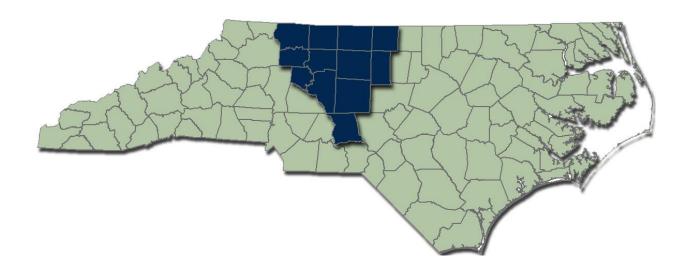
# **ENVIRONMENTAL JUSTICE**

# Piedmont Triad Regional Data Scan

Version 2 (Updated April 2016)





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#### **OVERVIEW**

### What is Environmental Justice?

Environmental Justice is a term that describes the way in which consideration is given to both the positive and negative impacts of public investment for programs, projects, policies or activities on minority and low income populations. The concept originates from a variety of federal laws, policies and executive orders.

There are three fundamental principles of Environmental Justice:

- To avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority populations and lowincome populations.
- 2. To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- 3. To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations.

### **Purpose**

This document identifies the location and distribution of populations that represent potential environmental justice issues in the Piedmont Triad Region. The data is provided for use by Piedmont Triad Regional Council (PTRC) and its local planning partners for use and consideration during planning and project delivery. Environmental justice is a key consideration of any project receiving federal funding. This information can also be used to tailor public involvement strategies to ensure the engagement of traditionally underserved populations and actively address the needs of these communities in a positive, proactive manner.

# The Legal Framework

A variety of federal laws, policies and orders provide the legal underpinning for environmental justice considerations. The relevant laws listed herein include a brief description of the relationship of each act to environmental justice.

#### Title VI of the 1964 Civil Rights Act

Under Title VI and related statutes, each Federal agency is required to ensure that no person is excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving Federal financial assistance on the basis of race, color, national origin, age, sex, disability, or religion.

#### The Civil Rights Restoration Act of 1987

This Act clarified the intent of Title VI to include all programs and activities of Federal-aid recipients, sub-recipients and contractors whether those programs and activities are federally funded or not.

#### The National Environmental Policy Act of 1969

Commonly referred to by the acronym NEPA, this Act stressed the importance of providing for "all Americans safe, healthful, productive, and esthetically pleasing surroundings", and requires federal agencies to take a "systematic, interdisciplinary approach" to give consideration to environmental and community factors in decision-making.

#### Federal-aid Highway Act of 1970: 23 United States Code 109(h)

This Act established further basis for equitable treatment of communities being affected by transportation projects. It requires consideration of the anticipated effects of proposed transportation projects upon residences, businesses, farms, and accessibility of public facilities, tax base, and other community resources.

# <u>Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations</u>

On February II, 1994, President Clinton signed this Executive Order which requires that each Federal agency administer and implement its programs, policies, and activities that affect human health or the environment so as to identify and avoid "disproportionately high and adverse" effects on minority and low-income populations.

# <u>DOT Order on Environmental Justice to Address Environmental Justice in Minority Populations</u> and Low-Income Populations (DOT Order 5610.2)

In April 1997, the U.S. Department of Transportation (DOT) issued this Order to describe the process for incorporating environmental justice principles into all DOT existing programs, policies, and activities.

# FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (DOT Order 6640.23)

In December 1998, FHWA issued guidance that requires implementation of environmental justice principles in all FHWA programs, policies and activities.

#### Implementing Title VI Requirements in Metropolitan and Statewide Planning, 1999

This memorandum issued by FHWA and the Federal Transit Administration (FTA) provides clarification on how to ensure that environmental justice is considered during planning certification reviews. While Title VI and environmental justice have often been raised during project development, this document recognizes that the law also applies equally to the processes and products of planning.

### **Considerations**

According to the guidance provided by the Federal Highway Administration (FHWA), all "reasonably foreseeable adverse social, economic, and environmental effects on minority populations and low-income populations" must be identified and addressed as the investment of federal funds are being considered. These adverse effects include, but are not limited to:

- Bodily impairment, infirmity, illness, or death.
- Air, noise, and water pollution
- Soil contamination.
- Destruction or disruption of man-made or natural resources.
- Destruction or diminution of aesthetic values.
- Destruction or disruption of community cohesion or a community's economic vitality.
- Vibration.
- Displacement of persons, businesses, farms, or nonprofit organizations.
- Adverse employment effects.
- Destruction or disruption of the availability of public and private facilities and services.
- The denial of, reduction in, or significant delay in the receipt of benefits of DOT programs, policies, or activities.
- Increased traffic congestion, isolation, exclusion, or separation of minority or low-income individuals within a given community or from the broader community.

Conversely, the potential positive impacts to these same communities resulting from the investments of public funds or programs should also be identified and quantified. These include enhanced economic development opportunities, improved access to the transportation network and improved safety.

#### THE DATA SCAN

The Piedmont Triad Regional Council obtained the data for analysis and mapping for this document from the U.S. Census Bureau's American Community Survey (ACS) 5-year estimates for the 2010 to 2014 period. While the federal definition of environmental justice primarily focuses on minority and low income populations, other traditionally underserved populations within the Piedmont Triad Region were also considered. Nine population characteristics were considered in this data scan:

- Age: Individuals included in this category are persons of at least 60 years of age or older.
- Race: Individuals included in this category are persons of at least one of the following minority racial or ethnic classes: African American, American Indian, Asian, Pacific Islander, or Latino.
- Poverty Status: Individuals are included in this category if the total family income was at or below the national designated poverty threshold. See Appendix A for the 2010 HHS Poverty Guidelines
- **Unemployment:** Individuals included in this category are ages 20 to 64 that were unemployed at the time the survey was conducted.
- Education Attainment: Individuals are included in this category if they are 25 years or older and have not obtained a High School Diploma or a GED.
- **Language:** Individuals are included in this category if they are 5 years old or over whose first language is not English.
- Disability: Individuals included in this category consider themselves to have one or more of the following difficulties: hearing, vision, cognitive, ambulatory, self-care and independent living.
  - Note: Disability status was not included in the original 2012 data scan due to changes made to the ACS in 2008. The updated disability portion of the ACS 5-year estimate was not available until 2013.
- **Vehicle Availability:** Households in this category were included if a passenger car, van or pick-up truck was unavailable for the use of household members.
- Female Homeowners or Renters with Children: Households are included in this
  category if the homeowner or renter is a female, whose marriage status is single and lives
  with their own children.

# **American Community Survey**

The U.S. Census Bureau has made changes to the way social and economic characteristics were collected since the 2000 Census that should be noted when using data from the American Community Survey (ACS). Where the 2000 Census was conducted with the traditional 'long form' format, the ACS is an ongoing survey intended to provide communities with data every year. The ACS is collected by sending the survey to a small percentage of the population yearly and on a rotating basis. The Census Bureau then compiles the information, releasing estimates in I and 5 year intervals.

