplied by 30% to derive the maximum allowable monthly expenditures for shelter at each income level. This percentage is a generally accepted definition of affordability in the housing industry.

We then took the percentage of income allocated for housing and included all rental units that could be afforded at that income level. For example, if the household earns \$50,159 annually, they have \$1,253 allocated for their monthly housing expenses. Thus, while the maximum they could pay would be \$1,253/month for a rental unit, they could also afford any unit cheaper than that. So, to get the total number of available units, we added together all units at or below \$1,253/month. We repeated these steps to get the number of units for the remaining income levels.

A household earning 100% of the median household income has \$1,253 to allocate toward housing. However, the rental category where this income would start is from \$1000 to \$1,499. In order to solve this problem, we followed the same extrapolation method used for the demand analysis. Since \$1,253 extends into the \$1,000 to \$1,499 bracket by 253, we took about half of the 2,366 units that fell within this band. We repeated these steps for all levels.

Table 8: Rental Housing Supply Analysis in 2009

2009: Supply Analysis				
Percent of Median Household Income	Household Income	Monthly Income	30% allocated for housing	Occupied Units 2009
100%	\$50,159	\$4,180	\$1,253.98	16,335
80%	\$40,127	\$3,344	\$1,003.18	15,135
50%	\$25,080	\$2,090	\$626.99	4,820
30%	\$15,048	\$1,254	\$376.19	40

Gap Analysis

Finally, we were able to use the need and supply analysis in order to find out the current gap in affordable housing at various income levels. For households earning 30% of the median household income, \$12,038, there is a gap of 6,017 units. These households would have to find units that rent for \$376/month or less to have “affordable housing.” This gap represents a lack of affordable housing for 83% of Orange County residents at this income level. For households earning less than \$20,000 annually, there is also a gap of 4,017 units.

On the one hand, it is fair to assume that the gap is higher than the table indicates. A portion of the rental units listed in Table 9 are rented to those making more than the income brackets in our analysis. These renters decrease the amount of housing available to low-income renters, increasing the gap. On the other hand, our supply only includes occupied units, it is reasonable to assume that the units available would increase if vacant units were included. However, our data only provides pricing information for occupied units, therefore we are not able to include objective data for these unoccupied units.

Statistically, 40% of Orange County residents who earn 30% or less of MHI are under the age of 25 and 63% of them are white. These statistics points to a need for housing for college-age students in Orange County. However, the statistically high percentage of non-white residents at the lowest income level also means that minorities in Orange County are disproportionately over-represented in the 30% MHI income bracket.

Table 9: Rental Housing Gap Analysis in 2009

2009: Gap Analysis				
Percent of Median Household Income	Household Income	Household Demand @ Various Income Levels	Units	Gap
100%	\$50,159	15,576	16,335	759
80%	\$32,102	13,521	15,135	1,614
50%	\$20,064	8,837	4,820	(4,017)
30%	\$12,038	6,057	40	(6,017)

RENTAL STRATEGIES

Rental Housing Location Strategies

Median Household Income Map

Median Rent Map

Median Household Size Map

Poverty Levels Map

Rent as a Percentage of Income Map

Rental Housing Location Strategies

The total need for affordable rental housing is important, but it is also important to know the geography of this need. This section includes census tract maps indicating population characteristics in the county. These maps include median income, median rental price, median household size, poverty levels and rent as a percentage of income for all county census tracts.

We recognize that 2000 Census data may vary from current trends; however, 2010 Census data is not currently available. In addition, this data is useful as a basis for tracking trends when 2010 Census data is released.

Figure 4 2000 Census Tract Map:
Orange County (Source 2000 Census)

This map shows all of the census tracts in Orange County, NC for the 2000 Census. This map will be used on subsequent pages to illustrate trends of the population in the county.

