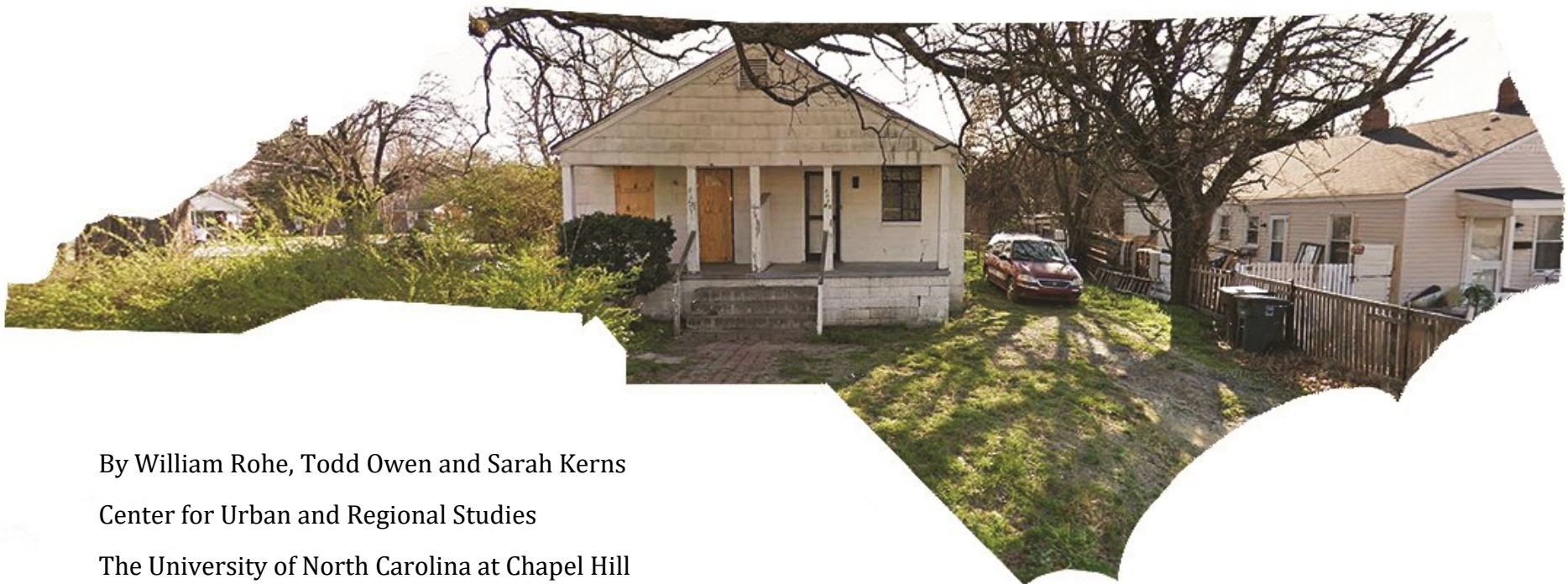


EXTREME HOUSING CONDITIONS IN NORTH CAROLINA



By William Rohe, Todd Owen and Sarah Kerns

Center for Urban and Regional Studies

The University of North Carolina at Chapel Hill

February 2017

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EXECUTIVE SUMMARY

Decent, secure and affordable housing is a fundamental human need. Beyond providing shelter from the elements, it provides a platform for undertaking other critical activities of life such as obtaining an education, finding and re-

those increasing rents have contributed to overcrowding, as households cannot afford to rent housing large enough to adequately accommodate their members. Finally, although progress has been made in reducing the number of

ard conditions (rental units that lack complete kitchen and/or bathroom facilities).

Using 2013 American Community Survey 5-year estimates, we present data on the number of housing deficits by region (Mountains, Piedmont and Coastal Plain), by county and by census tract. In doing so, we look to bring attention to those conditions and to aid state, county, municipal and non-profit organizations in targeting their housing programs to areas of greatest need.

...FINDING DECENT, SECURE AND AFFORDABLE RENTAL HOUSING IS INCREASINGLY DIFFICULT FOR MANY NORTH CAROLINIANS.

taining employment and maintaining both physical and mental health. Without such housing it is extremely difficult to have a fulfilling life and to be a productive member of society.

Unfortunately, finding decent, secure and affordable rental housing is increasingly difficult for many North Carolinians. In recent years wages have stagnated while rents have continued to climb, resulting in a sharp increase in the number of cost-burdened rental households at risk of being unable to afford other necessities such as food and clothing. Moreover,

substandard housing units in North Carolina, there were still thousands of rental housing units in the state that lacked complete plumbing and/or kitchen facilities.

The purpose of this study is to identify locations in North Carolina with extreme housing needs, defined as having relatively high percentages of at least two of the following three housing conditions: severe cost burden (households paying more than 50 percent of their income for rent), overcrowding (rental units inhabited by more than one person per room) and substand-

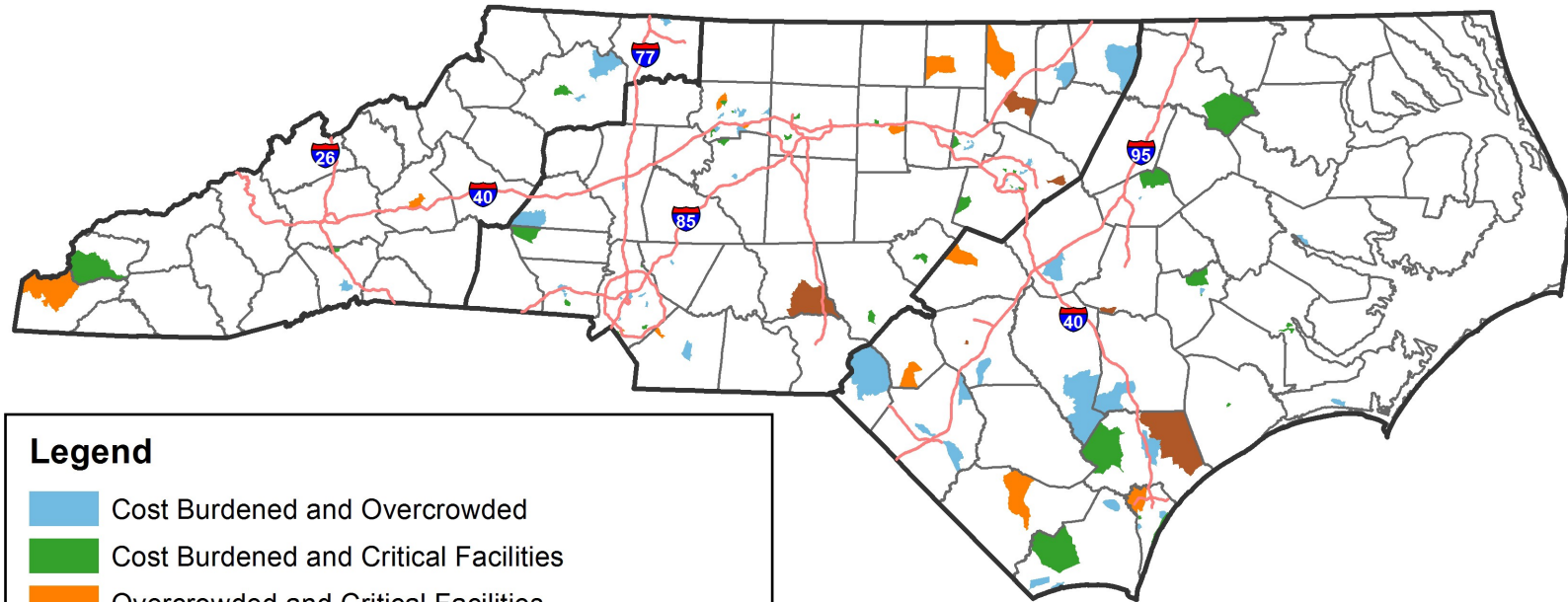
Findings

Our analysis of extreme housing conditions in North Carolina suggests that the members of over 377,000 households in the state are held back from leading fulfilling and productive lives by living in housing that lacks critical facilities, that is overcrowded or that imposes a severe cost burden on residents. More specifically, as of 2013, North Carolina had over 292,000 households that were severely cost burdened by their rents, more than 65,000 rental units that were







EXECUTIVE SUMMARY

Statewide Extreme Housing Census Tracts

THE DISTRIBUTION OF EXTREME HOUSING CONDITIONS INDICATES THAT A LACK OF AFFORDABLE AND SAFE HOUSING IS A STATEWIDE PROBLEM.



Legend

-  Cost Burdened and Overcrowded
-  Cost Burdened and Critical Facilities
-  Overcrowded and Critical Facilities
-  Cost Burdened, Overcrowded, and Critical Facilities
-  Regions
-  Interstates

In addition to the maps in this report, an interactive map of Extreme Housing Conditions in North Carolina can be accessed by visiting http://bit.do/CURS_Housing.

EXECUTIVE SUMMARY

overcrowded and more than 20,000 rental units that lacked either complete kitchen and/or complete bathroom facilities.

Moreover, this is a growing problem, with the number of severely cost-burdened households increasing by 22.5 percent and the number of overcrowded households by 45.4 percent between 2008 and 2013. The only bright spot is that the number of housing units lacking in complete kitchen or bathroom facilities decreased by 27 percent during this time period.

Extreme housing conditions can be found throughout the state in urban, suburban and rural communities (see Map 1). A total of 108 North Carolina census tracts had extreme housing conditions in 2013. We found census tracts with extreme housing conditions in 46 of North Carolina's 100 counties and in all three geographic regions. Looking at the distribution by region, the largest concentrations were in the Piedmont and Coastal Plain. The Coastal Plain was the only region, however, to have its share of extreme tracts (35.2 percent) exceed its share

of the state's census tracts (28 percent), indicating that a disproportionately high number of tracts in the Coastal Plain had extreme housing conditions. Turning to the urban-rural breakdown, although there were more census tracts with extreme housing conditions in urban areas, the extreme tracts were roughly proportional to the percentage of urban and rural tracts in the state; 63 percent of all census tracts in our study were urban, while 62 percent of the extreme tracts were in urban areas.

In terms of the social characteristics of census tracts with extreme housing conditions, they tended to have higher percentages of African Americans, Hispanics and people living in poverty compared to all census tracts.

- African Americans made up 27.4 percent of the population in extreme tracts compared with 21.1 percent of the population in all census tracts.
- Hispanics made up 13.5 percent of the population in extreme tracts compared with 8.7 percent of the population in all census tracts.

- 22.1 percent of the population in extreme tracts lived in poverty compared with 17.2 percent of the population in all census tracts.

Our analysis of each of the three components of extreme housing conditions indicates that severe housing cost burden is a growing problem in North Carolina. In 2013, a total of 292,544, or 21.8 percent of North Carolina's renter households, paid more than 50 percent of their income on housing costs. There were 53,737 more severely housing cost-burdened renter households in 2013 than there were in 2008, a 22.5 percent increase.

- In more than one-fifth of North Carolina census tracts, 30 percent or more of renter households were severely cost burdened.
- In eight census tracts, over 60 percent of renter households were severely cost burdened, with the highest percentage being 77.4 percent in a Wake County tract.

The analysis also indicates that approximately one in 20 rental housing units in North Carolina

EXECUTIVE SUMMARY

was overcrowded. In 2013 there were 65,410 overcrowded rental units in North Carolina.

complete kitchen and/or plumbing facilities. In 2013, a total of 20,141, or 1.5 percent of North

THE MOST IMPORTANT ACTION THE STATE CAN TAKE IS TO INCREASE ITS CONTRIBUTIONS TO THE NORTH CAROLINA HOUSING TRUST FUND, WHICH IS USED TO PRODUCE QUALITY AFFORDABLE RENTAL HOUSING.

There were 20,437 more overcrowded rental units in North Carolina in 2013 than in 2008, an increase of 45.4 percent.

- In more than one-fifth of North Carolina census tracts, the rate of renter household overcrowding was 10 percent or more.
- In six census tracts, over 30 percent of renter households were overcrowded, with the highest rate being 53 percent in a Wake County tract.

On a positive note, North Carolina has seen a reduction in the number of rental units that lack

Carolina's renter households, lacked these critical facilities, 7,315 fewer than in 2008.

- In over one-fifth of census tracts in North Carolina, 9 percent or more of rental households lacked critical facilities.
- In six census tracts, over 33 percent of rental households lacked critical facilities, with the highest being 58.1 percent in a Wake County tract.

Recommendations

The distribution of extreme housing conditions indicates that a lack of affordable and safe housing is a statewide problem. As a result, state government should play an important role in improving both housing conditions and affordability. Although the state provides funding for the North Carolina Housing Trust Fund and administers federal programs such as the Low-Income Housing Tax Credit and the HOME Investment Partnerships Program (HOME) programs, more needs to be done to improve and expand affordable rental housing in the state. The most important action the state can take is to increase its contributions to the North Carolina Housing Trust Fund, which is used to produce quality affordable rental housing.

Local governments also have important roles to play. The larger ones receive Community Development Block Grant and HOME funds directly from the U.S. Department of Housing and Urban

EXECUTIVE SUMMARY

Development but they also need to develop and fund their own housing programs. Some North Carolina municipalities and counties have created their own housing programs and funded them with general tax revenues, general obligation bonds and/or the donation of publicly-

owned land. Local governments can also address critical housing conditions through regulatory strategies such as increasing land zoned for multifamily housing, offering density bonuses for affordable housing developments, reducing development fees and streamlining approval

processes. Finally, local governments can improve the condition of existing housing by strengthening and enforcing minimum housing codes.



Photo Credit: Google Street View

INTRODUCTION

Decent, secure and affordable housing is a fundamental human need. Beyond providing shelter from the elements, it provides a platform for undertaking other critical activities of life such as obtaining an education, finding and retaining employment and maintaining both physical and mental health. Without such housing it is extremely difficult to have a fulfilling life and be a productive member of society.

Prior research has demonstrated that families living in substandard housing experience much higher rates of health problems—including chronic illnesses, infectious diseases, injuries and poor mental health—compared to similar families living in standard housing conditions. Mold, pest infestations, cold and dampness, lead contamination and safety hazards in substandard housing are some of the major contributors to these health problems.¹

Overcrowded housing has also been shown to lead to health problems. Overcrowding can increase the transmission of airborne infections and constrain the types of activities that house-

hold members can comfortably undertake in the home, causing family stress. Research has shown that overcrowding is related to respiratory infections in children and to anxiety and depression among adults.²

Having to pay a high percentage of household income for housing-related expenses has also been shown to have a variety of negative impacts. For one, families are left with insufficient funds to cover the costs of food, health care, heat

or other basic necessities.³ Families that pay a high percentage of their income for housing also tend to move more, which can have detrimental effects on the educational success of children and the mental health of adults.⁴

In sum, substandard, overcrowded and non-affordable housing can have severe negative im-

pacts both on individual families and on the larger society. From the societal perspective these housing problems increase public health care costs while lowering productivity and increasing reliance on social support programs.