For this Data Scan, the ACS 5-year estimates were utilized for the 2010 to 2014 period. According to the U.S. Census Bureau, the 5-year estimates use data that is collected over 60 months. It is the largest sample size and the most reliable of the estimates available. However, it should be noted that the 5 year data collection acts like an average for the 5 years represented, which masks isolated year to year changes.

The ACS 5 year data is best used for analyzing small populations that are not available with the ACS I-year estimates. However, the ACS does not follow up with respondents who do not return or complete the survey, which is different than the Decennial Census. As a result, the reliability of the data is not as high as the 2000 Census and so the data includes a variable margin of error that should be considered when performing statistical analysis.

## **Methodology**

Using data from the U.S. Census Bureau, ACS 5-year estimates for 2010 to 2014, the identified characteristics were collected and compared at the State, Regional (see *Table 1*) and County levels. County averages were used to determine appropriate benchmarks for each characteristic (Tables 3 – 23).

**Table 1: State and Regional Characteristics** 

	No	orth Carolin	a	Piedmont Triad		
	Universe	#	%	Universe	#	%
	Population	Impacted	Impacted	Population	Impacted	Impacted
Population Characteristic						
Total Population	9,750,405	-	-	1,661,909	-	-
Age 60 years and over	9,750,405	1,908,443	19.6%	1,661,909	343,755	20.7%
Minority	9,750,405	3,455,877	35.4%	1,661,909	565,306	34.0%
Below Poverty	9,496,939	1,669,147	17.6%	1,623,436	297,149	18.3%
Unemployed (Ages 20-64)	4,473,117	431,224	9.6%	755,290	72,110	9.5%
Without High School Diploma (Age 25 years and over)	6,495,047	947,402	14.6%	1,118,405	180,477	16.1%
English as a Second Language (Age 5 years and over)	9,132,159	1,009,317	11.1%	1,561,745	174,948	11.2%
With a Disability	9,551,760	1,280,361	13.4%	1,646,295	214,111	13.0%
Household Characteristics						
Without Access to a Vehicle	3,742,514	244,937	6.5%	656,465	45,145	6.9%
Female Householder with Children	3,742,514	293,077	7.8%	656,465	52,607	8.0%

Source: U.S. Census Bureau, American Community Survey 2010-2014 5-Year Estimates

Census tract data was used due to the geographic limitations of the ACS. Using the set benchmarks for each county, Census tracts with higher-than-average percentages for each characteristic were then identified and mapped for the entire region. Finally, using ArcGIS, a map was created identifying the total number of characteristics exhibited by each Census tract, illustrating a greater understanding of how these populations are spatially distributed throughout the region.

## **Regional Summary**

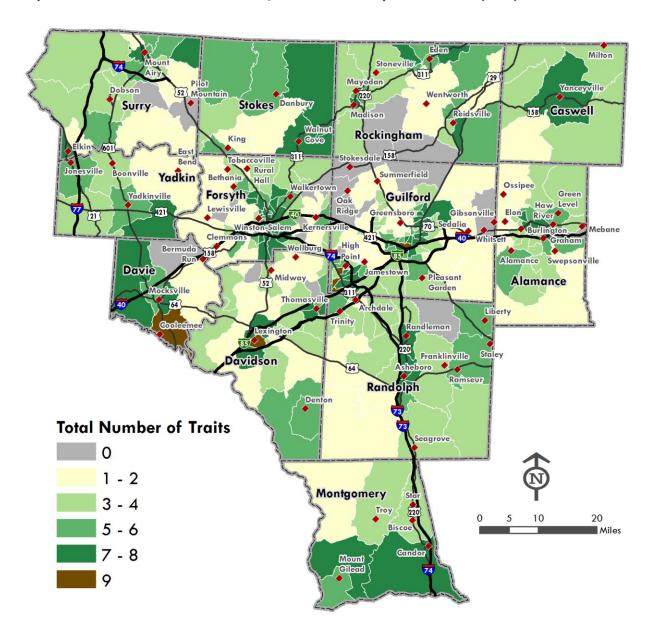
Much of the Piedmont Triad faces concerns regarding environmental justice. The Piedmont Triad area is comprised of 388 Census tracts. Within the area, 367 of these Census tracts (or 94.6%) were found to have above average conditions for at least one environmental justice characteristic. This statistic has increased from the previous Environmental Data Scan (2012) which identified 354 census tracts with above average conditions for at least one environmental justice characteristic. Only two of the additional census tracts identified can be linked to the addition of the disability characteristic in this update.

Only seven census tracts showed above average conditions for all nine environmental justice characteristics (1.8%), compared to 16 census tracts showing all eight characteristics in the 2010 data. These seven tracts are found along the I-85 corridor in Greensboro, High Point and Lexington along with one additional tract in Cooleemee. If the disability characteristic was to be removed from the 2014 data for comparison purposes, then nine census tracts would show above average conditions for all eight variables – still showing a decrease from the 2010 data.

21 census tracts showed no above average conditions for any environmental justice characteristic. This number has also decreased from the 2010 data. These tracts are generally located outside of the urban areas.

Table 2: Environmental Justice Impact Summary & Comparison (2010 & 2014)

		2010		2014			
Above Average for:	Region Average	# Impacted Census tracts	% Impacted Census tracts	Region Average	# Impacted Census tracts	% Impacted Census tracts	
Older Adult Population (Ages 60 years and over)	19.0%	180	46.4%	20.7%	197	50.8%	
Minority Population	28.7%	158	40.7%	34.0%	166	42.8%	
Population Living in Poverty	15.8%	160	41.2%	18.3%	172	44.3%	
Unemployment (Ages 20 to 64)	8.0%	166	42.8%	9.5%	165	42.5%	
Population without a High School Diploma (Ages 25 years and over)	17.6%	183	47.2%	16.1%	177	45.6%	
Population Speaking a Language other than English	10.4%	152	39.2%	11.2%	144	37.1%	
Disability Population	n/a	n/a	n/a	13.0%	200	51.5%	
Households without Access to a Vehicle	6.6%	149	38.4%	6.9%	160	41.2%	
Households with a Female Householder with Children	7.8%	167	43.0%	8.0%	166	42.8%	
Census Tract Summary							
Total Census tracts in Region		388	-		388	-	
# Above Average for Any One Characteristic		354	91.2%		367	94.6%	
# Above Average for All Charac	teristics	16	4.1%		7	1.8%	
# Below Average for All Charact	teristics	34	8.8%		21	5.4%	



Map 1: Total Number of Environmental Justice Variables by Census Tract (2014)

# **Summary by County**

### **Alamance County**

Alamance County is comprised of 36 census tracts. Within the county, 35 were found to have above average conditions of at least one environmental justice characteristic. Many census tracts within the Burlington area exhibit a high instance of multiple characteristics. None of the census tract exhibited all nine environmental justice characteristics. Only one of the census tracts were below average characteristics for all nine variables (Table 3).

**Table 3: Environmental Impact Summary for Alamance County** 

44.4% 38.9%
44.4%
38.9%
41.7%
47.2%
44.4%
38.9%
52.8%
41.7%
41.7%
-
97.2%
0.0%
2.8%

# **Caswell County**

Caswell County is comprised of six census tracts. Within the County, all six were found to have above average conditions of at least one environmental justice characteristic. None of the census tract exhibited all nine environmental justice characteristics. None of the census tracts were below average characteristics for all nine variables (Table 4).