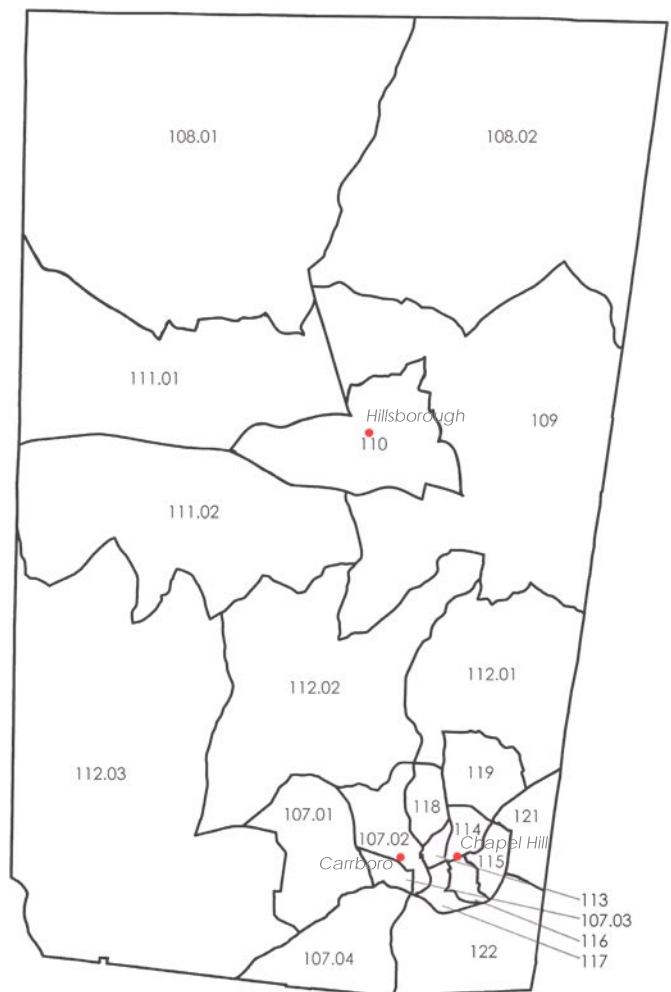
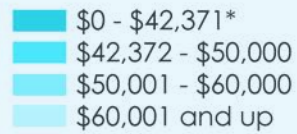
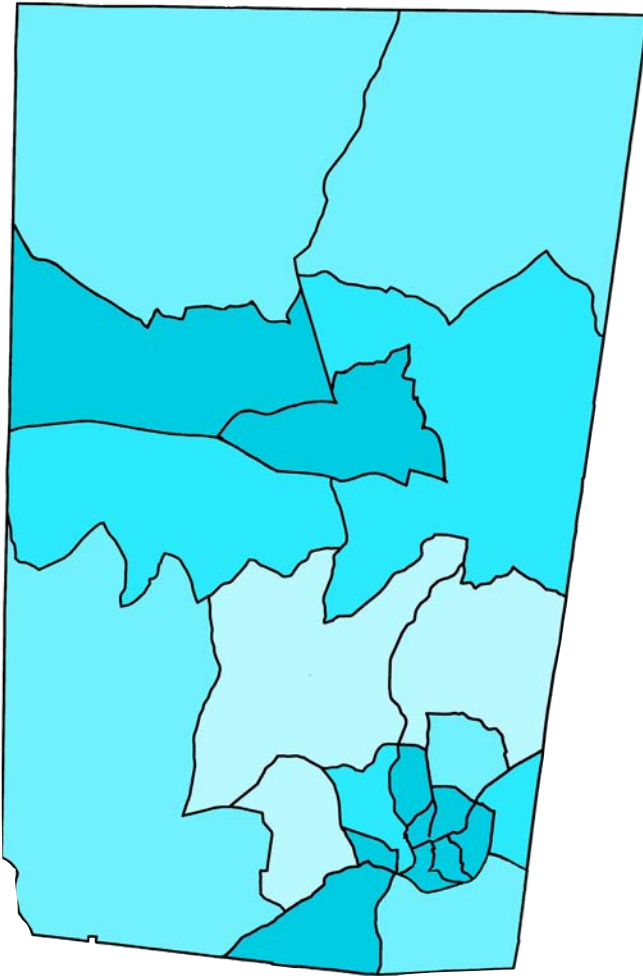


Figure 5 - 2000 Census: Median Household Income (Source 2000 Census)