Unfortunately, finding decent, secure and affordable rental housing is increasingly difficult for many North Carolinians. In recent years wages have stagnated while rents have continued to climb resulting in a sharp increase in the num-

...SUBSTANDARD, OVERCROWDED AND NON-AFFORDABLE HOUSING CAN HAVE SEVERE NEGATIVE IMPACTS BOTH ON INDIVIDUAL FAMILIES AND ON THE LARGER SOCIETY...

ber of rent-burdened households, defined as those paying more than 30 percent of their income for rent.⁵ According to the American Community Survey (ACS), in 2013 there were 606,239 cost-burdened rental households in North Carolina, an increase of over 127,000 households from 2008.

INTRODUCTION

Moreover, those relatively high rents have contributed to housing overcrowding, defined by the U.S. Census Bureau as having more than one person per room, as households cannot afford to rent units large enough to adequately accommodate their household members. The ACS indicates that there were 65,410 overcrowded rental units in North Carolina in 2013, an increase of over 20,000 units from 2008. Finally, although

progress has been made in reducing the number of substandard housing units in North Carolina—defined as those lacking complete plumbing and/or kitchen facilities—the 2013 ACS indicates that there were more than 20,000 rental housing units in the state that lacked complete plumbing or kitchen facilities.⁶

Many housing units in North Carolina suffer from more than one deficit. They may be over-

crowded and lack complete facilities, or they may contain cost-burdened families and are overcrowded or they may suffer from all three deficits. Families that live in units with multiple deficits are of particular concern because they experience a combination of obstacles to leading satisfying and productive lives. Furthermore, we know that housing units with one or more deficits are likely to be clustered within specific counties and census tracts.

The primary purpose of this report is to identify locations in North Carolina with high levels of multiple housing deficits, specifically: severely cost-burdened households (households paying more than 50 percent of their income for rent), overcrowded units (those inhabited by more than one person per room) and substandard units (those that lack complete kitchen and/or bathroom facilities). We use the terms “extreme housing conditions” to refer to census tracts that have relatively high rates of at least two of these three housing deficits. A census tract is consid-



Photo Credit: Google Street View

INTRODUCTION

ered to have a high rate of a particular indicator if it ranks in the top 20 percent of all North Carolina census tracts on that indicator. The tracts in the top 20 percent of each indicator met the following thresholds:

- Census tracts where more than 30.7 percent of all rental households were severely cost burdened;
- Census tracts where more than 10.7 percent of all rental units were overcrowded; and
- Census tracts where more than 9.2 percent of all rental units lacked complete plumbing and/or kitchen facilities.

Using 2013 American Community Survey 5-year estimates, we present data on the number of housing deficits by region (Mountains, Piedmont and Coastal Plain), by county and by census tract. In doing so, we look to bring attention to those conditions and to aid state, county, municipal and non-profit organizations in targeting their housing programs to areas of greatest

need. A more detailed description of our methodology can be found in Appendix A.

The next chapter of this report presents our analysis of the number, location and population composition of census tracts with extreme housing conditions. This is followed by three chap-

ters that present analysis of the individual indicators of housing conditions: severe cost burden, overcrowding and lack of critical facilities.

We conclude with a discussion of policies and programs for addressing the housing needs of the state.



Photo Credit: Google Street View

EXTREME HOUSING CONDITIONS

Based on the methodology described in the previous section, 108 North Carolina census tracts had extreme housing conditions in 2013. That is, they had relatively high rates of either severe cost burden and overcrowding, severe cost burden and a lack of critical facilities, overcrowding and a lack of critical facilities, or all three of the indicators.

Six of the state's census tracts were in the top 20 percent for all three indicators; three were located in the Piedmont and the other three were in the Coastal Plain. Two of the six were urban tracts and four were rural tracts. Among the other extreme housing conditions tracts, 53 met the thresholds for both cost burden and overcrowding, 35 for cost burden and lack of critical facilities and 14 for overcrowding and lack of critical facilities (see Table 1).

We found extreme housing conditions census tracts in 46 of North Carolina's 100 counties and in all three geographic regions (see Table 2). The largest concentrations were in the Piedmont and

Table 1: Tracts with Extreme Housing Conditions					
Region	Cost Burden and Overcrowding	Cost Burden and Critical Facilities	Top 20% in Critical Facilities and Overcrowding	Top 20% in All Three Indicators	Total
Coastal Plain	18	12	5	3	38
Piedmont	31	20	8	3	62
Mountains	4	3	1	0	8
Total	53	35	14	6	108
Urban	33	25	7	2	67
Rural	20	10	7	4	41

Table 2: Geographic Distribution of Extreme Housing Conditions Tracts				
Region	Number of Tracts with Extreme Housing Conditions	Number of Counties with Extreme Housing Conditions Census Tracts	Number of Urban Extreme Tracts	Number of Rural Extreme Tracts
Coastal Plain	37	20	13	24
Piedmont	62	20	52	10
Mountains	9	6	2	7
Total	108	46	67 (62%)	41 (38%)

EXTREME HOUSING CONDITIONS

Coastal Plain, however, the Coastal Plain was the only region to have its share of extreme tracts (35.2 percent) exceed its share of the state's census tracts (28 percent), indicating that it has a disproportionately high number of tracts with extreme housing conditions (see Figure 1).

In the Piedmont, more than half of the 62 extreme housing conditions tracts were located in three counties: Forsyth, Mecklenburg and Wake, while over one quarter of the 37 extreme tracts in the Coastal Plain were in two counties: New Hanover and Brunswick (see Map 1).

Although there were more census tracts with extreme housing conditions in urban areas, the extreme tracts were roughly proportional to the percentage of urban and rural tracts in the state; 63 percent of all census tracts in our study were urban, while 62 percent of the extreme tracts were urban.

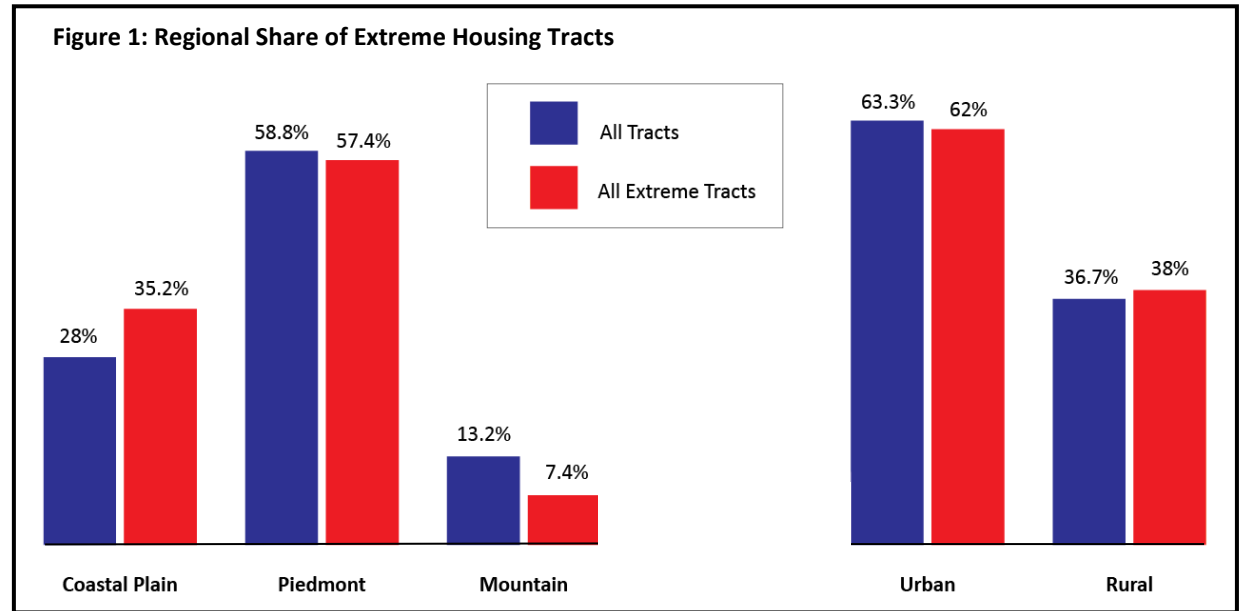
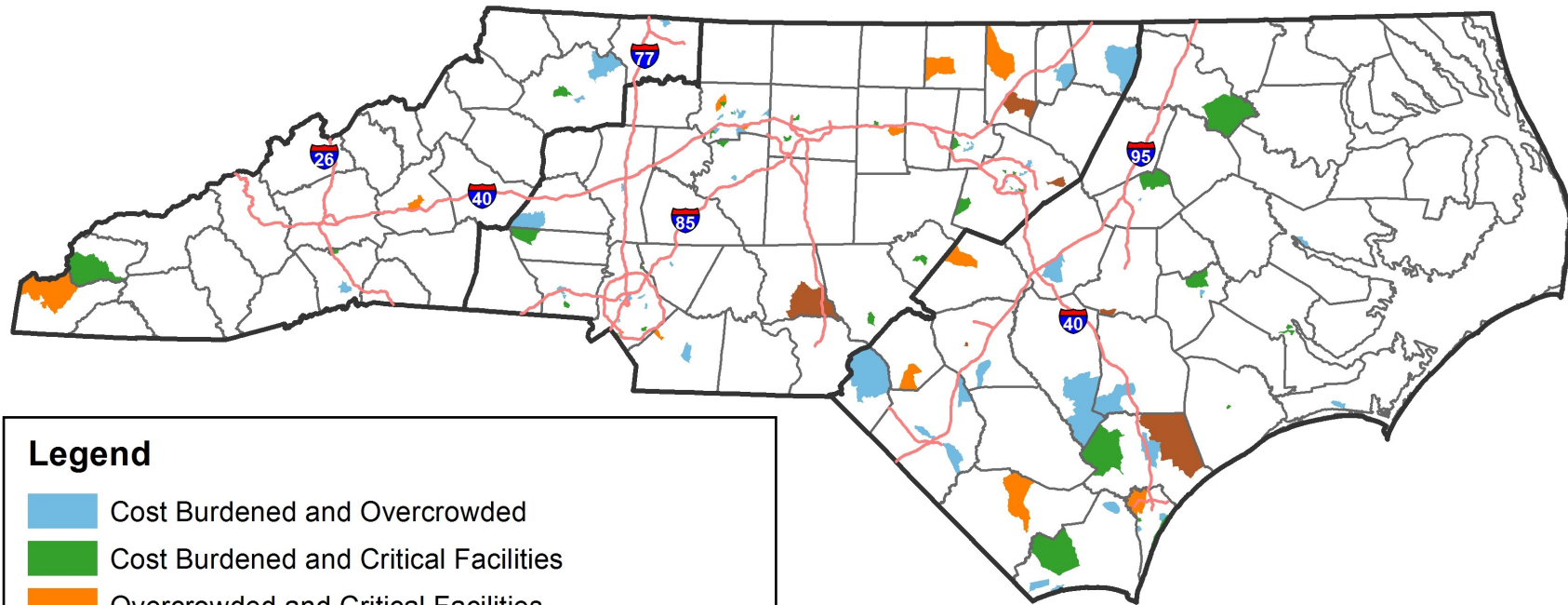








Photo Credit: Waferboard, Creative Commons

EXTREME HOUSING CONDITIONS

Map 1: Statewide Extreme Housing Census Tracts



Legend

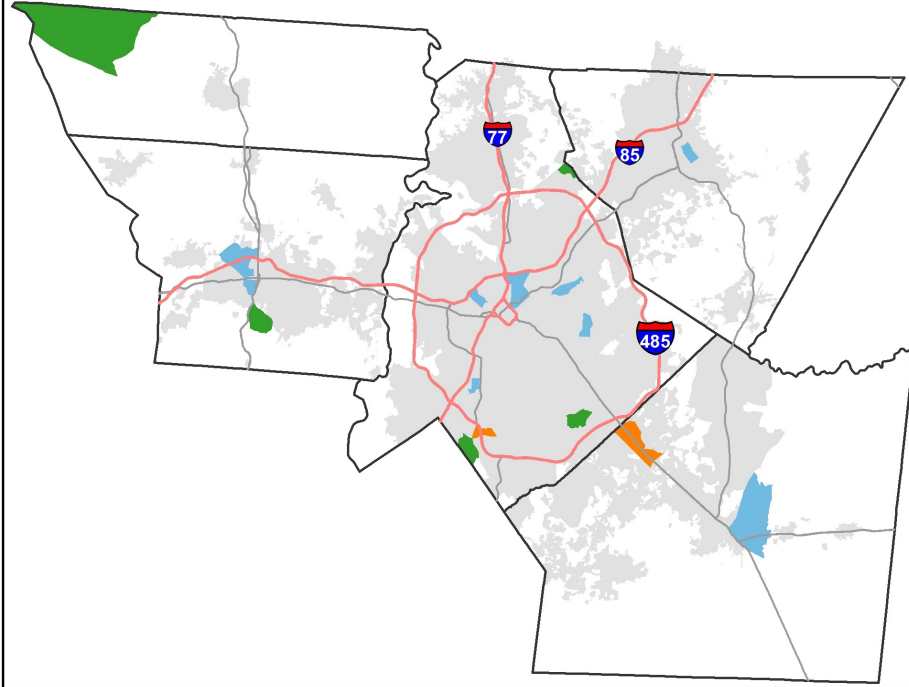
-  Cost Burdened and Overcrowded
-  Cost Burdened and Critical Facilities
-  Overcrowded and Critical Facilities
-  Cost Burdened, Overcrowded, and Critical Facilities
-  Regions
-  Interstates