Table 4: Environmental Impact Summary for Caswell County

	Caswell County				
	Universe Population	# Impacted	% Impacted	Impacted Tracts	% Impacted
Population Characteristic					
Total Population	23,357				
Age 60 years and over	23,357	5,780	24.7%	2	33.3%
Minority	23,357	9,065	38.8%	2	33.3%
Below Poverty	22,226	4,815	21.7%	3	50.0%
Unemployed (Ages 20-64)	9,570	1,184	12.4%	3	50.0%
Without High School Diploma (Age 25 years and over)	16,995	4,114	24.2%	3	50.0%
English as a Second Language (Ages 5 years and over)	22,214	738	3.3%	2	33.3%
With a Disability	22,289	4,634	20.8%	4	66.7%
Household Characteristics					
Without Access to a Vehicle	8,608	717	8.3%	2	33.3%
Female Householder with Children	8,608	551	6.4%	2	33.3%
Summary of Impacted Censu	ıs Tracts				
Total Census Tracts in County					-
# Above Average for Any One Characteristic				6	100.0%
# Above Average for All Characteristics				0	0.0%
# Below Average for All Charact	eristics			0	0.0%

#### **Davidson County**

Davidson County is comprised of 34 census tracts. Within the County, 32 tracts were found to have above average conditions of at least one environmental justice characteristic. There is a high density of multiple characteristics around Lexington and Thomasville. One census tracts, located in southern Lexington, exhibited all nine environmental justice characteristics. Two census tracts (one west of Midway and the other north of Thomasville) showed no above average characteristics (Table 5).

Table 5: Environmental Impact Summary for Davidson County

		Davi	dson County	,	
	Universe Population	# Impacted	% Impacted	Impacted Tracts	% Impacted
Population Characteristic					
Total Population	163,545				
Age 60 years and over	163,545	35,204	21.5%	17	50.0%
Minority	163,545	30,108	18.4%	11	32.4%
Below Poverty	160,994	25,866	16.1%	15	44.1%
Unemployed (Ages 20-64)	74,238	8,015	10.8%	16	47.1%
Without High School Diploma (Age 25 years and over)	112,973	21,329	18.9%	16	47.1%
English as a Second Language (Ages 5 years and over)	154,182	11,917	7.7%	14	41.2%
With a Disability	161,744	26,300	16.3%	22	64.7%
Household Characteristics					
Without Access to a Vehicle	64,254	3,611	5.6%	10	29.4%
Female Householder with Children	64,254	4,123	6.4%	17	50.0%
Summary of Impacted Censu	us Tracts				
Total Census Tracts in County					-
# Above Average for Any One Characteristic				32	94.1%
# Above Average for All Characteristics				I	2.9%
# Below Average for All Charact	eristics			2	5.9%

# **Davie County**

Davie County is comprised of seven census tracts. Within the County, six tracts were found to have above average conditions of at least one environmental justice characteristic. One tract (around the Cooleemee area) exhibited all eight environmental justice characteristics. One tract (northwest of Bermuda Run) showed no above average characteristics (Table 6).

**Table 6: Environmental Impact Summary for Davie County** 

	Davie County				
	Universe Population	# Impacted	% Impacted	Impacted Tracts	% Impacted
Population Characteristic					
Total Population	41,411				
Age 60 years and over	41,411	10,132	24.5%	3	42.9%
Minority	41,411	6,222	15.0%	4	57.1%
Below Poverty	40,978	5,905	14.4%	4	57.1%
Unemployed (Ages 20-64)	18,459	1,514	8.2%	3	42.9%
Without High School Diploma (Age 25 years and over)	28,940	4,217	14.6%	4	57.1%
English as a Second Language (Ages 5 years and over)	39,235	2,985	7.6%	3	42.9%
With a Disability	41,025	5,294	12.9%	3	42.9%
Household Characteristics					
Without Access to a Vehicle	16,117	721	4.5%	4	57.1%
Female Householder with Children	16,117	952	5.9%	3	42.9%
Summary of Impacted Censu	ıs Tracts				
Total Census Tracts in County					-
# Above Average for Any One Characteristic				6	85.7%
# Above Average for All Characteristics				I	14.3%
# Below Average for All Charact	eristics			I	14.3%

#### **Forsyth County**

Forsyth County is comprised of 93 census tracts. Within the County, 88 tracts were found to have above average conditions of at least one environmental justice characteristic. Many Census tracts in Winston-Salem, along the Highway US-52 corridor, exhibit a high instance of multiple characteristics. No census tracts exhibited all nine environmental justice characteristics. Five census tracts showed no above average characteristics (Table 7).

Table 7: Environmental Impact Summary for Forsyth County

	Forsyth County				
	Universe Population	# Impacted	% Impacted	Impacted Tracts	% Impacted
Population Characteristic					
Total Population	358,130				
Age 60 years and over	358,130	69,522	19.4%	52	55.9%
Minority	358,130	149,791	41.8%	41	44.1%
Below Poverty	348,176	66,425	19.1%	40	43.0%
Unemployed (Ages 20-64)	164,663	15,125	9.2%	35	37.6%
Without High School Diploma (Age 25 years and over)	236,409	31,169	13.2%	43	46.2%
English as a Second Language (Ages 5 years and over)	334,667	47,216	14.1%	33	35.5%
With a Disability	354,998	37,653	10.6%	51	54.8%
Household Characteristics					
Without Access to a Vehicle	141,901	11,201	7.9%	39	41.9%
Female Householder with Children	141,901	12,005	8.5%	36	38.7%
Summary of Impacted Censi	us Tracts				
Total Census Tracts in County					-
# Above Average for Any One Characteristic				88	94.6%
# Above Average for All Characteristics				0	0.0%
# Below Average for All Charact	eristics			5	5.4%

## **Guilford County**

Guilford County is comprised of 119 census tracts. Within the County, 112 were found to have above average conditions of at least one environmental justice characteristic. Many census tracts within Greensboro and High Point (along the I-85, I40 and US-29 corridors) exhibit a high instance of multiple characteristics. Five census tracts exhibited all nine environmental justice characteristics. Seven census tracts showed no above average characteristics (Table 8).

Table 8: Environmental Impact Summary for Guilford County

	Guilford County					
	Universe Population	# Impacted	% Impacted	Impacted Tracts	% Impacted	
Population Characteristic						
Total Population	500,899					
Age 60 years and over	500,899	92,855	18.5%	57	47.9%	
Minority	500,899	235,428	47.0%	55	46.2%	
Below Poverty	486,453	86,968	17.9%	51	42.9%	
Unemployed (Ages 20-64)	237,933	22,315	9.4%	46	38.7%	
Without High School Diploma (Age 25 years and over)	328,664	38,657	11.8%	49	41.2%	
English as a Second Language (Ages 5 years and over)	469,998	59,883	12.7%	45	37.8%	
With a Disability	497,264	52,821	10.6%	54	45.4%	
Household Characteristics						
Without Access to a Vehicle	198,560	14,830	7.5%	50	42.0%	
Female Householder with Children	198,560	18,792	9.5%	51	42.9%	
Summary of Impacted Censu	ıs Tracts					
Total Census Tracts in County					-	
# Above Average for Any One Characteristic					94.1%	
# Above Average for All Characteristics				5	4.2%	
# Below Average for All Characteristics				7	5.9%	

# **Montgomery County**

Montgomery County is comprised of six census tracts. Within the County, all six tracts were found to have above average conditions of at least one environmental justice characteristic. No census tracts within Montgomery County exhibited all nine environmental justice characteristics (Table 9).