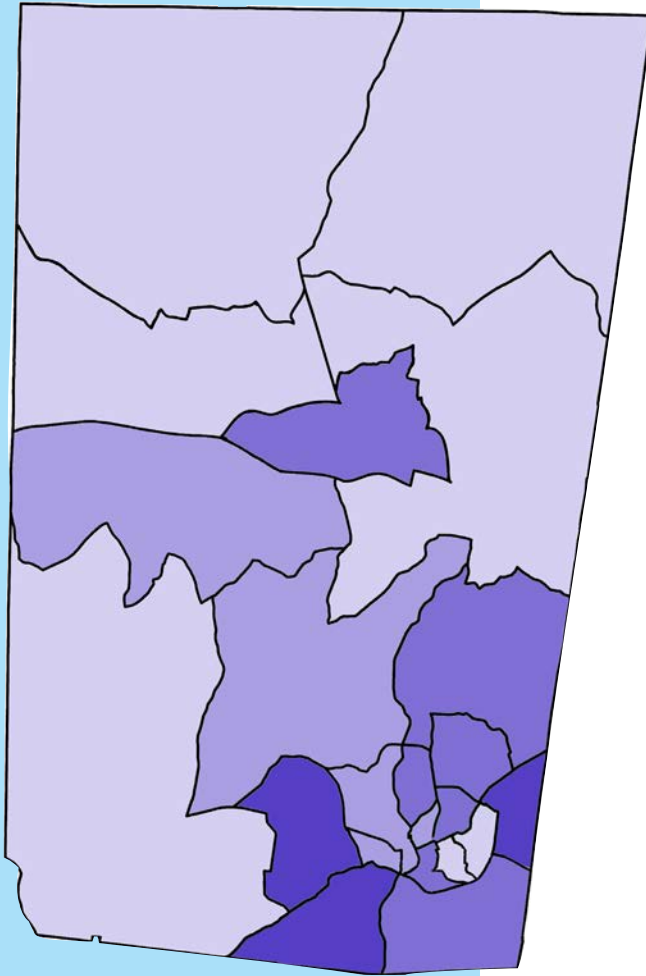


* Orange County Household Median Income (2000 Census)

Table 10 - 2000 Census: Median Household Income (Source 2000 Census)

Census Tract	Median Household Income	Census Tract	Median Household Income
Tract 107.01	67,500	Tract 112.02	70,766
Tract 107.02	45,500	Tract 112.03	50,839
Tract 107.03	28,108	Tract 113	21,597
Tract 107.04	34,156	Tract 114	27,821
Tract 108.01	50,390	Tract 115	40,870
Tract 108.02	56,250	Tract 116	4,982
Tract 109	47,960	Tract 117	35,230
Tract 110	40,424	Tract 118	43,790
Tract 111.01	39,570	Tract 119	56,121
Tract 111.02	43,197	Tract 121	47,063
Tract 112.01	60,655	Tract 122	59,831

Figure 6 - 2000 Census: Median Rent
(Source 2000 Census)



- \$801 and up
- \$685 - \$800
- \$601 - \$684*
- \$0 - \$600

* Orange County Median Gross Rent
(2000 Census)

Table 11 - 2000 Census: Median Rent
(Source 2000 Census)

Census Tract	Median Rent (\$)	Census Tract	Median Rent (\$)
Tract 107.01	908	Tract 112.02	622
Tract 107.02	678	Tract 112.03	546
Tract 107.03	642	Tract 113	625
Tract 107.04	809	Tract 114	710
Tract 108.01	598	Tract 115	556
Tract 108.02	513	Tract 116	324
Tract 109	557	Tract 117	753
Tract 110	687	Tract 118	776
Tract 111.01	551	Tract 119	786
Tract 111.02	620	Tract 121	804
Tract 112.01	762	Tract 122	723

Figure 7 - 2000 Census: Median Household Size
(Source 2000 Census)