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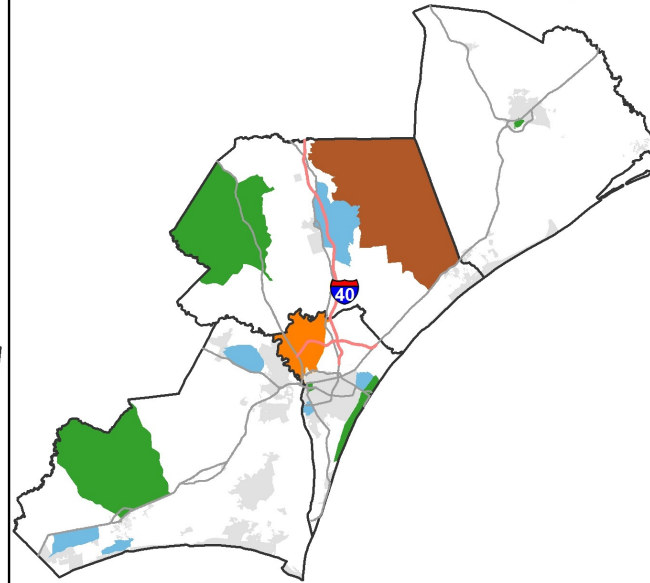
EXTREME HOUSING CONDITIONS

Map 1a: Statewide Extreme Housing Census Tracts Metro Areas

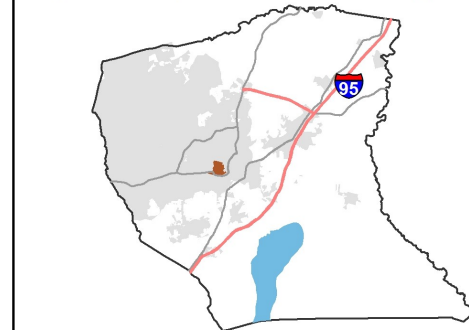
Charlotte Metro Area (Cabarrus, Gaston, Lincoln, Mecklenburg, and Union Counties)











Wilmington-Jacksonville Metro Area (Brunswick, New Hanover, Onslow, and Pender Counties)



Fayetteville (Cumberland County)

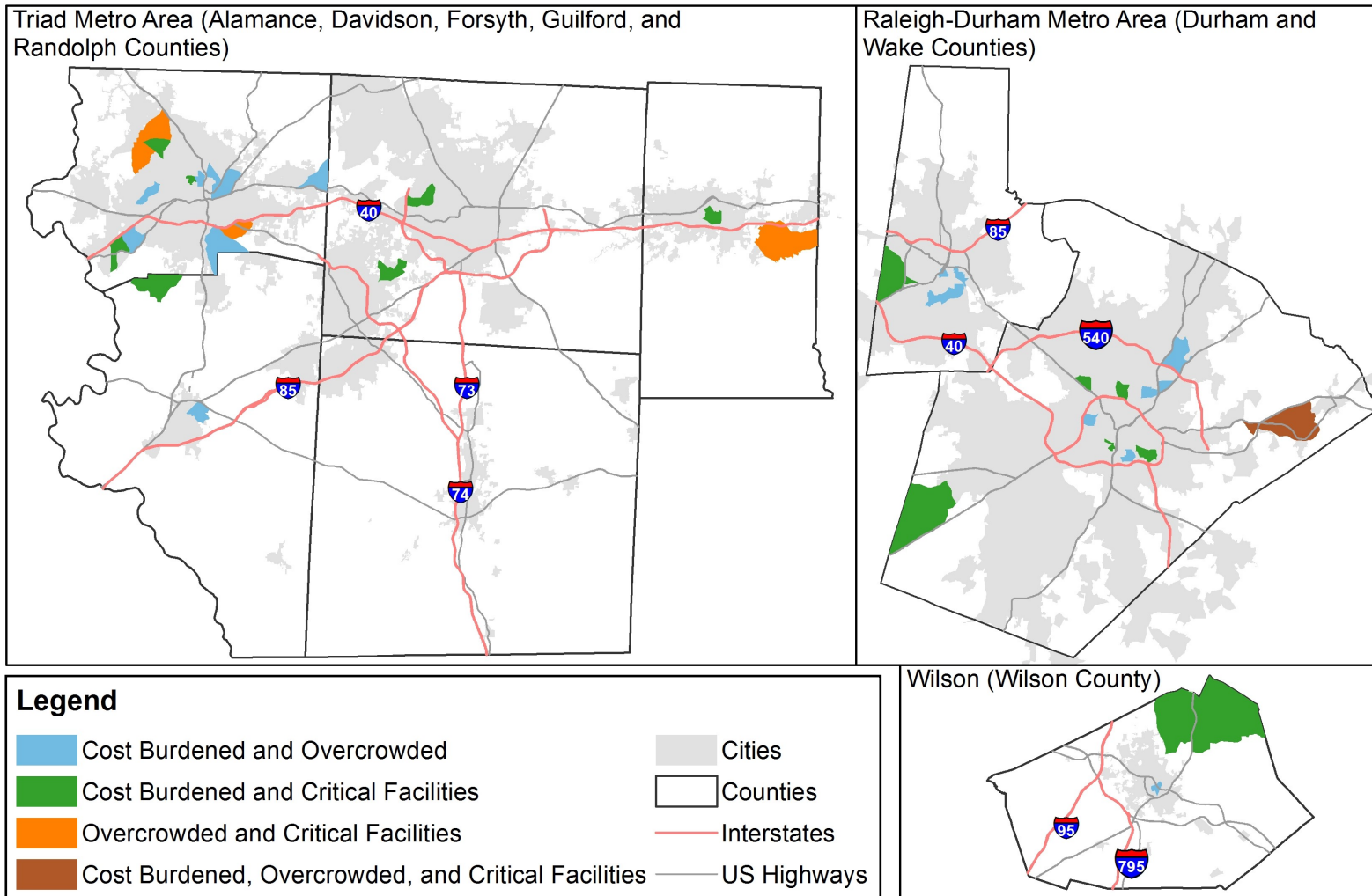


Legend

- | | |
|---|---|
|  Cost Burdened and Overcrowded |  Cities |
|  Cost Burdened and Critical Facilities |  Counties |
|  Overcrowded and Critical Facilities |  Interstates |
|  Cost Burdened, Overcrowded, and Critical Facilities |  US Highways |

EXTREME HOUSING CONDITIONS

Map 1b: Statewide Extreme Housing Census Tracts Metro Areas



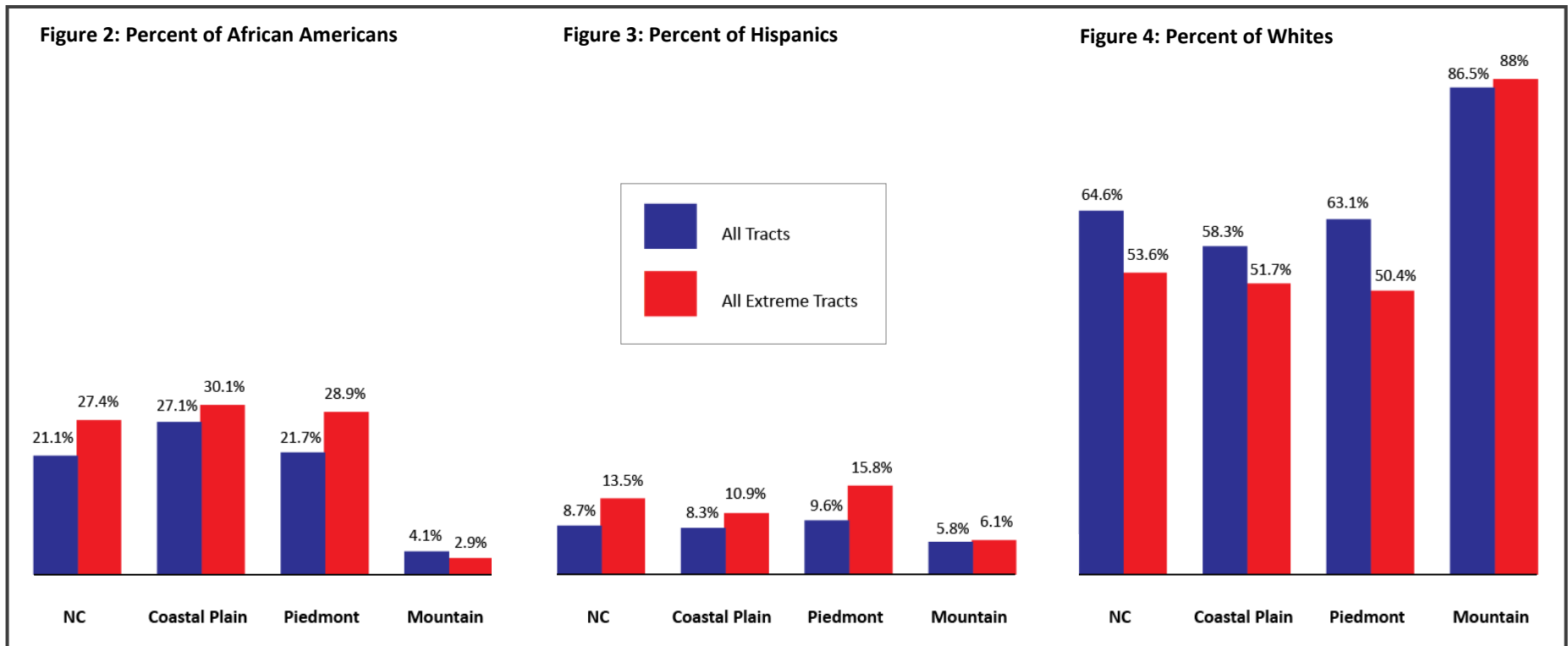
POPULATION CHARACTERISTICS

Census tracts with relatively high rates of extreme housing conditions tended to have higher percentages of Hispanics, African Americans and people living in poverty, compared to all North Carolina tracts. There were only small differences between the percentages of elderly in the two groups of tracts. While African Americans

made up 21.1 percent of the population in the census tracts included in our study, they constituted 27.4 percent of people in extreme tracts (see Figure 2). Looking at the three regions of the state, the region with the largest concentration of African Americans in extreme tracts was the Coastal Plain, while the concentration of Afri-

can Americans in Mountain area extreme tracts was slightly lower than that among all census tracts in that region.

The extreme tracts also had a disproportionate share of Hispanics. Although Hispanics made up 8.7 percent of the population in the census tracts in our study, they constituted 13.5 percent



POPULATION CHARACTERISTICS

in extreme tracts (see Figure 3). This same pattern held for all three regions of the state but was particularly prominent in the Piedmont.

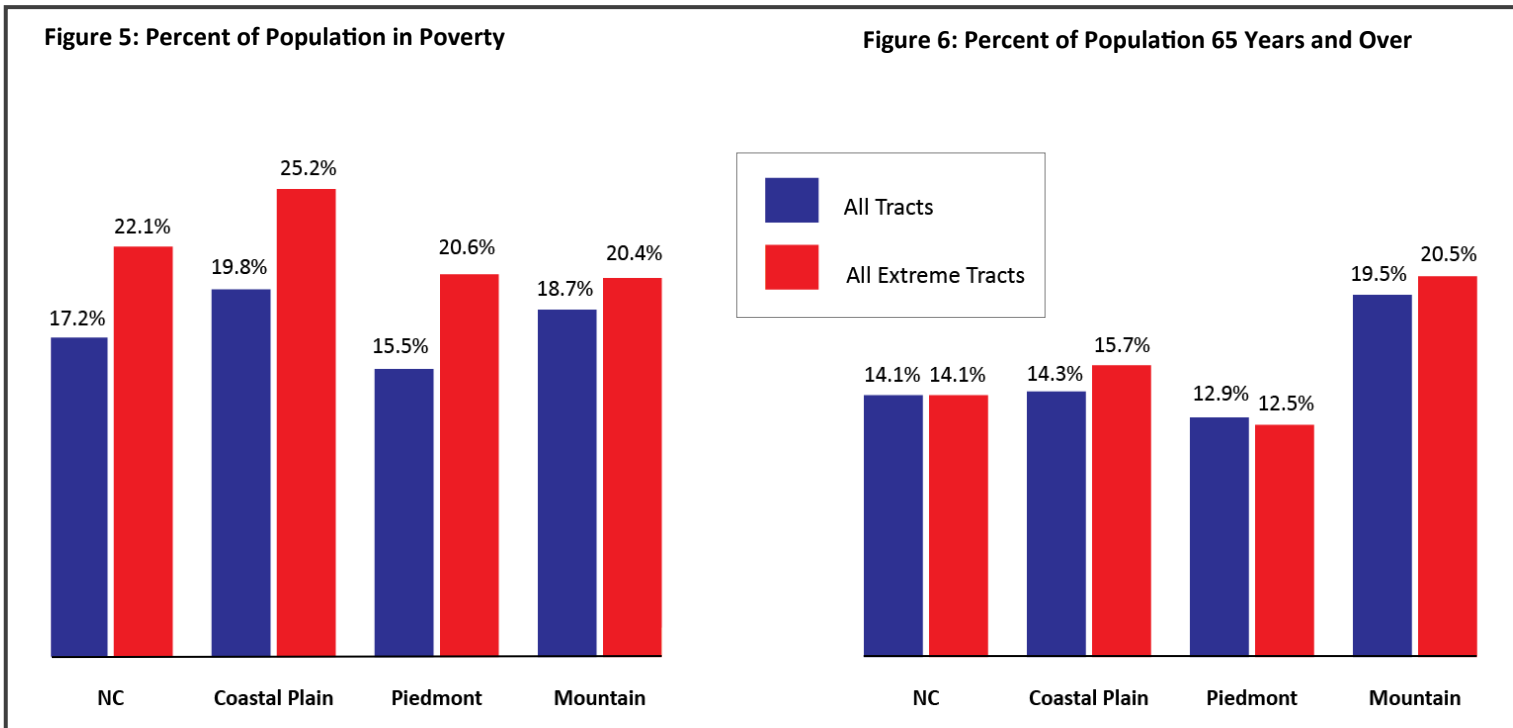
The white population was underrepresented statewide and in the Coastal Plain and the Piedmont. In the Mountains, where whites were the largest segment of the population

by far, they were slightly overrepresented (see Figure 4).

The extreme housing conditions tracts also had a disproportionate share of individuals living in poverty. They made up 17.2 percent of the population in all North Carolina census tracts; however, they made up 21.1 percent in extreme tracts (see Figure 5). This pattern was

consistent across all three regions of the state.

The elderly, however, were no more likely to live in extreme housing conditions tracts and there were only small differences between their percentages in each region of North Carolina (see Figure 6).



HOUSING COST BURDEN

As discussed in the introduction, cost-burdened households often do not have sufficient incomes to pay for food, clothes and other

severely cost burdened criteria of 50 percent or more of income used for housing costs. The findings indicate that although census tracts

costs, which was slightly less than the 24.5 percent rate for the nation. Severe housing cost burden is a growing problem in North Carolina as there were 53,737 more severely housing cost-burdened renter households in 2013 than there were in 2008, a 22.5 percent increase. Clearly, the demand for affordable housing greatly exceeds the supply in many communities across North Carolina.