Table 9: Environmental Impact Summary for Montgomery County

	Montgomery County				
	Universe Population	# Impacted	% Impacted	Impacted Tracts	% Impacted
Population Characteristic					
Total Population	27,626				
Age 60 years and over	27,626	6,657	24.1%	3	50.0%
Minority	27,626	10,023	36.3%	3	50.0%
Below Poverty	26,666	6,992	26.2%	3	50.0%
Unemployed (Ages 20-64)	10,549	1,227	11.6%	2	33.3%
Without High School Diploma (Age 25 years and over)	19,032	4,854	25.5%	3	50.0%
English as a Second Language (Ages 5 years and over)	25,963	4,138	15.9%	3	50.0%
With a Disability	26,682	4,297	16.1%	3	50.0%
Household Characteristics					
Without Access to a Vehicle	10,625	1,050	9.9%	3	50.0%
Female Householder with Children	10,625	746	7.0%	4	66.7%
Summary of Impacted Censu	us Tracts				
Total Census Tracts in County					-
# Above Average for Any One Characteristic				6	100.0%
# Above Average for All Characteristics				0	0.0%
# Below Average for All Charact	eristics			0	0.0%

## **Randolph County**

Randolph County is comprised of 28 census tracts. Within the County, 27 tracts were found to have above average conditions of at least one environmental justice characteristic. Many Census tracts within Asheboro and Randleman (along the US-220 corridor) exhibit a high instance of multiple characteristics. No census tract exhibited all nine environmental justice characteristics. Only one census tract showed no above average characteristics (Table 10).

Table 10: Environmental Impact Summary for Randolph County

		Rand	lolph County	,	
	Universe Population	# Impacted	% Impacted	Impacted Tracts	% Impacted
Population Characteristic					
Total Population	142,276				
Age 60 years and over	142,276	30,785	21.6%	17	60.7%
Minority	142,276	27,471	19.3%	12	42.9%
Below Poverty	140,594	25,316	18.0%	13	46.4%
Unemployed (Ages 20-64)	63,384	6,056	9.6%	14	50.0%
Without High School Diploma (Age 25 years and over)	96,740	20,239	20.9%	16	57.1%
English as a Second Language (Ages 5 years and over)	133,630	14,451	10.8%	10	35.7%
With a Disability	141,179	19,079	13.5%	11	39.3%
Household Characteristics					
Without Access to a Vehicle	54,254	2,759	5.1%	14	50.0%
Female Householder with Children	54,254	3,819	7.0%	12	42.9%
Summary of Impacted Censu	ıs Tracts				
Total Census Tracts in County					-
# Above Average for Any One Characteristic				27	96.4%
# Above Average for All Characteristics				0	0.0%
# Below Average for All Charact	eristics			I	3.6%

## **Rockingham County**

Rockingham County is comprised of 21 census tracts. Within the County, 19 tracts were found to have above average conditions of at least one environmental justice characteristic. Many Census tracts within the Reidsville and Eden areas exhibit a high instance of multiple characteristics. No census tracts exhibited all nine environmental justice characteristics. Two census tracts showed no above average characteristics (Table 11).

Table II: Environmental Impact Summary for Rockingham County

		Rockir	ngham Coun	ty		
	Universe Population	# Impacted	% Impacted	Impacted Tracts	% Impacted	
Population Characteristic						
Total Population	92,602					
Age 60 years and over	92,602	22,357	24.1%	10	47.6%	
Minority	92,602	24,862	26.8%	9	42.9%	
Below Poverty	91,233	17,170	18.8%	11	52.4%	
Unemployed (Ages 20-64)	39,831	4,685	11.8%	10	47.6%	
Without High School Diploma (Age 25 years and over)	65,465	13,585	20.8%	П	52.4%	
English as a Second Language (Ages 5 years and over)	87,724	5,151	5.9%	7	33.3%	
With a Disability	91,668	16,294	17.8%	13	61.9%	
Household Characteristics						
Without Access to a Vehicle	37,691	2,699	7.2%	9	42.9%	
Female Householder with Children	37,691	2,747	7.3%	10	47.6%	
Summary of Impacted Censu	ıs Tracts					
Total Census Tracts in County	21	-				
# Above Average for Any One Characteristic						
# Above Average for All Charact	# Above Average for All Characteristics 0					
# Below Average for All Charact	eristics			2	9.5%	

### **Stokes County**

Stokes County is comprised of nine census tracts. Within the County, all nine were found to have above average conditions of at least one environmental justice characteristic. Higher instances of multiple characteristics were noted in the eastern part of the County. No census tracts within Stokes County exhibited all nine environmental justice characteristics (Table 12).

Table 12: Environmental Impact Summary for Stokes County

		Stokes County					
	Universe Population	# Impacted	% Impacted	Impacted Tracts	% Impacted		
Population Characteristic							
Total Population	46,858						
Age 60 years and over	46,858	11,381	24.3%	5	55.6%		
Minority	46,858	3,958	8.4%	2	22.2%		
Below Poverty	46,322	7,909	17.1%	4	44.4%		
Unemployed (Ages 20-64)	20,219	1,924	9.5%	5	55.6%		
Without High School Diploma (Age 25 years and over)	33,478	6,519	19.5%	5	55.6%		
English as a Second Language (Ages 5 years and over)	44,470	1,328	3.0%	4	44.4%		
With a Disability	46,433	6,990	15.1%	5	55.6%		
Household Characteristics							
Without Access to a Vehicle	18,855	898	4.8%	3	33.3%		
Female Householder with Children	18,855	1,187	6.3%	5	55.6%		
Summary of Impacted Censu	ıs Tracts						
Total Census Tracts in County	9	-					
# Above Average for Any One Characteristic 9							
# Above Average for All Charact	# Above Average for All Characteristics 0						
# Below Average for All Charact	eristics			0	0.0%		

## **Surry County**

Surry County is comprised of 22 census tracts. Within the County, 20 were found to have above average conditions for at least one environmental justice characteristic. Many census tracts within the Mount Airy and Elkin areas exhibited a high instance of multiple characteristics. No census tracts exhibited all nine environmental justice characteristics. Two census tract showed no above average characteristics (Table 13).