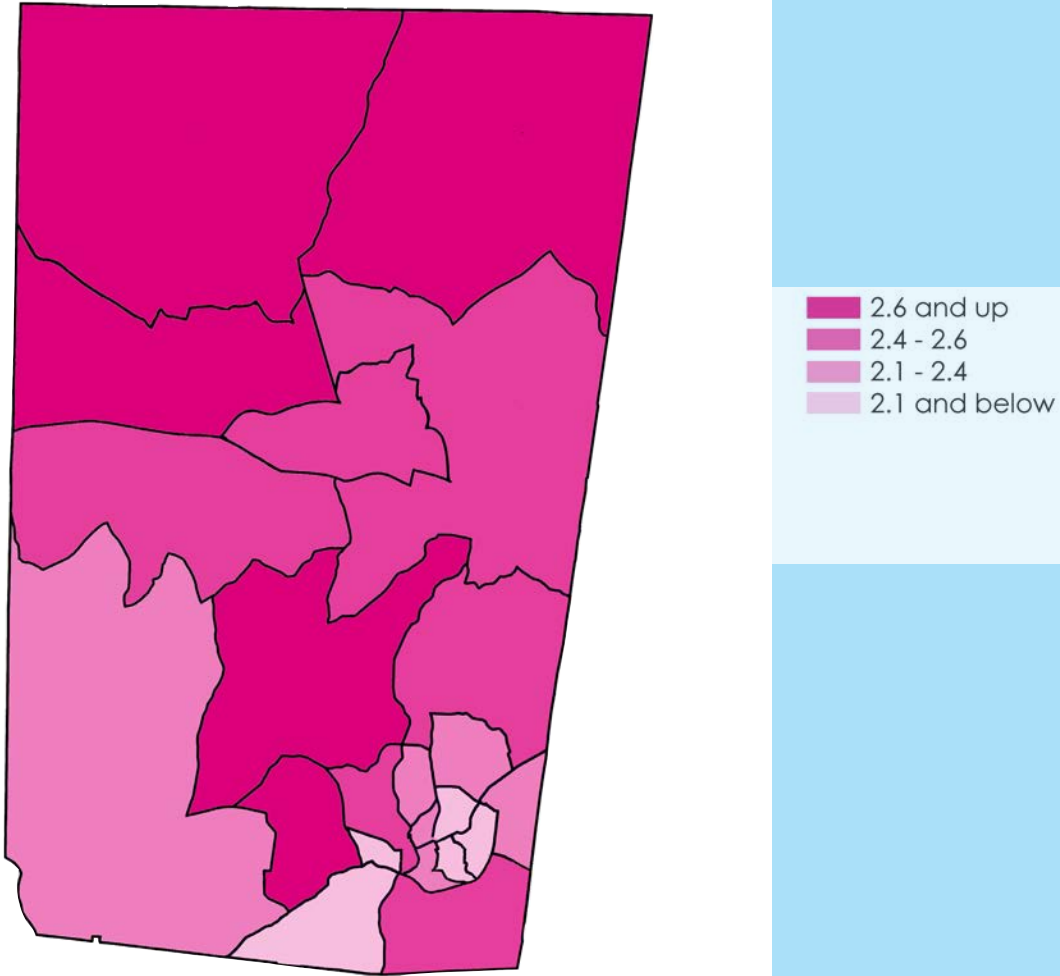


Table 12 - 2000 Census: Median Household Size
(Source 2000 Census)

Census Tract	Median Household Size	Census Tract	Median Household Size
Tract 107.01	2.64	Tract 112.02	2.67
Tract 107.02	2.55	Tract 112.03	2.36
Tract 107.03	1.95	Tract 113	2.23
Tract 107.04	2.09	Tract 114	2.04
Tract 108.01	2.62	Tract 115	2.1
Tract 108.02	2.6	Tract 116	1.81
Tract 109	2.48	Tract 117	2.22
Tract 110	2.43	Tract 118	2.31
Tract 111.01	2.62	Tract 119	2.36
Tract 111.02	2.53	Tract 121	2.21
Tract 112.01	2.47	Tract 122	2.42

Figure 8 - 2000 Census: Poverty Levels
(Source 2000 Census)