...SEVERE HOUSING COST BURDEN IS A GROWING PROBLEM IN NORTH CAROLINA...

necessities of life. The standard definition of housing cost burden is any household paying more than 30 percent of its income for housing costs, while the definition of *severe* housing cost burden is any household paying more than 50 percent of its income for housing costs.⁷ In our analysis of extreme housing needs, we use the

with high rates of severe housing cost burden can be found across the state, they are more prevalent in the Piedmont and in urban, rather than rural, areas.

In 2013, a total of 292,544, or 21.8 percent of North Carolina’s renter households, paid more than 50 percent of their income on housing

As might be expected, severely cost-burdened households can be found clustered in certain census tracts spread throughout the state (see Map 2). There are 401 census tracts that rank in the top quintile (20 percent) of the distribution

Region	Number of Tracts	Share of Total	Number of Severely Cost-Burdened Rental Households	Severely Cost-Burdened Rental Households in Tracts in Top 20%	Highest Percentage of Any Tract in the Top 20%
Coastal Plain	113	28%	23,396 (27.5%)	37.2%	70.4%
Piedmont	244	61%	53,024 (62.4%)	37.4%	77.4%
Mountains	44	11%	8,544 (10.1%)	36.2%	62.6%
Total Number in Top 20%	401	100%	84,964 (100%)	37.2%	
Urban	260	65%	57,175 (67.3%)	37.3%	77.4%
Rural	141	35%	27,789 (32.7%)	37.2%	71.3%

HOUSING COST BURDEN

of severely cost-burdened rental households. The rates of severe cost-burdened households among those 401 tracts ranged from a high of 77.4 percent to a low of 30.7 percent. In contrast, only 60 North Carolina census tracts had no severely cost-burdened rental households. Of the 401 tracts in the top quintile of severe cost burden, 44 were located in the Mountains, 244 in the Piedmont and 113 in the Coastal Plain

(see Table 3). Moreover, approximately two-thirds of these census tracts were located in urban areas.

Among the individual counties, Mecklenburg had the highest number of census tracts with high percentages of severely cost-burdened rental households (46), including the census tract with the largest number of such households. Other urban counties with large numbers

of census tracts in the top quintile included Wake (27), Forsyth (24) and Guilford (20).

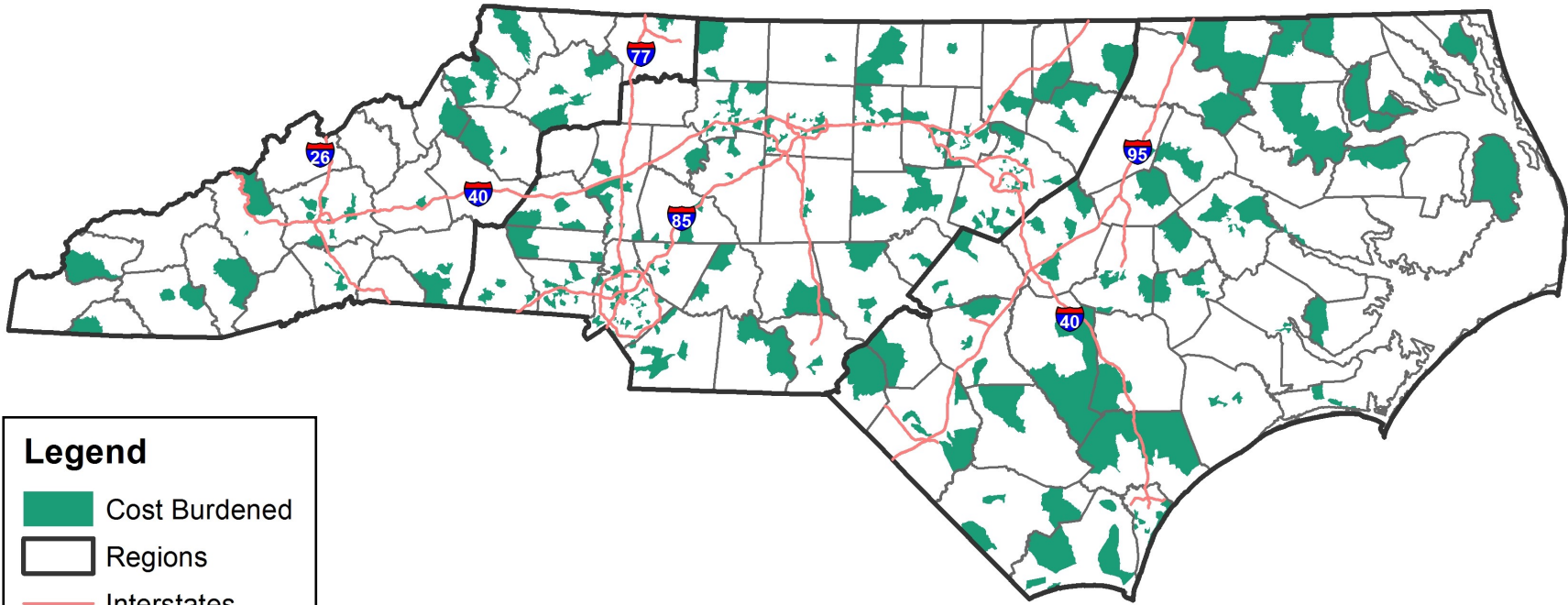
The ten census tracts with the highest percentages of cost-burdened rental households are show in Table 4 while the ten tracts with the highest numbers of such households are listed in Table 5.

Table 4: Top Ten Tracts by Percentage for Severe Housing Cost Burden	
Geography	Percentage of Households Paying More Than 50% of Income on Rent
Census Tract 537.19, Wake County	77.40%
Census Tract 201.06, Chatham County	71.30%
Census Tract 201.02, Brunswick County	70.40%
Census Tract 49, Mecklenburg County	66.10%
Census Tract 612.05, Iredell County	64.00%
Census Tract 9507, Jackson County	62.60%
Census Tract 606.03, Iredell County	60.80%
Census Tract 203.06, Brunswick County	60.70%
Census Tract 203.09, Union County	59.30%
Census Tract 9510, Cleveland County	56.90%

Table 5: Top Ten Tracts by Number for Severe Housing Cost Burden	
Geography	Gross Rent 50% or more of Household Income
Census Tract 19.15, Mecklenburg County	739
Census Tract 540.08, Wake County	714
Census Tract 58.25, Mecklenburg County	703
Census Tract 527.04, Wake County	688
Census Tract 27.02, Forsyth County	629
Census Tract 208.02, Alamance County	600
Census Tract 17.09, Durham County	577
Census Tract 9203, Person County	576
Census Tract 7.01, Pitt County	563
Census Tract 20.16, Durham County	561

HOUSING COST BURDEN

Map 2: Statewide Severe Cost Burdened Census Tracts



Legend

- Cost Burdened
- Regions
- Interstates

OVERCROWDING

Overcrowded housing units have a variety of negative effects on the inhabitants including heightened mental and physical health problems, behavioral conflicts and lower academic

The findings of our analysis indicate that approximately 1 in 20 housing units in North Carolina was overcrowded and that the largest concentration of those units was in the Piedmont.

rental units in the state. This rate of overcrowding is somewhat lower than the national rate of 6.1 percent of all rental units. Both the total number and percentage of overcrowded rental units increased substantially between 2008 and 2013. There were 20,437 more overcrowded rental units in North Carolina in 2013 than in 2008, an increase of 45.4 percent.

...THE TOTAL NUMBER AND PERCENTAGE OF OVERCROWDED RENTAL UNITS INCREASED SUBSTANTIALLY BETWEEN 2008 AND 2013...

performance among children.⁸ Although there are several measures of overcrowding, one of the most frequently used definitions and the measure used in this report, is a household with more than one person per room, not counting bathrooms or unused attics or basements.

The census tracts with high concentrations of overcrowded units were slightly more likely to be urban, but many rural tracts also had high rates of overcrowded units.

In 2013, there were 65,410 overcrowded rental units in North Carolina, 4.9 percent of all

As with the other indicators of housing conditions, the census tracts with the highest concentrations of overcrowded households were spread throughout the state (see Map 3).

There were 256 census tracts in the top quintile of the distribution of overcrowded rental

Region	Number of Tracts	Share of Total	Number of Overcrowded Rental Units	Overcrowded Rental Units in Tracts in Top 20%	Highest Percentage of Any Tract in the Top 20%
Coastal Plain	76	29.7%	5,258 (25.5%)	15.4%	35.5%
Piedmont	148	57.8%	13,584 (65.9%)	15.5%	53.0%
Mountains	32	12.5%	1,759 (8.5%)	14.8%	51.4%
Total Number in Top 20%	256	100.0%	20,601 (100%)		
Urban	138	53.9%	12,495 (60.7%)	15.2%	53.0%
Rural	118	46.1%	8,106 (39.3%)	15.7%	51.4%

OVERCROWDING

households. Overcrowding in those 256 tracts ranged from a high of 53 percent of all rental units down to 10.7 percent.

The Piedmont, with 148, had more tracts in the top quintile than did the Mountains (32) and the Coastal Plain (76) combined (see Table 6). There were 783 tracts in the state that did not have any

overcrowded rental units. Census tracts with high concentrations of overcrowded units were slightly more prevalent in urban, rather than rural, areas (54 percent vs. 46 percent).

The ten census tracts with the highest percentages of overcrowded units are show in Table 7, while the ten tracts with the highest numbers

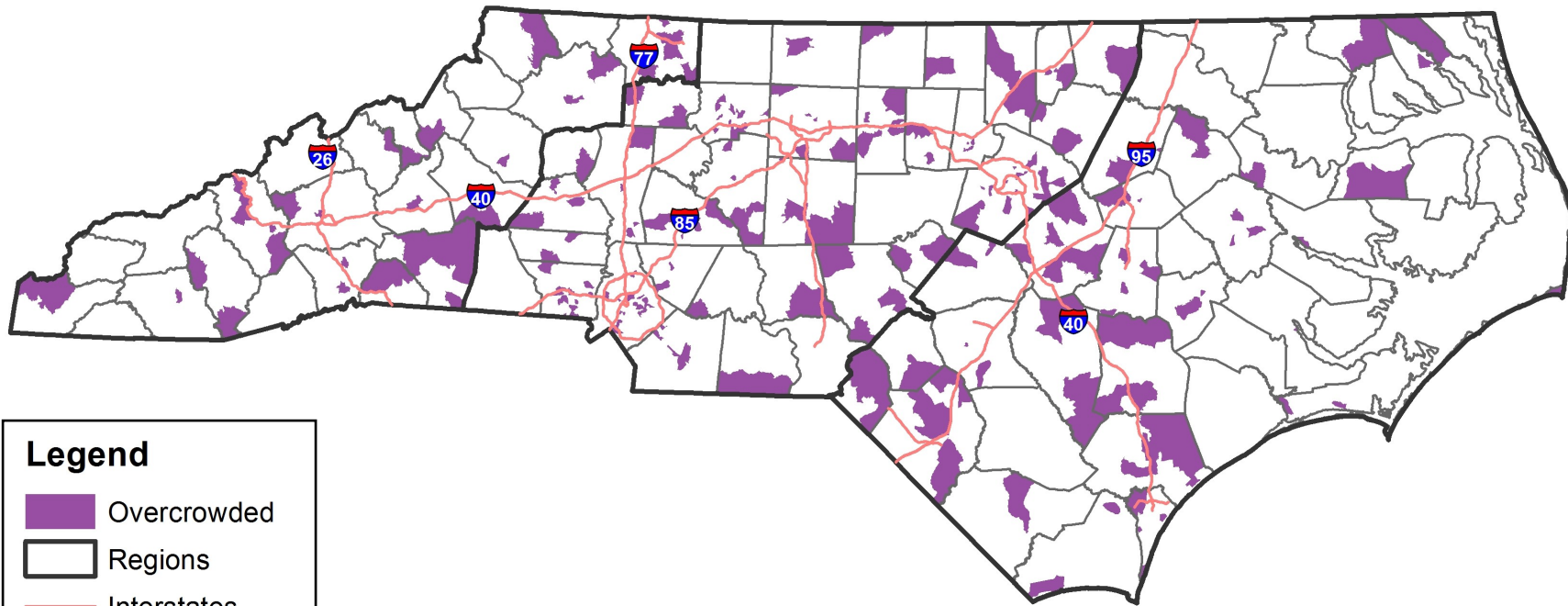
of overcrowded units are listed in Table 8. The counties with the highest numbers of overcrowded tracts included a mix of urban and rural counties, including Mecklenburg, Wake, Forsyth, Gaston and Robeson.

Geography	Percentage of Overcrowded Rental Units
Census Tract 532.07, Wake County	53.0%
Census Tract 9601.02, Yancey County	51.4%
Census Tract 409.02, Johnston County	35.5%
Census Tract 9616.01, Robeson County	35.2%
Census Tract 541.11, Wake County	33.3%
Census Tract 907.01, Duplin County	32.0%
Census Tract 332.04, Gaston County	29.0%
Census Tract 9202.01, Pender County	28.4%
Census Tract 402.02, Johnston County	27.8%
Census Tract 9308.02, Stanly County	27.7%

Geography	Number of Overcrowded Rental Units
Census Tract 540.08, Wake County	365
Census Tract 527.08, Wake County	275
Census Tract 17.02, Mecklenburg County	271
Census Tract 20.16, Durham County	249
Census Tract 38.08, Mecklenburg County	245
Census Tract 19.12, Mecklenburg County	229
Census Tract 14, Buncombe County	228
Census Tract 409.02, Johnston County	225
Census Tract 540.14, Wake County	210
Census Tract 35, Forsyth County	205

OVERCROWDING

Map 3: Statewide Overcrowded Census Tracts



CRITICAL FACILITIES

Modern homes are expected to include both complete kitchen facilities, such as refrigerators, stoves and sinks, as well as complete plumbing facilities, such as a toilet, shower and wash basin. Those living in housing units that lack those facilities have extra burdens in meeting nutritional and/or health needs.⁹ The analysis to follow relies on 2013 American Community Survey data on the number and location of units that lack complete plumbing facilities and those that lack complete kitchen facilities. If a unit does not have either complete kitchen or complete bathroom facilities we consider it lacking in critical facilities. Some of the units included in this indicator may be lacking in both plumbing and kitchen facilities, but we are unable to identify

those units. The findings indicate that the lack of critical facilities is the least frequent of the three housing deficits studied, but the number of units without complete kitchen or plumbing facilities is still substantial, particularly in the Piedmont and in urban areas.