Table 13: Environmental Impact Summary for Surry County

		Su	rry County		
	Universe Population	# Impacted	% Impacted	Impacted Tracts	% Impacted
Population Characteristic					
Total Population	73,391				
Age 60 years and over	73,391	18,050	24.6%	11	50.0%
Minority	73,391	11,292	15.4%	10	45.5%
Below Poverty	72,390	14,367	19.8%	10	45.5%
Unemployed (Ages 20-64)	30,189	2,617	8.7%	11	50.0%
Without High School Diploma (Age 25 years and over)	50,993	12,249	24.0%	9	40.9%
English as a Second Language (Ages 5 years and over)	69,289	6,195	8.9%	6	27.3%
With a Disability	72,606	12,732	17.5%	11	50.0%
Household Characteristics					
Without Access to a Vehicle	29,380	1,979	6.7%	9	40.9%
Female Householder with Children	29,380	2,003	6.8%	7	31.8%
Summary of Impacted Censu	ıs Tracts				
Total Census Tracts in County				22	-
# Above Average for Any One C	20	90.9%			
# Above Average for All Characteristics 0					
# Below Average for All Charact	eristics			2	9.1%

# **Yadkin County**

Yadkin County is comprised of seven census tracts. Within the County, all seven tracts were found to have above average conditions of at least one environmental justice characteristic. No Census tracts within Yadkin County exhibited all nine environmental justice characteristics (Table 14).

Table 14: Environmental Impact Summary for Yadkin County

		Yad	lkin County		
		Tau	ikin County		
	Universe Population	# Impacted	% Impacted	Impacted Tracts	% Impacted
Population Characteristic					
Total Population	38,101				
Age 60 years and over	38,101	9,113	23.9%	4	57.1%
Minority	38,101	5,574	14.6%	3	42.9%
Below Poverty	37,763	7,318	19.4%	3	42.9%
Unemployed (Ages 20-64)	16,239	1,237	7.6%	3	42.9%
Without High School Diploma (Age 25 years and over)	26,477	5,756	21.7%	2	28.6%
English as a Second Language (Ages 5 years and over)	36,009	3,328	9.2%	3	42.9%
With a Disability	37,792	6,110	16.2%	4	57.1%
Household Characteristics					
Without Access to a Vehicle	15,174	792	5.2%	2	28.6%
Female Householder with Children	15,174	753	5.0%	4	57.1%
Summary of Impacted Cens	us Tracts				
Total Census Tracts in County	7	-			
# Above Average for Any One C	7	100.0%			
# Above Average for All Charact	# Above Average for All Characteristics 0				
# Below Average for All Charact	eristics			0	0.0%

# **Summary by Characteristic**

#### **Race**

The geographic distribution of minority communities is a primary consideration of the federal government's Environmental Justice guidelines. To calculate the average percent minority population for each county and census tract, the number of White, non-Hispanic individuals was subtracted from the total population. Therefore, minority individuals are persons of at least one of the following racial or ethnic classes: African American, American Indian, Asian, Pacific Islander, or Hispanic/Latino.

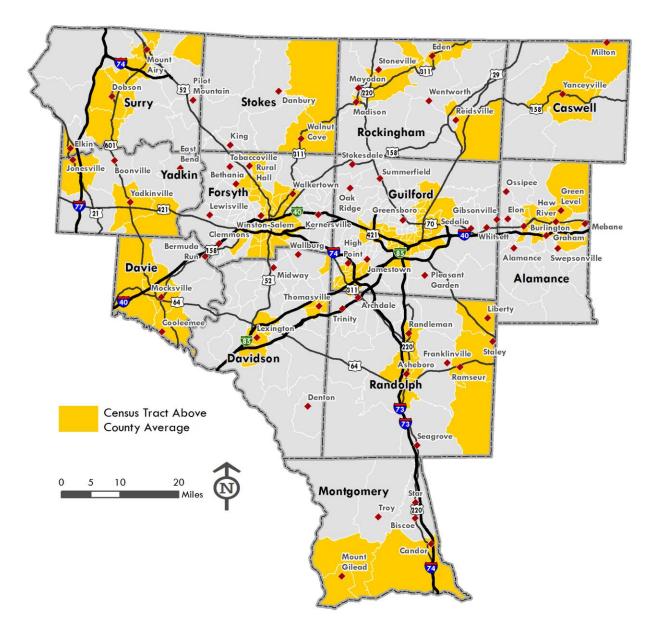


**Table 15: Minority Population** 

County:	Universe Population	Minority Population	% Minority Population (County Average)	Total Tracts	Impacted Tracts	% Tracts Impacted
Alamance	153,713	51,512	33.5%	36	14	38.9%
Caswell	23,357	9,065	38.8%	6	2	33.3%
Davidson	163,545	30,108	18.4%	34	11	32.4%
Davie	41,411	6,222	15.0%	7	4	57.1%
Forsyth	358,130	149,791	41.8%	93	41	44.1%
Guilford	500,899	235,428	47.0%	119	55	46.2%
Montgomery	27,626	10,023	36.3%	6	3	50.0%
Randolph	142,276	27,471	19.3%	28	12	42.9%
Rockingham	92,602	24,862	26.8%	21	9	42.9%
Stokes	46,858	3,958	8.4%	9	2	22.2%
Surry	73,391	11,292	15.4%	22	10	45.5%
Yadkin	38,101	5,574	14.6%	7	3	42.9%
REGION	1,661,909	565,306	34.0%	388	166	42.8%

Source: U.S. Census Bureau, American Community Survey 2010-2014 5-Year Estimates

North Carolina's poulation consists of 35.4% minority population. The Piedmont Triad Region's minority population proportion is slightly less at 34.0%. The urban counties of Guilford and Forsyth have the highest proportion of minority populationat 47.0% and 41.8%, respectively. Census tracts with higher than the county average for minority population are generally located in urban areas and along major highway corridors (Map 2).



Map 2: Higher than Average Minority Population

Source: U.S. Census Bureau, American Community Survey 2010-2014 5-Year Estimates

## Age

Age is an important environmental justice consideration because older adults generally experience increased difficulties recovering from disasters, adjusting to economic changes or stresses, dealing with injuries and exposure to illness or pollution. Individuals included in this category are 60 years of age or older.

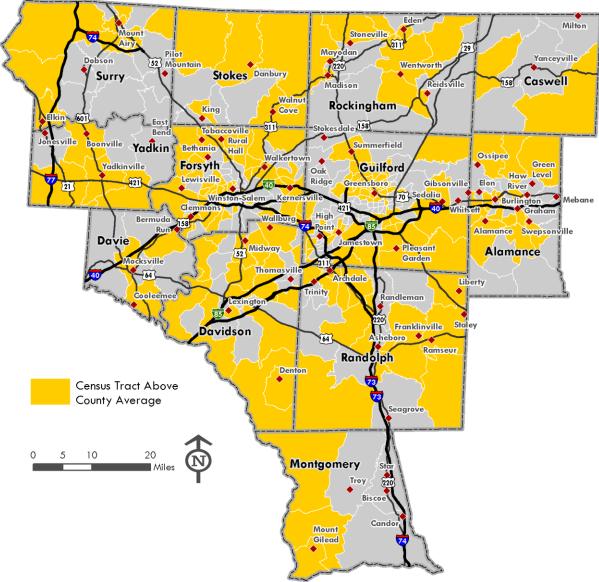


Table 16: Older Adult Population (Age 60 Years and Over)