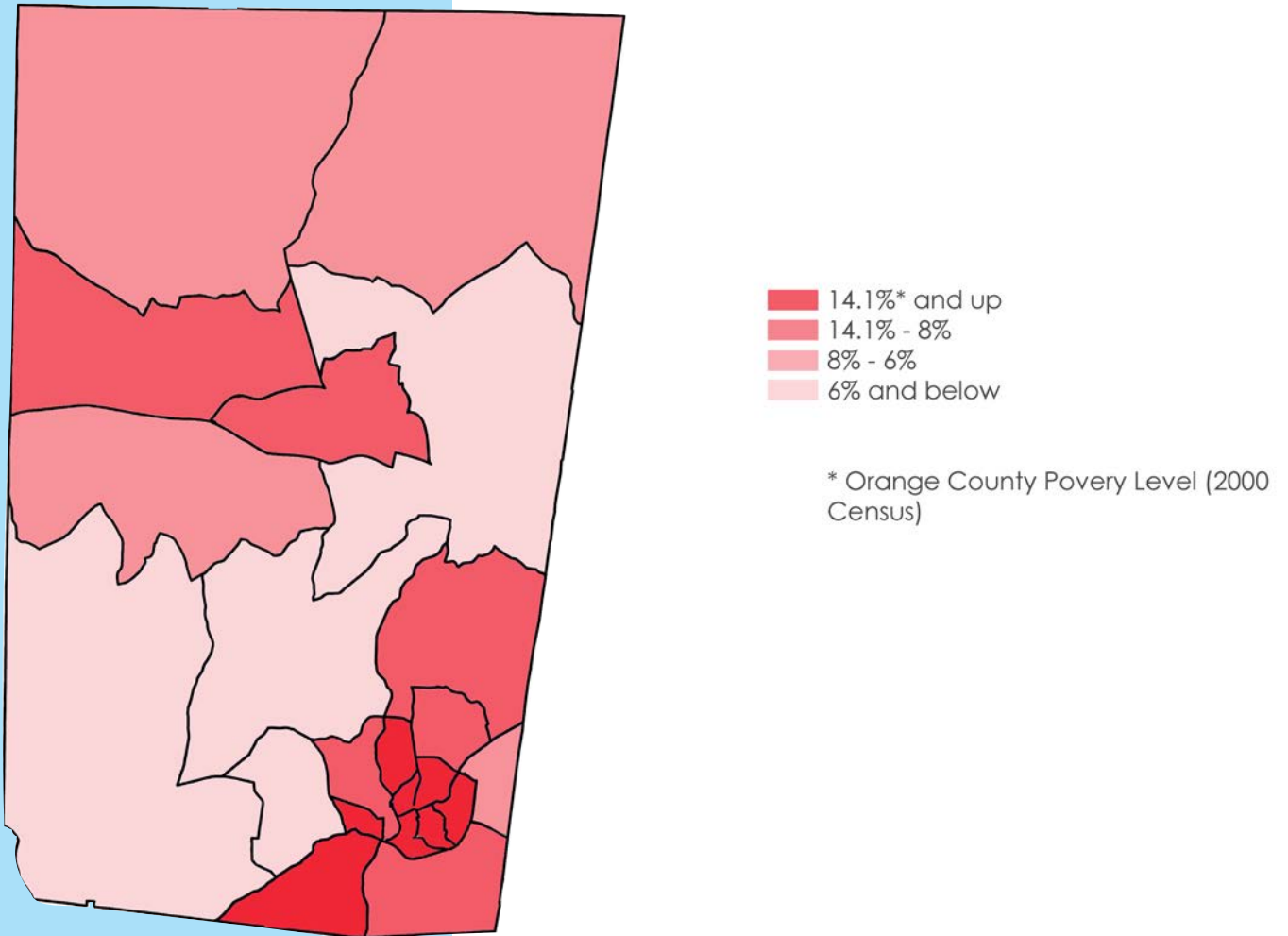


Table 13 - 2000 Census: Poverty Levels
(Source 2000 Census)

Census Tract	Poverty Level (%)	Census Tract	Poverty Level (%)
Tract 107.01	5	Tract 112.02	5.8
Tract 107.02	12	Tract 112.03	5.9
Tract 107.03	23.3	Tract 113	36.7
Tract 107.04	21.4	Tract 114	34
Tract 108.01	7.3	Tract 115	18.4
Tract 108.02	6.7	Tract 116	79.8
Tract 109	5	Tract 117	33.7
Tract 110	9.8	Tract 118	15.9
Tract 111.01	9.5	Tract 119	8.1
Tract 111.02	7.5	Tract 121	7.4
Tract 112.01	8.8	Tract 122	12.9

Figure 9 - 2000 Census: Rent as a Percentage of Income (Source 2000 Census)