In 2013, a total of 20,141, or 1.5 percent of North Carolina’s renter households, lacked complete plumbing and/or complete kitchen facilities. The percentage of occupied North Carolina rental housing units lacking critical facilities was somewhat lower than the national average (1.5 percent vs. 2.1 percent). Breaking these data down by the two types of facilities, four of every 1,000 occupied rental units in the state lacked complete plumbing facilities. Alt-

hough this may seem like a small proportion, it translates to 5,371 units without complete plumbing (see Table 9). The number of occupied rental units without complete kitchen facilities was somewhat higher at 11 for every 1,000 rental units, which translates to 14,770 units. Both the total number and percentage of occupied North Carolina rental units that lacked critical facilities (2.4 percent to 1.5 percent) declined between 2008 and 2013. There were 7,315 fewer rental units that lacked critical facilities in 2013 than in 2008.

The top quintile of the distribution of percentage of rental units that lack critical facilities contains 133 census tracts. Among those 133 census tracts, the rates of rental units lacking

	Renter-occupied Housing Units	Without Complete Plumbing Facilities	Without Complete Kitchen Facilities	Lacking Critical Facilities	Without Complete Plumbing Facilities	Without Complete Kitchen Facilities	Lacking Critical Facilities
United States	42,447,172	0.50%	1.60%	2.10%	212,236	679,155	891,391
North Carolina	1,342,763	0.40%	1.10%	1.50%	5,371	14,770	20,141

CRITICAL FACILITIES

critical facilities ranged from a high of 58.1 percent to a low of 9.2 percent. As with the other indicators of housing conditions, the units that lacked critical housing facilities were spread throughout the state (see Map 4). The highest concentration of census tracts was in the Piedmont and in urban areas. Fifty-eight percent of these 133 tracts were located in the Piedmont,

32 percent were found in the Coastal Plain and 10 percent were found in the Mountain Region (see Table 10).

Almost two-thirds of the tracts with high concentrations of units that lack complete facilities were found in the state’s urban areas. The counties with the greatest number of these tracts were Mecklenburg, Forsyth, Wake, Guilford and New

Hanover . The ten census tracts with the highest percentages of occupied rental units lacking complete facilities are listed in Table 11, while the top ten tracts with the highest numbers of occupied rental units lacking complete facilities are listed in Table 12.

Table 10: Top 20% of Census Tracts for Lack of Critical Facilities					
Region	Number of Tracts	Share of Total	Number of Rental Units Lacking Critical Facilities	Rental Units Lacking Critical Facilities in Tracts in Top 20%	Highest Percentage of Any Tract in the Top 20%
Coastal Plain	43	32%	3, 292 (36.0%)	16.1%	46.6%
Piedmont	77	58%	5,089 (55.6%)	14.0%	58.1%
Mountains	13	10%	774 (8.5%)	12.7%	23.9%
Total Number in Top 20%	133	100.0%	9,155 (100%)		
Urban	83	62%	5,996 (65.5%)	13.9%	58.1%
Rural	50	38%	3,159 (34.5%)	16.0%	46.6%

CRITICAL FACILITIES

Table 11: Top Ten Census Tracts Percentage of Lack of Critical Facilities

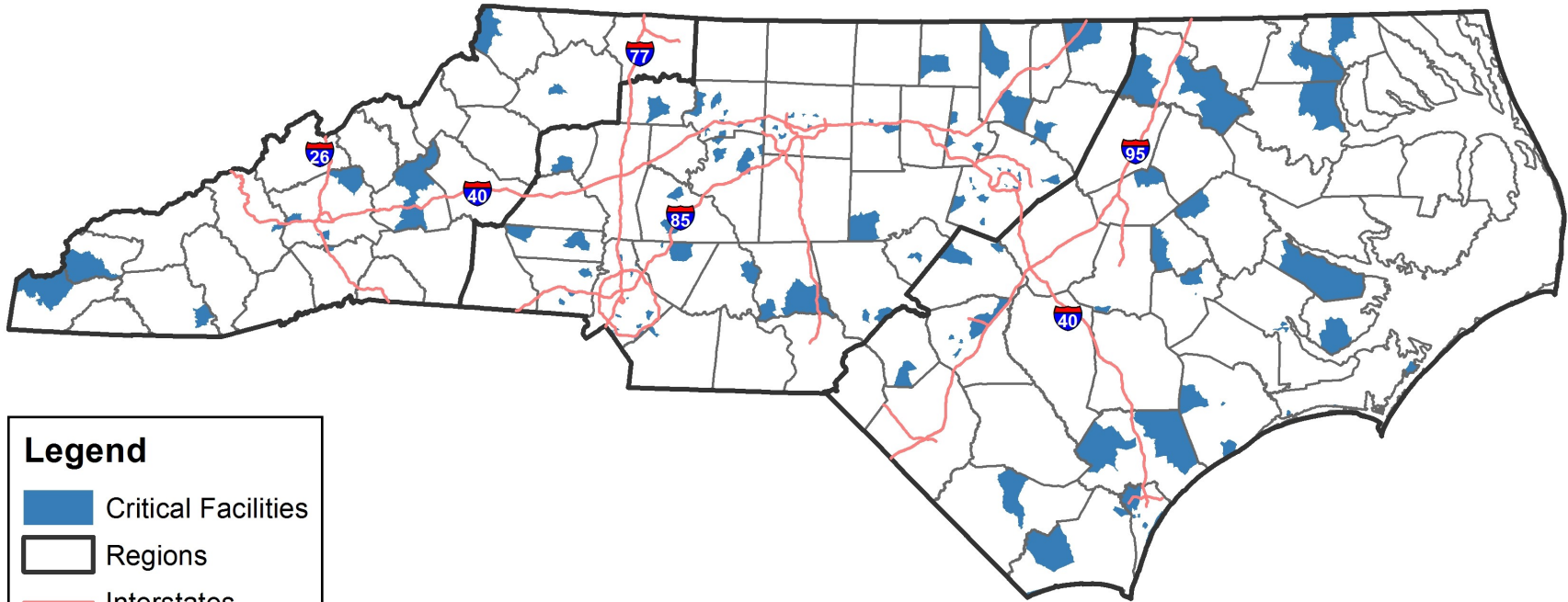
Geography	Percent Total RENTER Occupied Housing Units Lacking Critical Facilities
Census Tract 536.04, Wake County	58.10%
Census Tract 711.01, Harnett County	46.56%
Census Tract 164.09, Guilford County	45.80%
Census Tract 55.15, Mecklenburg County	35.71%
Census Tract 9706.05, Carteret County	35.47%
Census Tract 104.03, Guilford County	33.49%
Census Tract 9609, Beaufort County	27.27%
Census Tract 606.02, Davidson County	27.19%
Census Tract 9205.01, Pender County	26.69%
Census Tract 9704.02, Hoke County	24.50%

Table 12: Top Ten Census Tracts Number for Lack of Critical Facilities




Geography	RENTER Occupied Housing Units Lacking Critical Facilities
Census Tract 22.04, Buncombe County	208
Census Tract 58.25, Mecklenburg County	193
Census Tract 9605, Vance County	189
Census Tract 3.01, Onslow County	174
Census Tract 27.01, Forsyth County	159
Census Tract 208.02, Alamance County	153
Census Tract 20.17, Durham County	149
Census Tract 527.07, Wake County	148
Census Tract 711.01, Harnett County	142
Census Tract 9308, Halifax County	142

CRITICAL FACILITIES

Map 4: Statewide Critical Facilities Census Tracts



Legend

-  Critical Facilities
-  Regions
-  Interstates

CONCLUSIONS AND POLICY RECOMMENDATIONS

This analysis of extreme housing conditions in North Carolina suggests that the residents of more than 377,000 households in the state are held back from leading fulfilling and productive lives by living in housing that lacks critical facilities, that is overcrowded or that imposes a severe cost burden on residents. Residents exposed to those conditions are more likely to suffer from health problems and lack the residential stability needed to have a fulfilling life and be a productive member of society. More specifically,

as of 2013, North Carolina had over 292,000 households that were severely cost burdened by their rents, more than 65,000 rental units that

were overcrowded and more than 20,000 rental units that lacked either complete kitchen and/or complete bathroom facilities.

This is a growing problem, with the number of severely cost-burdened households increasing by 22.5 percent and the number of overcrowded

...MORE THAN 377,000 HOUSEHOLDS IN THE STATE ARE HELD BACK FROM LEADING FULFILLING AND PRODUCTIVE LIVES...

households by 45.4 percent between 2008 and 2013. The only bright spot is that the number of housing units lacking in complete kitchen or bathroom facilities decreased by 27 percent during this time period.

Our findings also indicate that 108 of the state's census tracts have extreme housing conditions: That is, they suffer from relatively high levels of at least two of the three housing problems mentioned above. We found extreme housing conditions census tracts in 46 of North Carolina's 100 counties and in all three geographic regions. The largest number of extreme tracts was in the Piedmont, followed by the Coastal Plain. Census tracts with relatively high rates of



Photo Credit: Andy Berner

CONCLUSIONS AND POLICY RECOMMENDATIONS

extreme housing conditions also have higher percentages of Hispanic, African American and poverty households compared to all North Carolina tracts. There are only small differences between the percentages of elderly in the extreme

housing conditions and non-extreme housing conditions tracts.

The analysis of the individual components of extreme housing conditions indicate that census tracts with high rates of severe housing cost bur-

den, overcrowding and a lack of critical facilities were found across the state. The greatest number of those tracts, however, was found in the Piedmont and in urban areas, largely because these geographies contain the largest share of all tracts within the state.

In looking at the proportion of tracts with high rates of severe housing cost burden we find that the Piedmont has a slightly higher proportion of census tracts in the top quintile of cost burdened tracts, while the Mountains have a slightly lower share of cost-burdened tracts. The proportion of tracts with high rates of overcrowding was slightly higher in the Coastal Plain and lower in the Piedmont and the Mountains. Finally, the proportion of tracts with high rates of inadequate facilities was considerably higher in the Coastal Plain and considerably lower in the Mountains.



Photo Credit: Todd Owen

CONCLUSIONS AND POLICY RECOMMENDATIONS

Policy Implications

The figures presented in this report indicate that additional attention needs to be paid to improving housing conditions, reducing overcrowding and lessening the housing cost burdens on North Carolinians. Without decent and affordable housing it is difficult for many families in the state to lead happy and productive lives, which results in higher public expenditures for health care and a range of social ser-

and local government policy should focus on lowering the cost of rental housing, while not ignoring the other two dimensions of extreme housing conditions discussed in this report.

The distribution of extreme housing conditions suggests that it is a statewide problem and, as such, the state government should play an important role in improving both housing conditions and affordability. State government is currently engaged in a variety of housing activities

done to improve and expand rental housing in the state. Additional support has been provided through the new Federal Housing Trust Fund program—North Carolina received \$3.28 million in 2016—but this will only address a small portion of the need. The most important action the state can take is to increase its contributions to the NC Housing Trust Fund, which is used to produce new rental housing that is more affordable to moderate-income families.

...STATE GOVERNMENT SHOULD PLAY AN IMPORTANT ROLE IN IMPROVING BOTH HOUSING CONDITIONS AND AFFORDABILITY...

vices. The data show that housing cost burden, rather than overcrowding or the lack of critical facilities, is by far the most prevalent dimension of extreme housing conditions. There are over 292,000 NC households that pay more than 50 percent of their incomes for rent, leaving them with very little to cover food, clothing and other basic necessities of life. This suggests that state

including providing funding for the NC Housing Trust Fund and administering federal programs such as the Low-Income Housing Tax Credit and the HOME Investment Partnerships Program (HOME) programs. These programs play a very important role in improving housing conditions and affordability in the state. The data reported above, however, indicates that more needs to be

Local governments also have important roles to play. The larger ones receive Community Development Block Grant and HOME funds directly from the U.S. Department of Housing and Urban Development but they also need to develop and fund their own housing programs. Some of North Carolina's municipal and county governments have created their own housing programs and funded them with general tax revenues, general obligation bonds and the donation of publicly-owned land. Local governments can also address critical housing conditions through regulatory strategies. They can, for example, increase the

CONCLUSIONS AND POLICY RECOMMENDATIONS

supply of affordable rental housing by increasing land zoned for multifamily housing, offering density bonuses for affordable housing develop-

ments, reducing development fees and streamlining approval processes. Local governments can also improve the condition of existing hous-

ing by strengthening and enforcing minimum housing codes, although this has to be done in a way that minimizes the displacement of tenants.

The combined efforts of state and local governments have the potential to reverse the negative trends in housing affordability and overcrowding, thereby improving both the quality of life and economic productivity of North Carolina families.



Photo Credit: Todd Owen

ENDNOTES

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⁵ Mather, M. and Jarosz, B. "The Growing Owner/Renter Gap in Affordable Housing in the U.S." accessed online at <http://www.prb.org/Publications/Articles/2013/us-owners-renters-housing.aspx>, on June 17, 2016. National Low Income Housing Coalition.

⁶ "Out of Reach 2016." accessed online at http://nlihc.org/sites/default/files/oor/OOR_2016.pdf, on June 17, 2016.

⁷ Unfortunately, there are no statewide or countywide figures on the number of units that are substandard in other ways, such as holes in walls or floors. Mather, M. and Jarosz, B. "The Growing Owner/Renter Gap in Affordable Housing in the U.S." accessed online at <http://www.prb.org/Publications/Articles/2013/us-owners-renters-housing.aspx>, on June 17, 2016. National Low Income Housing Coalition. "Out of Reach 2016." accessed online at http://nlihc.org/sites/default/files/oor/OOR_2016.pdf, on June 17, 2016.

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⁹ Rohe, W. and Han H. Housing and Health: Time for Renewed Collaboration. *North Carolina Medical Journal*. 2012; 73 (5):374-380.

APPENDIX A: METHODOLOGY

This study uses the 2013 American Community Survey (ACS) 5-year estimates to identify census tracts with extreme housing conditions for renters, defined as census tracts in the top 20 percent of North Carolina census tracts for at least two of the three following indicators: severely housing-cost burdened households, overcrowded units and units lacking critical facilities.

The thresholds for being in the top quintile of each of the three indicators are as follows:

- At least 30.7 percent of rental households were severely housing cost burdened;
- More than 10.7 percent of the units were overcrowded; and
- More than 9.2 percent of rental units lacked plumbing or kitchen facilities.