County:	Universe Population	Older Adult Population	% Older Adult Population (County Average)	Total Tracts	Impacted Tracts	% Tracts Impacted
Alamance	153,713	31,919	20.8%	36	16	44.4%
Caswell	23,357	5,780	24.7%	6	2	33.3%
Davidson	163,545	35,204	21.5%	34	17	50.0%
Davie	41,411	10,132	24.5%	7	3	42.9%
Forsyth	358,130	69,522	19.4%	93	52	55.9%
Guilford	500,899	92,855	18.5%	119	57	47.9%
Montgomery	27,626	6,657	24.1%	6	3	50.0%
Randolph	142,276	30,785	21.6%	28	17	60.7%
Rockingham	92,602	22,357	24.1%	21	10	47.6%
Stokes	46,858	11,381	24.3%	9	5	55.6%
Surry	73,391	18,050	24.6%	22	П	50.0%
Yadkin	38,101	9,113	23.9%	7	4	57.1%
REGION	1,661,909	343,755	20.7%	388	197	50.8%

North Carolina's poulation consists of 19.6% older adults, age 60 years and over. The Piedmont Triad Region's older adult population proportion is slightly higher at 20.7%. The rural counties have a higher proportion of older adults than the urban counties of Guilford and Forsyth. Census tracts with higher than the county average for older adults are generally located in rural areas of the region, in areas without access to major highways (Map 3).

Map 3: Higher than Average Older Adult Population



### **Poverty Status**

poverty may experience increased difficulties recovering from disasters, adjusting to economic stresses, dealing with injuries or illness and exposure to pollution.

Poverty statistics in the American Community Survey (ACS) are calculated for all people except institutionalized people, people in military group quarters, people in college dormitories, and unrelated individuals under

15 years old. The ACS uses a set of dollar

Similar to older adults, families living in



value thresholds that vary by family size and composition to determine who is in poverty. Further, poverty thresholds for people living alone or with nonrelatives (unrelated individuals) vary by age (under 65 years or 65 years and older). The poverty thresholds for two-person families also vary by the age of the householder. If a family's total income is less than the dollar value of the appropriate threshold, then that family and every individual in it are considered to be in poverty. Similarly, if an unrelated individual's total income is less than the appropriate threshold, then that individual is considered to be in poverty.

Because the ACS is a continuous survey, people respond throughout the year. Income questions specify a period covering the las 12 months, so the income thresholds are determined by multiply the base-year poverty threshold (1982) by the average of the monthly inflation factors for the 12 months preceding the data collection (see Appendix).

**Table 17: Population Living in Poverty** 

County:	Universe Population	Impacted Population	% Impacted (County Average)	Total Tracts	Impacted Tracts	% Tracts Impacted
Alamance	149,641	28,098	18.8%	36	15	41.7%
Caswell	22,226	4,815	21.7%	6	3	50.0%
Davidson	160,994	25,866	16.1%	34	15	44.1%
Davie	40,978	5,905	14.4%	7	4	57.1%
Forsyth	348,176	66,425	19.1%	93	40	43.0%
Guilford	486,453	86,968	17.9%	119	51	42.9%
Montgomery	26,666	6,992	26.2%	6	3	50.0%
Randolph	140,594	25,316	18.0%	28	13	46.4%
Rockingham	91,233	17,170	18.8%	21	11	52.4%
Stokes	46,322	7,909	17.1%	9	4	44.4%
Surry	72,390	14,367	19.8%	22	10	45.5%
Yadkin	37,763	7,318	19.4%	7	3	42.9%
REGION	1,623,436	297,149	18.3%	388	172	44.3%

Compared to the 17.6% of North Carolina's population lives below the poverty threshold, the Piedmont Triad's poverty rate is slightly higher at 18.3%. The rural counties of Montgomery and Caswell have the highest poverty rates at 26.2% and 21.7%, respectively. Census tracts with higher than the county average for population living in poverty are located in rural parts of the region and in the center of the more urbanized cities (Map 4).

Milton Yanceyville 52 Mountain 220 Stokes Danbury Surry Caswell Madison Reidsville Rockingham 158 onville Yadkin Walkertown Ossipee Forsyth Yadkinville Guilford Haw Level Gibsonville Elon River Alamance Swepsonville Davie Midway **Alamance** ksville Randleman Franklinville Staley Davidson Randolph Denton Census Tract Above County Average Montgomery Candor Gilead

Map 4: Higher than Average Population Living in Poverty

#### Unemployment

Long-term unemployment often puts individuals and households at higher risk of slipping into poverty. As previously mentioned, families living in poverty may experience increased difficulties recovering from disasters, adjusting to economic stresses, dealing with injuries or illness and exposure to pollution. Individuals included in this category are ages 20 to 64 that were unemployed at the time of responding to the American Community Survey.



Table 18: Unemployed Population (Ages 20-64)

County:	Universe Population	Unemployed Population	% Unemployed (County Average)	Total Tracts	Impacted Tracts	% Tracts Impacted
Alamance	70,016	6,211	8.9%	36	17	47.2%
Caswell	9,570	1,184	12.4%	6	3	50.0%
Davidson	74,238	8,015	10.8%	34	16	47.1%
Davie	18,459	1,514	8.2%	7	3	42.9%
Forsyth	164,663	15,125	9.2%	93	35	37.6%
Guilford	237,933	22,315	9.4%	119	46	38.7%
Montgomery	10,549	1,227	11.6%	6	2	33.3%
Randolph	63,384	6,056	9.6%	28	14	50.0%
Rockingham	39,831	4,685	11.8%	21	10	47.6%
Stokes	20,219	1,924	9.5%	9	5	55.6%
Surry	30,189	2,617	8.7%	22	11	50.0%
Yadkin	16,239	1,237	7.6%	7	3	42.9%
REGION	755,290	72,110	9.5%	388	165	42.5%

North Carolina has an unemployment rate of 9.6%. The Piedmont Triad Region's unemployment rate is about the same at 9.5%. Caswell County has the highest poverty rate at 12.4%; while Yadkin County has the lowest rate at 7.6%. Census tracts with higher than the county average for unemployment rates are highlighted in Map 5.

Milton Stoneville Yanceyville 52 Mountain Surry Stokes Danbury Caswell Rockingham kesdale 158 Boonville Yadkin Oak Forsyth Guilford Green Yadkinville Haw Level Ridge River High Alamance Swepsonville Davie Midway Alamance Garden ksville Liberty Randleman Franklinville Davidson Ramseur Randolph Denton Census Tract Above County Average eagrove

Montgomery

Mount Gilead 220

Cando

Map 5: Higher than Average Unemployment Rates (Ages 20-64)

#### **Educational Attainment**

Educational attainment is highly correlated to other environmental justice considerations, particularly poverty and unemployment. Without an adequate education, individuals may experience difficulties in obtaining employment or reasonable wages.

Individuals are included in this category if they are 25 years or older and have not obtained a High School Diploma or a GED.