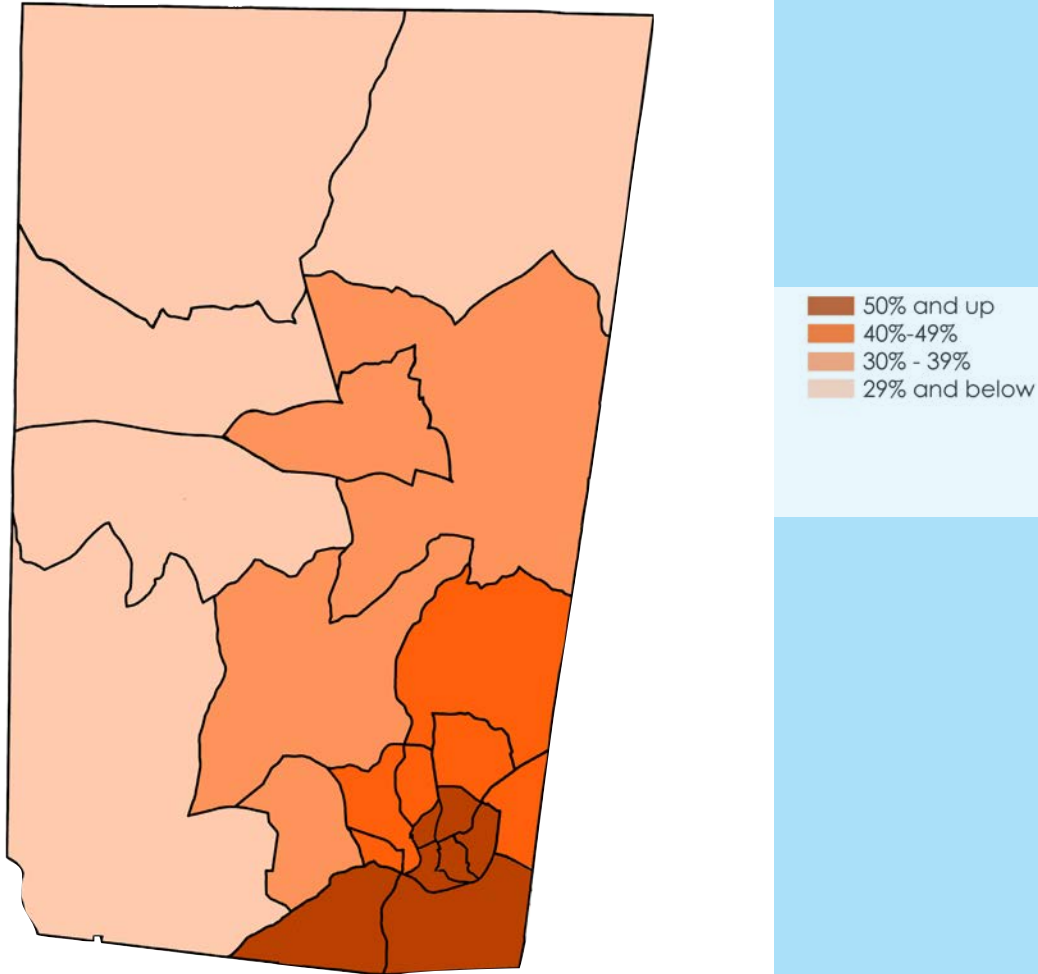


Table 14 - 2000 Census: Rent as a Percentage of Income (Source 2000 Census)

Census Tract	Rent to Income (%)	Census Tract	Rent to Income (%)
Tract 107.01	32.6	Tract 112.02	37.6
Tract 107.02	49.2	Tract 112.03	15.3
Tract 107.03	47.4	Tract 113	50.4
Tract 107.04	57	Tract 114	62.5
Tract 108.01	23.9	Tract 115	57.4
Tract 108.02	27.3	Tract 116	74.7
Tract 109	32	Tract 117	50.8
Tract 110	36	Tract 118	48.1
Tract 111.01	23.8	Tract 119	46.7
Tract 111.02	28.2	Tract 121	46.5
Tract 112.01	41.2	Tract 122	52

APPENDIX

Sources

2000 Census

American Community Survey 2005, 2009

U.S. Department of Housing and Urban Development: Community Planning & Development. (2010, December 2). Affordable Housing. Retrieved from <http://www.hud.gov/offices/cpd/affordablehousing/>

Orange County, The Orange County Partnership to End Homelessness. (2007). Orange County Ten Year Plan to End Chronic Homelessness. Hillsborough, NC. Retrieved from: <http://www.co.orange.nc.us/housing/OrangeCountyTenYearPlanToEndChronicHomelessness.asp>