To create the indicator for missing or incomplete critical facilities, ACS data was pulled from table S2504, “Physical Housing Characteristics for Occupied Housing Units.” With limited ways to document housing conditions, this indicator was used to show housing units that are sub-

standard due to the lack of amenities present in a majority of households. However, we recognize that this indicator excludes housing units that are substandard due to other problems such as leaking roofs or holes in floors or walls. Kitchen and plumbing facility figures were calculated separately, and the collected data was summed to create a singular figure for each tract within the critical facilities analysis.

The Census Bureau considers housing units that have each of the following three facilities to have complete plumbing facilities: 1) hot and cold running water; 2) a flush toilet; and 3) a bathtub or shower. If any one of three is missing then the units lack complete plumbing facilities.

The Census Bureau considers housing units that have each of the following three facilities to have complete kitchen facilities: 1) a sink with a faucet; 2) a stove or range; and 3) a refrigerator. If any one of three is missing then the units lack complete kitchen facilities.

Housing overcrowding was based on table B25014, “Tenure by Occupants per Room,” and summing the number of housing units with occupancy greater than 1.01 occupants per room. This number was divided by the total number of rental units to determine the percentage of overcrowded units.

Cost-burdened housing units were determined through the use of table B25070, “Gross Rent as a Percentage of Household Income in the Past 12 Months.” Housing cost burden was defined as units in which the residents paid 50 percent or more of household income on housing costs. With over half of household income going to housing costs, these households have little income left for everyday necessities. The percent of cost-burdened rental households in a tract was based on the number of households paying 50 percent or more of their income on rent, divided by the total number of rental units.

Each indicator was then analyzed to create a percentage of impacted households within each

APPENDIX A: METHODOLOGY

tract by dividing the number of housing units within the indicator's parameters by the total number of units meeting our criteria (i.e. units with more than one occupant per room). This percentage was then ranked numerically, with the highest percentage being ranked first, and the top 20 percent of census tracts were then determined for comparison between indicators. Analysis was completed based on the top 20 percent of tracts within indicators rather than frequency due to the greater assortment of large and small tracts within the rankings, and this blend of sizes better demonstrates the distribution of housing distress throughout the entire state. To create an ample yet manageable selection of census tracts that adequately depict extreme housing distress within the state, focus was directed toward tracts ranking in the top 20 percent for at least two indicators.

After ranking the tracts based on the percentage of renter occupied housing units falling within the qualifications, it was discovered that sev-

eral small tracts with minimal levels of rental housing units were ranking highly, created a distorted ranking that inflated levels of distress. To remedy this issue, 66 tracts with fewer than 50 rental housing units were excluded from analysis. Of the 66 tracts, 12 tracts fell into the Census Bureau's classification of mainly water with little residential space, 15 were designated as special use tracts with little residential space and 5 tracts had fewer than 50 total housing units and were not reported for privacy reasons, leaving 2,129 total census tracts with rental units for data analysis.

Upon closer examination of the location of the remaining census tracts, it was discovered that several tracts within the top 20 percent of extreme housing needs contained or were contiguous to institutions of higher education. To eliminate any bias due to the existence of group quarters of students, the tracts within the top 20 percent of housing cost burden were analyzed. The three parameters utilized to deem tracts as

questionable include the average age of residents within the census tracts, the number of non-family and family households and the location of the census tract in relation to the nearby institution of higher education. For tracts to be considered questionable, the average age of residents was 30 years or younger, the number of non-family units were roughly 50 percent or more of the households in the tract and the tract had to contain an institution of higher education, be contiguous to a tract with an institution of higher education or be contiguous to a contiguous tract. Of the three parameters, it was decided that the average age was the strongest indicators of potential bias, and 65 tracts with an average age under 30 years were deemed questionable. The same parameters were also applied to the next 75 tracts and one additional tract was eliminated for a total of 66 removed tracts that were questionable. Although these tracts were not included in calculations regarding the top 20 percent of tracts with extreme housing needs,

APPENDIX A: METHODOLOGY

these tracts were not removed from state and county totals.

Once the questionable tracts were removed, the demographic data for tracts within the top 20 percent of extreme housing need was analyzed. Tables S1701, “Poverty Status in the Past 12 Months,” and DP05, “ACS Demographic and Housing Estimates,” were used to gather information on populations below the poverty level, over the age of 65 years, identifying as white, identifying as African American and identifying as Hispanic. These totals were then compared to the state-wide values to determine if these demographic indicators were concentrated in areas with extreme housing needs.

The top 20% of tracts with extreme housing needs were also categorized as urban or rural. In this report, tracts are considered “urban” if they are partially or completely located within one of North Carolina’s eighteen Census-designated “urban areas.” The Census defines urban areas as those that:

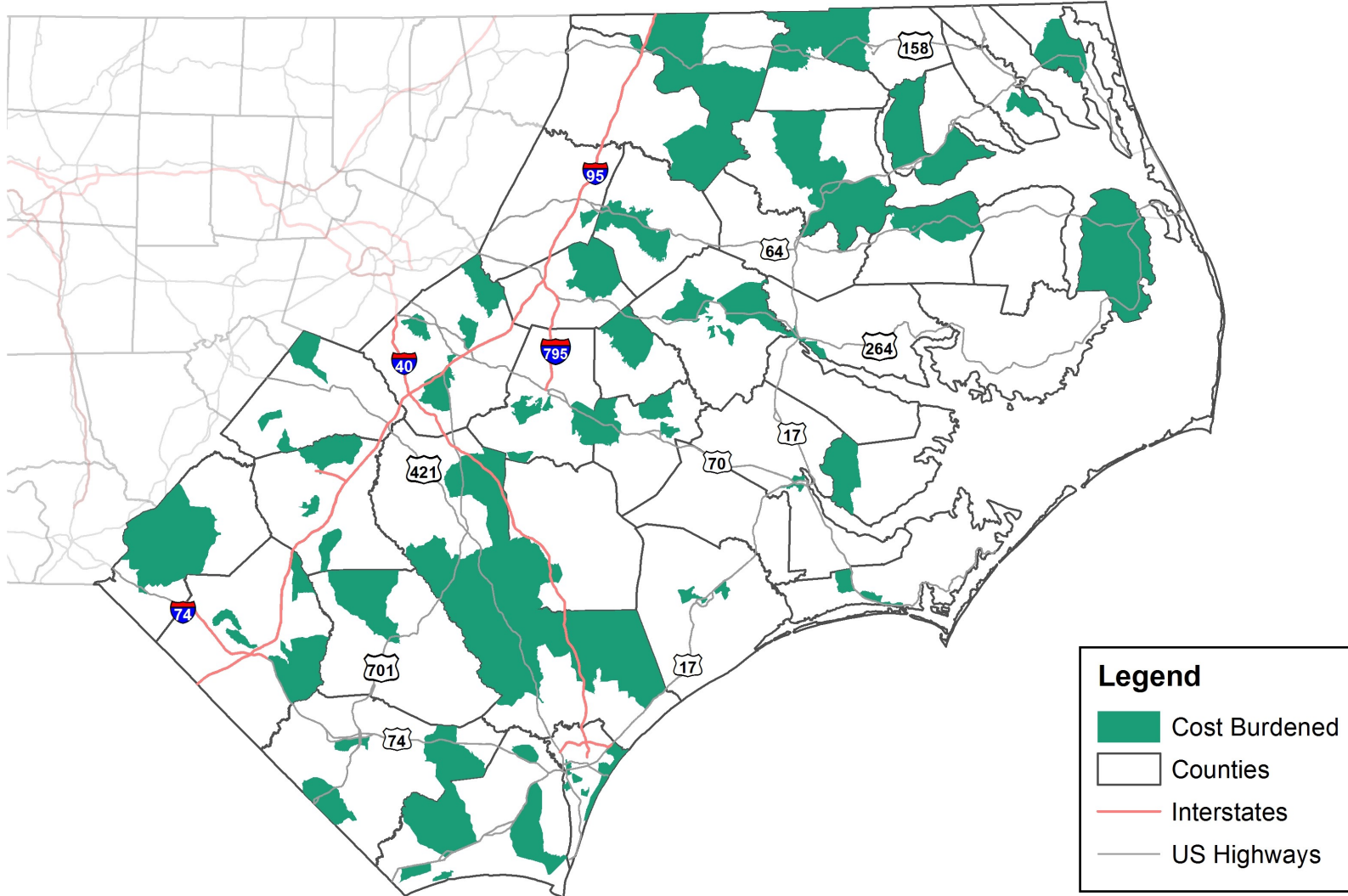
“...comprise a densely settled core of census tracts...that meet minimum population density requirements, along with adjacent territory containing non-residential urban land uses as well as territory with low population density included to link outlying densely settled territory with the densely settled core.”

The Census classifies urbanized areas as having 50,000 or more people and urban clusters as those with 2,500-50,000 people. For the purposes of this study, all tracts that do not fall within or intersect an urban area are designated “rural.”

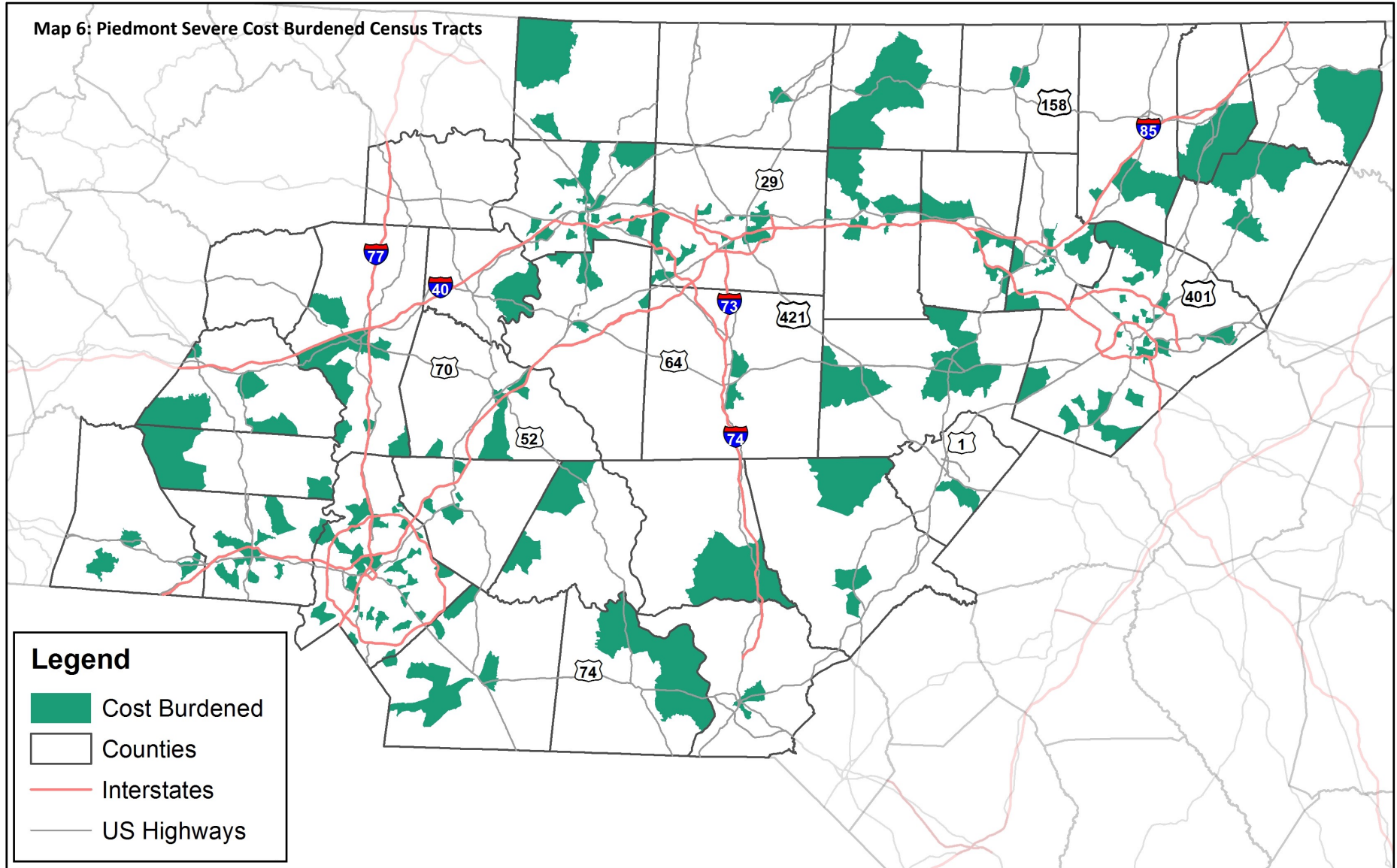
The 18 urban areas in North Carolina are: Asheville, Burlington, Charlotte, Concord, Durham, Fayetteville, Gastonia, Goldsboro, Greensboro, Greenville, Hickory, High Point, Jacksonville, New Bern, Raleigh, Rocky Mount, Wilmington and Winston-Salem.