Table 19: Population Age 25 Years and Older Without a High School Diploma

County:	Universe Population	Impacted Population	% Impacted (County Average)	Total Tracts	Impacted Tracts	% Tracts Impacted
Alamance	102,239	17,789	17.4%	36	16	44.4%
Caswell	16,995	4,114	24.2%	6	3	50.0%
Davidson	112,973	21,329	18.9%	34	16	47.1%
Davie	28,940	4,217	14.6%	7	4	57.1%
Forsyth	236,409	31,169	13.2%	93	43	46.2%
Guilford	328,664	38,657	11.8%	119	49	41.2%
Montgomery	19,032	4,854	25.5%	6	3	50.0%
Randolph	96,740	20,239	20.9%	28	16	57.1%
Rockingham	65,465	13,585	20.8%	21	11	52.4%
Stokes	33,478	6,519	19.5%	9	5	55.6%
Surry	50,993	12,249	24.0%	22	9	40.9%
Yadkin	26,477	5,756	21.7%	7	2	28.6%
REGION	1,118,405	180,477	16.1%	388	177	45.6%

Compared to the 14.6% of North Carolina's population without a high school diploma, a higher percentage (16.1%) of the Piedmont Triad Region's adult population does not have a high school diploma. The rural counties of Caswell and Surry have the highest uneducated rates at 24.2% and 24.0%, respectively. Census tracts with higher than the county average for the adult population without a high school diploma are highlighted in Map 6.

Milton Yanceyville 52 Mountain Stokes Danbury Surry Caswell Madison Rockingham Yadkin Bethania Ossipee Walkertown Forsyth Yadkinville Guilford Elon Gibsonville 21 Alamance Swepsonville Davie Midway Alamance ksville Liberty Randleman Franklinville Staley Davidson Randolph Denton Census Tract Above County Average Seagrove Montgomery 220 Candor Gilead

Map 6: Higher than Average Population (Ages 25+) Without a High School Diploma

## Language

Public agencies must consider and address language barriers to effectively communicate important community information, particularly in times of disaster.

Individuals are included in this category if they are five years old or older and speak English as a second language. Although listed in varying degrees of proficiency, a sum was derived from the ACS estimates.



Table 20: English as a Second Language Population (Ages 5+)

County:	Universe Population	Impacted Population	% Impacted (County Average)	Total Tracts	Impacted Tracts	% Tracts Impacted
Alamance	144,364	17,618	12.2%	36	14	38.9%
Caswell	22,214	738	3.3%	6	2	33.3%
Davidson	154,182	11,917	7.7%	34	14	41.2%
Davie	39,235	2,985	7.6%	7	3	42.9%
Forsyth	334,667	47,216	14.1%	93	33	35.5%
Guilford	469,998	59,883	12.7%	119	45	37.8%
Montgomery	25,963	4,138	15.9%	6	3	50.0%
Randolph	133,630	14,451	10.8%	28	10	35.7%
Rockingham	87,724	5,151	5.9%	21	7	33.3%
Stokes	44,470	1,328	3.0%	9	4	44.4%
Surry	69,289	6,195	8.9%	22	6	27.3%
Yadkin	36,009	3,328	9.2%	7	3	42.9%
REGION	1,561,745	174,948	11.2%	388	144	37.1%

11.2% of the Piedmont Triad Region's population (ages 5 years old and older) speak a primary language other than English. This percentage is similar to the State's (11.1%). Generally, the urban counties have a higher percentage of non-English speakers, but Montgomery County has the highest proportion at 15.9%, due in part to the high percentage of Hispanic individuals. Census tracts with a higher percentage than the county average for population speaking English as a second language are highlighted in Map 7.

Milton Stoneville Pilot 52 Mountain Yanceyville Stokes Danbury Surry Caswell Rockingham King Bethania Rural Yadkin ( Oak Forsyth Yadkinville Guilford Green Ridge Elon Gibsonville Alamance Swepsonville Davie Midway **Alamance** Liberty Lexingtor Franklinville Davidson Ramseur Randolph Census Tract Above County Average eagrove 10 Montgomery Cando Mount Gilead

Map 7: Higher than Average Population Speaking English as a Second Language

# **Disability**

Access to public transportation is key to independence for people with disabilities. Individuals included in this category are in the noninstitutionalized population and consider themselves to have one or more of the following difficulties: hearing, vision, cognitive, ambulatory, self-care and independent living.



Table 21: Population with a Disability

County:	Universe Population	Impacted Population	% Impacted (County Average)	Total Tracts	Impacted Tracts	% Tracts Impacted
Alamance	152,615	21,907	14.4%	36	19	52.8%
Caswell	22,289	4,634	20.8%	6	4	66.7%
Davidson	161,744	26,300	16.3%	34	22	64.7%
Davie	41,025	5,294	12.9%	7	3	42.9%
Forsyth	354,998	37,653	10.6%	93	51	54.8%
Guilford	497,264	52,821	10.6%	119	54	45.4%
Montgomery	26,682	4,297	16.1%	6	3	50.0%
Randolph	141,179	19,079	13.5%	28	- 11	39.3%
Rockingham	91,668	16,294	17.8%	21	13	61.9%
Stokes	46,433	6,990	15.1%	9	5	55.6%
Surry	72,606	12,732	17.5%	22	11	50.0%
Yadkin	37,792	6,110	16.2%	7	4	57.1%
REGION	1,646,295	214,111	13.0%	388	200	51.5%

13.0% of the Piedmont Triad Region's noninstitutionalized population has one or more disabilities. This percentage is similar to the State's (13.4%). Generally, the urban counties have a lower percentage of their population with a disability. Caswell County has the highest proportion with 20.8% of its population with a disability. Census tracts with a higher percentage than the county average for population with a disability are highlighted in Map 8.

Milton Stoneville 220 Stokes Danbury Surry Madison Caswell Reidsville Rockingham 158 Boonville Yadkin Bethania Ossipee Walkertown Forsyth Green Yadkinville Guilford Haw Level Elon Gibsonville 21 Alamance Swepsonville Midway Alamance Liberty Franklinville Davidson Randolph Denton Census Tract Above County Average Seagrove Montgomery Candor Gilead

Map 8: Higher than Average Population with a Disability

Source: U.S. Census Bureau, American Community Survey 2010-2014 5-Year Estimates

#### **Vehicle Availability**

Individuals without immediate access to a vehicle are dependent on others or alternative forms of transportation to access jobs, healthcare and to services. Individuals living in rural locations may experience more difficulty coping without a vehicle as access to alternate forms of transit maybe limited and distances to services and employment tend to be greater.



Households in this category were included if a passenger car, van or pick-up truck was unavailable for the use of household members.

Table 22: Households without Access to a Vehicle

County:	Universe Households	Impacted Households	% Impacted (County Average)	Total Tracts	Impacted Tracts	% Tracts Impacted
Alamance	61,046	3,888	6.4%	36	15	41.7%
Caswell	8,608	717	8.3%	6	2	33.3%
Davidson	64,254	3,611	5.6%	34	10	29.4%
Davie	16,117	721	4.5%	7	4	57.1%
Forsyth	141,901	11,201	7.9%	93	39	41.9%
Guilford	198,560	14,830	7.5%	119	50	42.0%
Montgomery	10,625	1,050	9.9%	6	3	50.0%
Randolph	54,254	2,759	5.1%	28	14	50.0%
Rockingham	37,691	2,699	7.2%	21	9	42.9%
Stokes	18,855	898	4.8%	9	3	33.3%
Surry	29,380	1,979	6.7%	22	9	40.9%
Yadkin	15,174	792	5.2%	7	2	28.6%
REGION	656,465	45,145	6.9%	388	160	41.2%

6.9% of the Piedmont Triad Region's households do not have access to a vehicle, compared to the state average of 6.5%. Montgomery County has the highest percentage of households without vehicle access at 9.9% while Davie County has the least at 4.5%. Census tracts with a higher percentage than the county average for households without access to a vehicle are highlighted in Map 8.