APPENDIX B: MAPS

Map 5: Coastal Plain Severe Cost Burdened Census Tracts

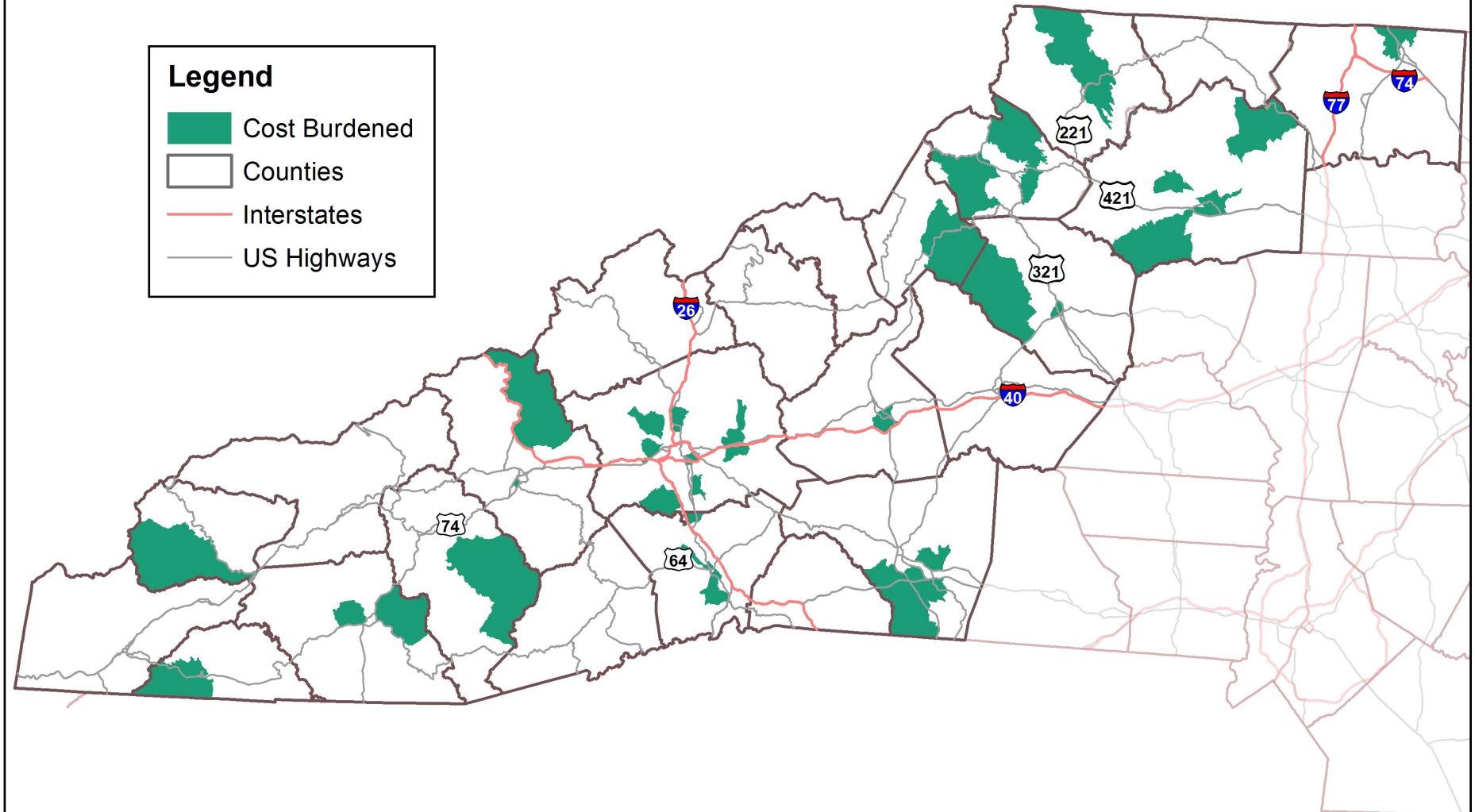


APPENDIX B: MAPS



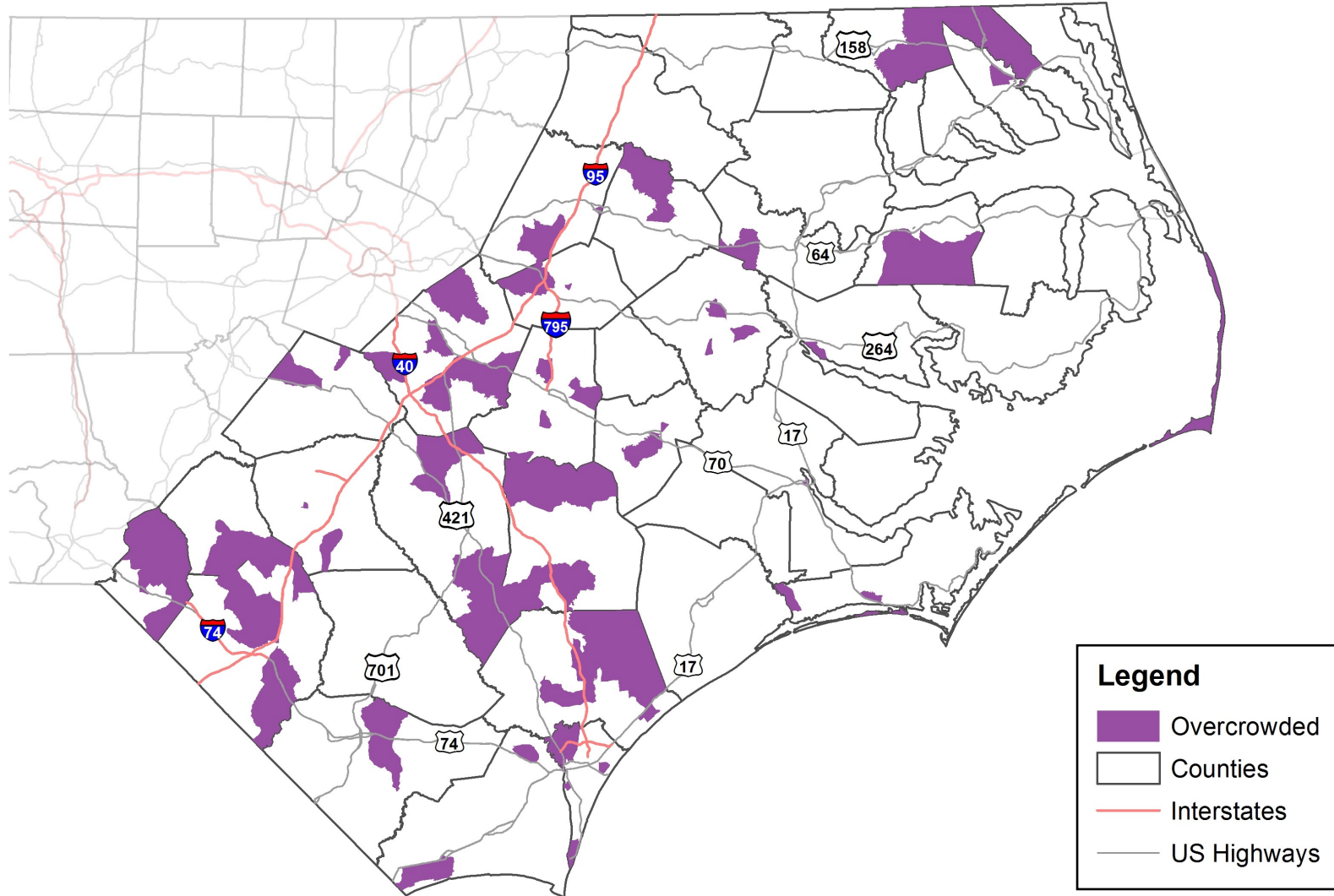
APPENDIX B: MAPS

Map 7: Mountain Severe Cost Burdened Census Tracts

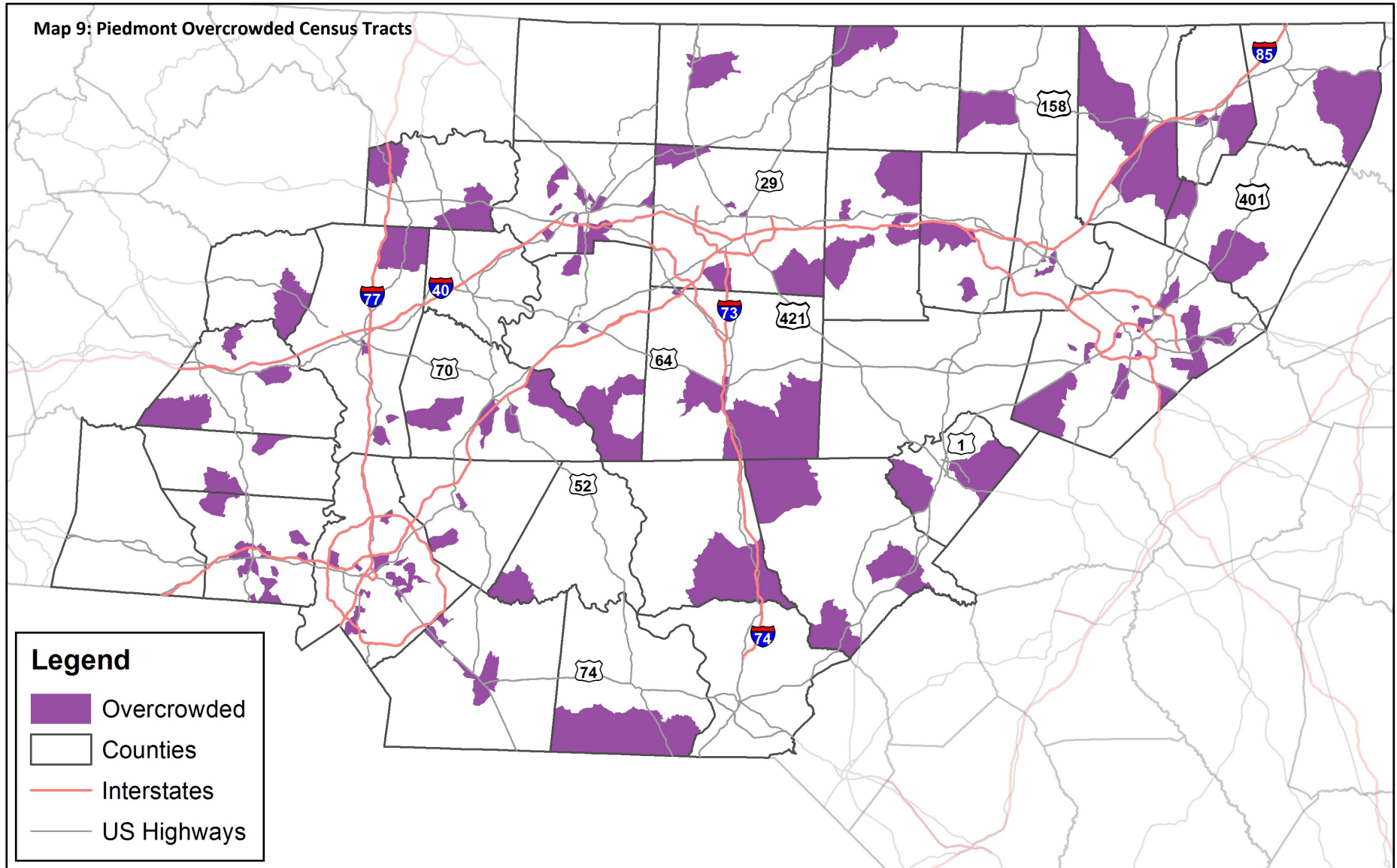


APPENDIX B: MAPS

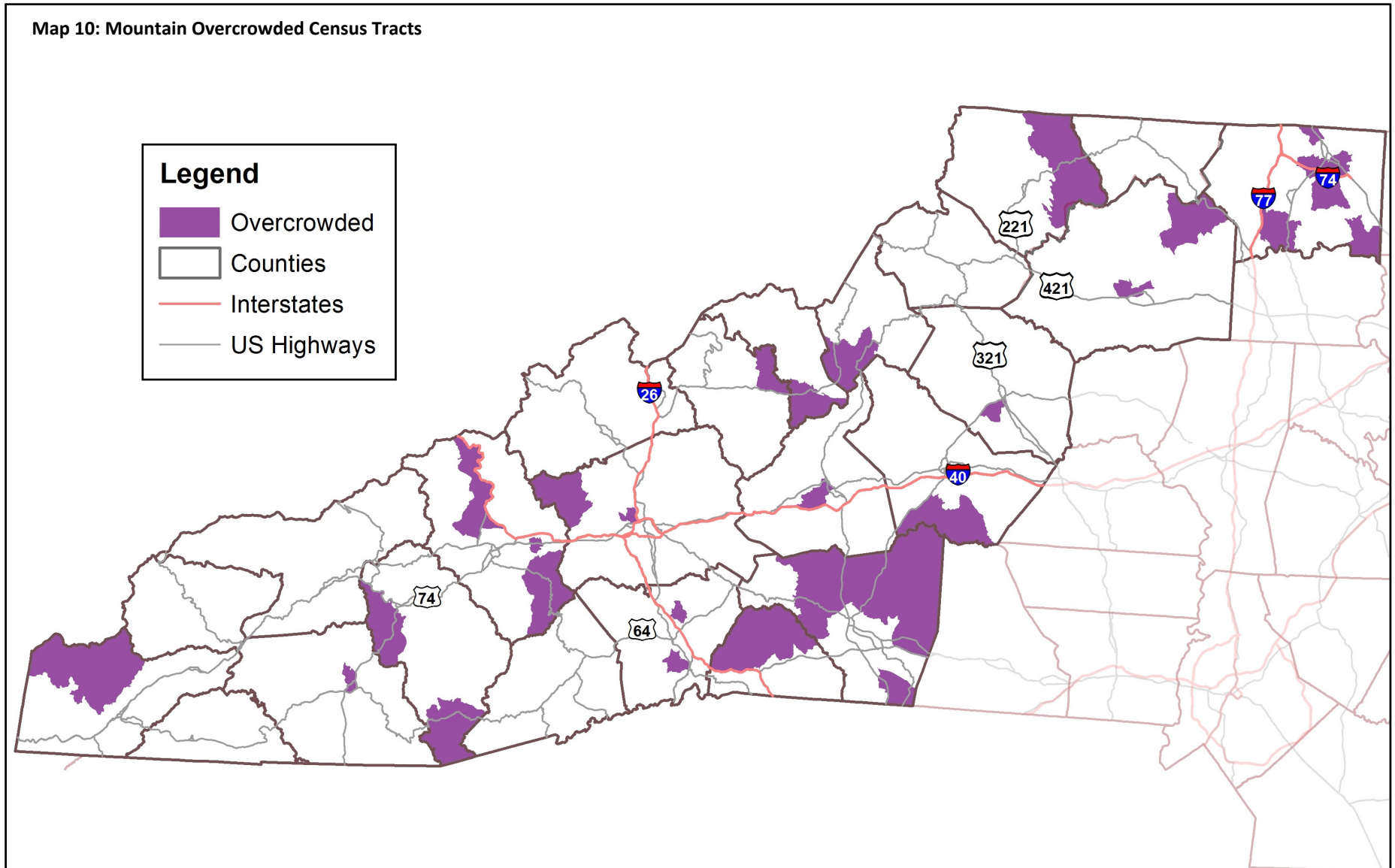
Map 8: Coastal Plain Overcrowded Census Tracts



APPENDIX B: MAPS

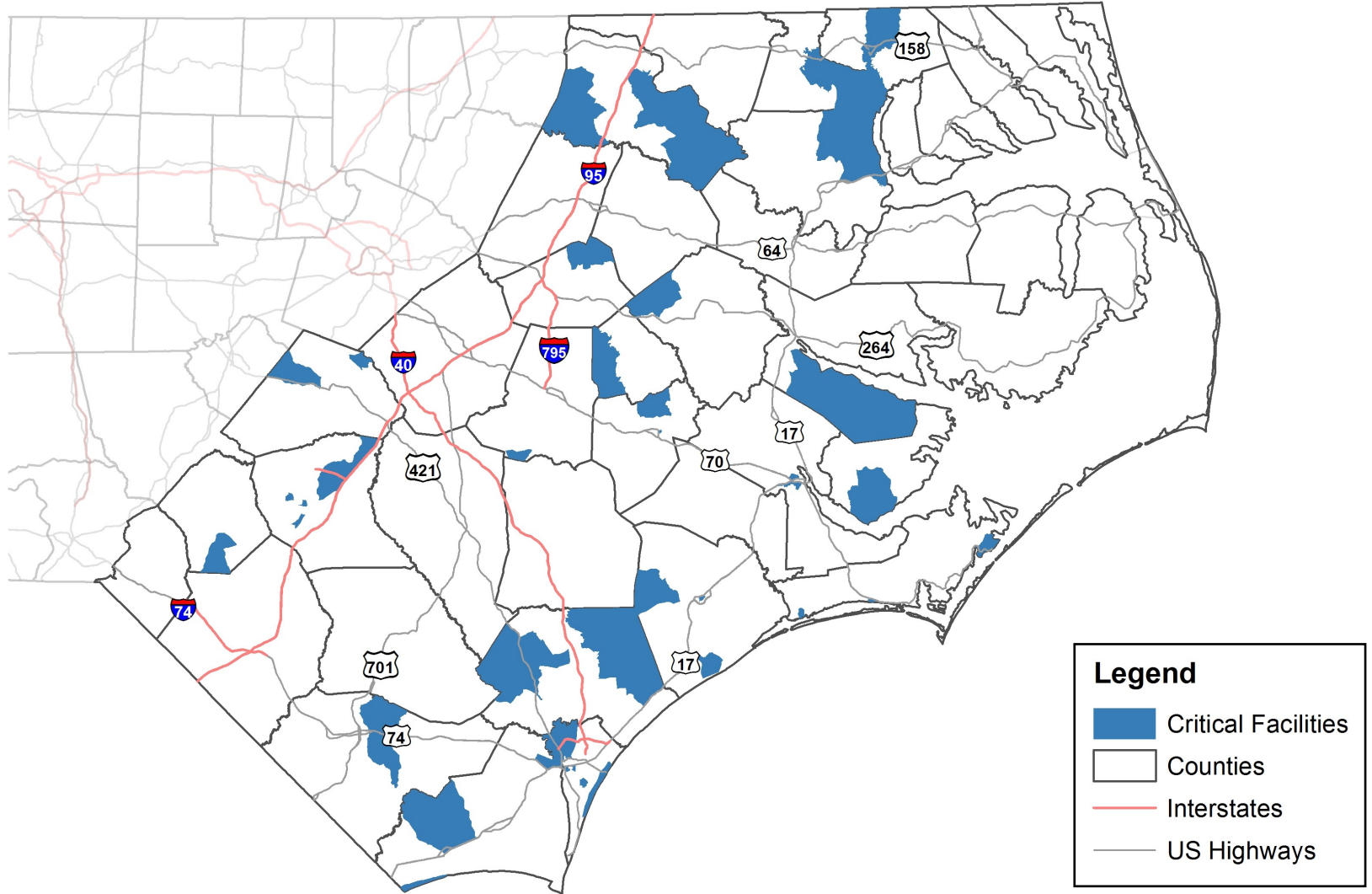


APPENDIX B: MAPS

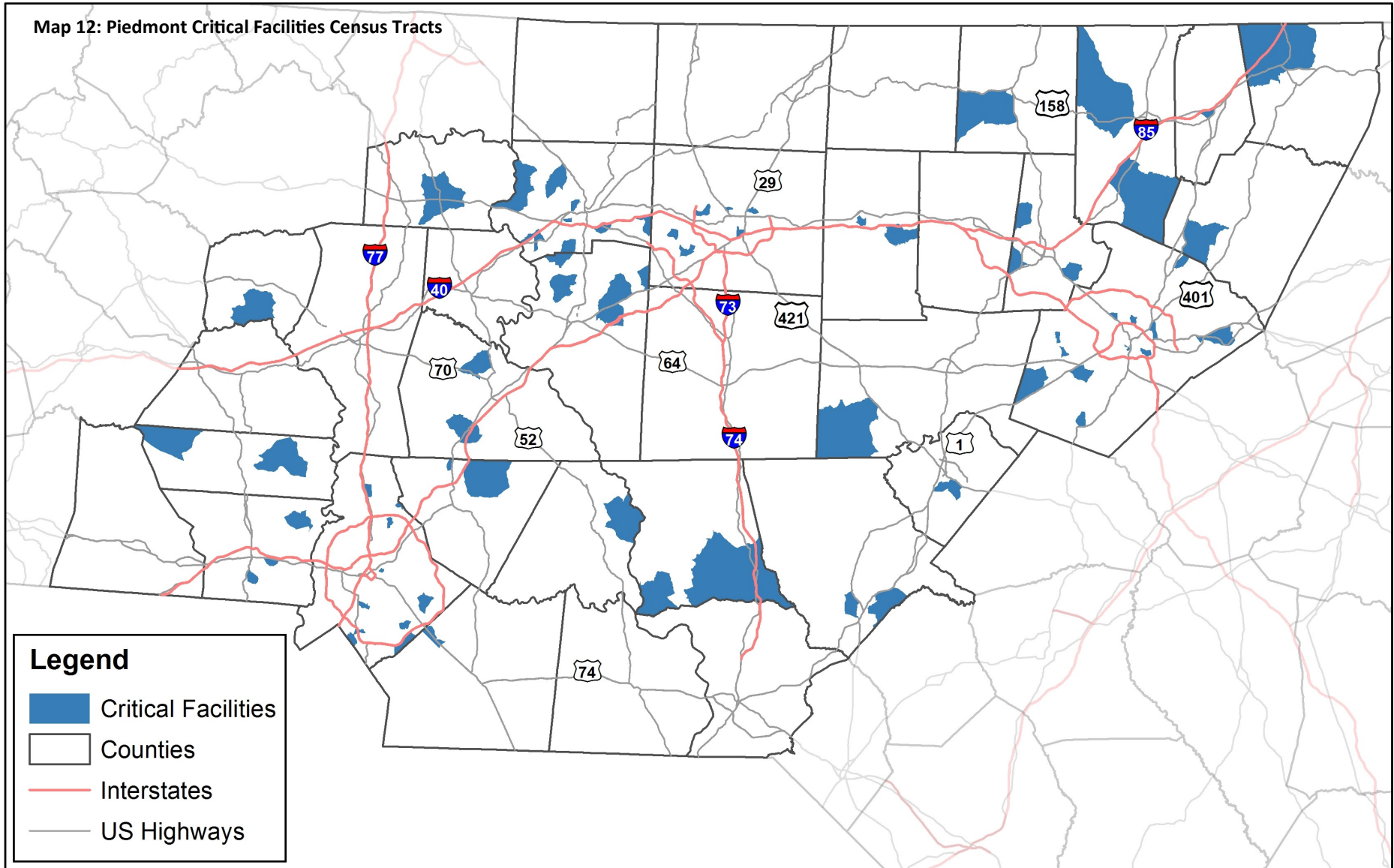


APPENDIX B: MAPS

Map 11: Coastal Plain Critical Facilities Census Tracts

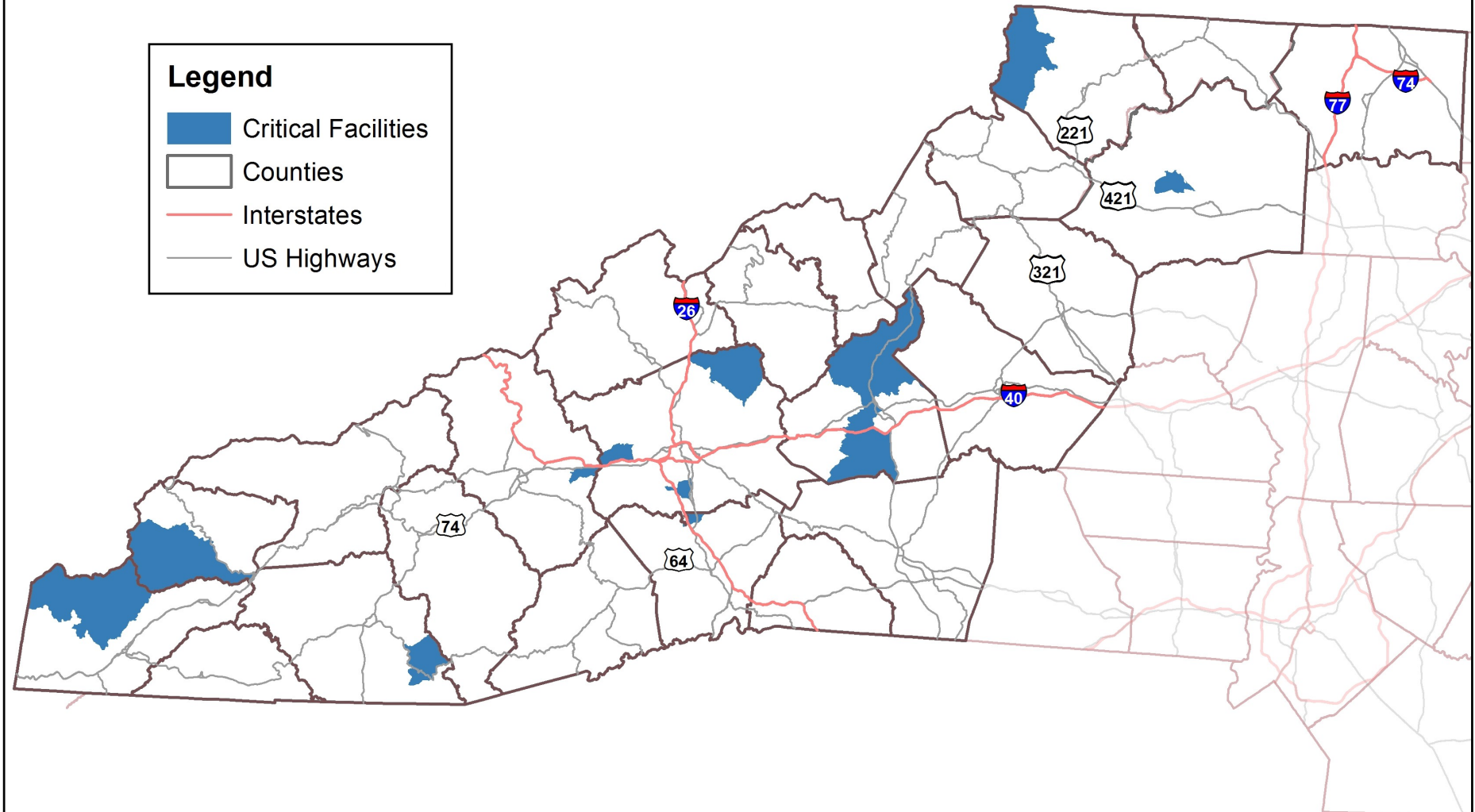


APPENDIX B: MAPS



APPENDIX B: MAPS

Map 13: Mountain Critical Facilities Census Tracts



APPENDIX C: EXTREME HOUSING TRACTS

Alamance County Tract 208.02	Forsyth County Tract 26.04	Lenoir County Tract 109	Robeson County Tract 9605.03
Alamance County Tract 212.04	Forsyth County Tract 27.01	Lincoln County Tract 706	Robeson County Tract 9616.01
Beaufort County Tract 9305.01	Forsyth County Tract 28.04	McDowell County Tract 9706	Sampson County Tract 9710
Brunswick County Tract 201.02	Forsyth County Tract 32.02	Mecklenburg County Tract 15.09	Scotland County Tract 106
Brunswick County Tract 205.08	Forsyth County Tract 34.03	Mecklenburg County Tract 19.12	Surry County Tract 9305.01
Brunswick County Tract 205.11	Forsyth County Tract 35	Mecklenburg County Tract 38.08	Union County Tract 203.12
Brunswick County Tract 206.01	Forsyth County Tract 38.06	Mecklenburg County Tract 42	Union County Tract 206.01
Cabarrus County Tract 419.02	Forsyth County Tract 39.06	Mecklenburg County Tract 51	Vance County Tract 9607
Carteret County Tract 9705.01	Forsyth County Tract 40.14	Mecklenburg County Tract 52	Vance County Tract 9609
Catawba County Tract 118.02	Gaston County Tract 315	Mecklenburg County Tract 55.15	Wake County Tract 508
Cherokee County Tract 9303	Gaston County Tract 329	Mecklenburg County Tract 58.25	Wake County Tract 510
Columbus County Tract 9304	Gaston County Tract 332.02	Mecklenburg County Tract 58.29	Wake County Tract 515.02
Craven County Tract 9604.02	Graham County Tract 9203	Mecklenburg County Tract 58.33	Wake County Tract 520.02
Craven County Tract 9606	Granville County Tract 9701.02	Montgomery County Tract 9605	Wake County Tract 525.06
Cumberland County Tract 7.02	Granville County Tract 9706.01	Moore County Tract 9507.02	Wake County Tract 526.02
Cumberland County Tract 30.02	Guilford County Tract 161.01	New Hanover County Tract 108	Wake County Tract 527.04
Davidson County Tract 603.02	Guilford County Tract 164.09	New Hanover County Tract 111	Wake County Tract 534.13
Davidson County Tract 614	Halifax County Tract 9311	New Hanover County Tract 112	Wake County Tract 540.08
Duplin County Tract 908.02	Harnett County Tract 711.01	New Hanover County Tract 115	Wake County Tract 540.14
Durham County Tract 10.01	Henderson County Tract 9306	New Hanover County Tract 117.03	Wake County Tract 544.04
Durham County Tract 20.09	Henderson County Tract 9315	New Hanover County Tract 118	Warren County Tract 9501.03
Durham County Tract 20.17	Hoke County Tract 9704.02	Onslow County Tract 18	Wayne County Tract 8
Durham County Tract 23	Iredell County Tract 602	Pender County Tract 9202.04	Wilkes County Tract 9602
Forsyth County Tract 3.02	Johnston County Tract 412.02	Pender County Tract 9204.03	Wilkes County Tract 9606
Forsyth County Tract 4	Lee County Tract 304.02	Pender County Tract 9205.01	Wilkes County Tract 9608.01
Forsyth County Tract 16.02	Lenoir County Tract 104	Person County Tract 9206.01	Wilson County Tract 2
Forsyth County Tract 17	Lenoir County Tract 105	Robeson County Tract 9601.01	Wilson County Tract 13