Milton Yanceyville 52 Mountain 220 Stokes Danbury Surry Caswell Rockingham 158 onville Yadkin Ossipee Forsyth Yadkin ville Guilford Elon Gibsonville Alamance Swepsonville Davie Midway Alamance ksville Randleman Franklinville Staley Davidson. Randolph Census Tract Above County Average Seagrove Montgomery Candor Gilead

Map 9: Higher than Average Households without Access to a Vehicle

#### Female Householders with Children

Female heads of households may be more vulnerable to shifts in the economy and disasters, leaving them at higher risk of slipping into poverty.

Households are included in this category if the homeowner or renter is a single female living with her children.

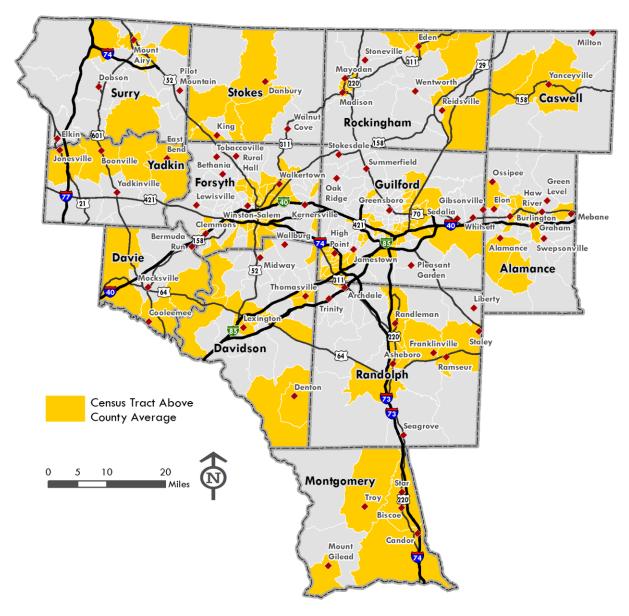


**Table 23: Female Households with Children** 

County:	Universe Households	Impacted Households	% Impacted (County Average)	Total Tracts	Impacted Tracts	% Tracts Impacted
Alamance	61,046	4,929	8.1%	36	15	41.7%
Caswell	8,608	551	6.4%	6	2	33.3%
Davidson	64,254	4,123	6.4%	34	17	50.0%
Davie	16,117	952	5.9%	7	3	42.9%
Forsyth	141,901	12,005	8.5%	93	36	38.7%
Guilford	198,560	18,792	9.5%	119	51	42.9%
Montgomery	10,625	746	7.0%	6	4	66.7%
Randolph	54,254	3,819	7.0%	28	12	42.9%
Rockingham	37,691	2,747	7.3%	21	10	47.6%
Stokes	18,855	1,187	6.3%	9	5	55.6%
Surry	29,380	2,003	6.8%	22	7	31.8%
Yadkin	15,174	753	5.0%	7	4	57.1%
REGION	656,465	52,607	8.0%	388	166	42.8%

8.0% of the Piedmont Triad Region's households have female householders living with their own children, compared to the state average of 7.8%. Generally, the urban counties have a higher percentage of these households (9.5% for Guilford County). Yadkin County has the lowest percentage of households with female householders with children at 5.0%. Census tracts with a higher percentage than the county average for these households are highlighted in Map 8.

Map 10: Higher than Average Households with a Female Householder with Her Own Children



#### **REFERENCES**

- Mid-Ohio Regional Planning Commission. 2000. "Environmental Justice Report." <a href="http://www.morpc.org/pdf/EnvironmentalJusticeReport.pdf">http://www.morpc.org/pdf/EnvironmentalJusticeReport.pdf</a>.
- U.S. Census Bureau. 2014. American Community Survey 5-year Estimates (2010-2014). <a href="http://www.factfinder.census.gov/">http://www.factfinder.census.gov/</a>.
- U.S. Census Bureau. 2014. American Community Survey and Puerto Rico Community Survey: 2014 Subject Definitions. <a href="http://www2.census.gov/programs-surveys/acs/tech\_docs/subject\_definitions/2014\_ACSSubjectDefinitions.pdf">http://www2.census.gov/programs-surveys/acs/tech\_docs/subject\_definitions/2014\_ACSSubjectDefinitions.pdf</a>.
- U.S. Department of Transportation, Federal Highway Administration, Federal Transit
  Administration. 2000. Environmental Justice: An Overview of Transportation and Environmental
  Justice. FHWA-EP-00-013.
  <a href="http://www.fhwa.dot.gov/environment/environmental">http://www.fhwa.dot.gov/environment/environmental</a> justice/overview/.
- U.S. Department of Transportation, Federal Highway Administration, Office of Planning. 2006. How to Engage Low-Literacy and Limited English Proficiency Populations in Transportation Decision Making. FHWA-HEP-06-009. https://www.fhwa.dot.gov/planning/publications/low\_limited/webbook.pdf.
- U.S. Environmental Protection Agency. 2016. *Environmental Justice*. <a href="https://www.epa.gov/environmentaljustice">https://www.epa.gov/environmentaljustice</a>.

# **APPENDIX**

**Table 24: 2014 ACS Poverty Factors** 

Interview	Poverty				
Month	Factors				
January	2.41382				
February	2.41696				
March	2.41922				
April	2.42226				
May	2.42618				
June	2.43046				
July	2.43464				
August	2.43866				
September	2.44209				
October	2.44544				
November	2.44880				
December	2.45146				

Source: U.S. Census Bureau, American Community Survey 2014 Subject Definitions

Table 25: 2014 ACS Poverty Thresholds

	Related children under 18 years								
Size of family unit	None	One	Two	Three	Four	Five	Six	Seven	Eight or more
One person (unrelated individual)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Under 65 years	5,019	N/A							
65 years and over	4,626	N/A							
Two persons	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Householder under 65 years	6,459	6,649	N/A						
Householder 65 years and over	5,831	6,624	N/A						
Three persons	7,546	7,765	7,772	N/A	N/A	N/A	N/A	N/A	N/A
Four persons	9,950	10,112	9,783	9,817	N/A	N/A	N/A	N/A	N/A
Five persons	11,999	12,173	11,801	11,512	11,336	N/A	N/A	N/A	N/A
Six persons	13,801	13,855	13,570	13,296	12,890	12,649	N/A	N/A	N/A
Seven persons	15,879	15,979	15,637	15,399	14,955	14,437	13,869	N/A	N/A
Eight persons or more	17,760	17,917	17,594	17,312	16,911	16,403	15,872	15,738	N/A
Nine persons or more	21,364	21,468	21,183	20,943	20,549	20,008	19,517	19,397	18,649

Source: U.S. Census Bureau, American Community Survey 2014 Subject Definitions