



# Prestage AgEnergy - Moltenville

## Draft Environmental Justice Report

North Carolina Department of Environmental Quality  
March 15, 2021

## Contents

1 Introduction.....	4
2 Environmental Justice Evaluation.....	4
3 Proposed Project.....	5
4 Geographic Area .....	7
5 Regional and Local Settings .....	8
5.1 Race and Ethnicity .....	9
Regional Setting.....	9
Local Setting.....	10
5.2 Age and Sex.....	10
Regional Setting.....	10
Local Setting.....	12
Project Radius.....	12
5.3 Disability .....	13
Regional Setting.....	13
Local Setting.....	15
5.4 Poverty.....	17
Regional Setting.....	17
Local Setting.....	19
5.5 Household Income .....	21
Regional Setting.....	21
Local Setting.....	21
Per Capita Income.....	22
6 Limited English Proficiency .....	23
7 County Health.....	24
Figure 1. Prestage AgEnergy - Moltonville location with the one-mile radius. ....	7
Figure 2. Census tracts encompassing the facility location and one-mile radius. ....	8
Figure 3. County Health Rankings for Health Factors in North Carolina provided by University of Wisconsin Public Health Institute. ....	25
Figure 4. Sensitive receptors surrounding Prestage AgEnergy.. ....	27
Figure 5. Permitted facilities and incidents with the one-mile radius surrounding the Prestage AgEnergy facility.....	28

Table 1. Toxic Air Pollutant Emissions and Modeling Results ..... 6  
Table 2. Facility Emissions Overview ..... 6  
Table 3. Regional Setting - Race and Ethnicity ..... 9  
Table 4. Local Setting - Race and Ethnicity ..... 10  
Table 5. Regional Setting - Age Groups and Sex ..... 11  
Table 6. Local Setting - Age Groups and Sex ..... 12  
Table 7. Project Radius - Age Groups and Sex ..... 12  
Table 8. Regional Setting - Disability ..... 14  
Table 9. Local Setting - Disability ..... 16  
Table 10. Regional Setting - Poverty ..... 18  
Table 11. Local Setting - Poverty ..... 20  
Table 12. Regional Setting- Household Income ..... 21  
Table 13. Local Setting - Household Income ..... 22  
Table 14. Limited English Proficiency ..... 24  
Table 15. Health Outcomes ..... 25

## 1 Introduction

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (US EPA). This evaluation examines the demographic and environmental conditions in Sampson County, in census tracts 9707 and 9708, and the one-mile radius around the property boundary of the Prestage AgEnergy - Moltonville facility. Finally, the demographics of the entire state of North Carolina are also considered as they compare to both the county and the local census tract and radius settings.

The primary goal of this Draft EJ Report is to encourage comments and suggestions from the surrounding community, industry, and environmental groups throughout the comment period. Public comments will be considered throughout the remainder of the comment period to inform the Final EJ Report.

## 2 Environmental Justice Evaluation

The Department of Environmental Quality (DEQ or Department) has assessed the permit application and the demographics of the communities in the area surrounding the proposed project. Accordingly, this Draft EJ Report includes:

- Permit application submitted by Prestage AgEnergy - Moltonville
- Facility emissions overview
- Study of area demographics [determined by utilizing the US EPA Environmental Justice tool (EJSCREEN) <https://ejscreen.epa.gov/mapper/> and current, available census data. <https://data.census.gov/cedsci/>
- Comparison of local area demographics to the county and statewide census data
- County health assessment
- Sensitive receptors surrounding the area
- Local industrial sites (using the NCDEQ Community Mapping System <https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=1eb0fbe2bcfb4ccb3cc212af8a0b8c8>).

Demographics for Sampson County and the state are compared to the local (census tracts and project radius) level data to identify any disparities surrounding the project area using standard environmental justice guidelines from the EPA and National Environmental Policy Act (NEPA) documentation. Certain areas will be flagged as potentially underserved communities using criteria set out in more detail in Section 5: Regional and Local Settings.

### 3 Proposed Project

Prestage AgEnergy - Moltonville submitted a permit application (8200158.20A) for an existing facility located in Moltonville, North Carolina. The facility is a biomass-to-energy facility that is currently permitted as part of the Prestage Farms – Moltonville facility (Facility ID No. 8200112), an animal feed mill. The facility has requested to permit the existing biomass-to-energy operations under a new Title V air permit for the following equipment:

- Wood/used poultry bedding-fired boiler (72.88 million Btu per hour, ID No. ES-01) controlled by the following:
- Multicyclone (59 nine-inch diameter tubes, ID No. CD-01A)
- Dry Sorbent Injection control system (ID No. CD-04) for acid gas control, and
- Fabric filter (16,270 square feet of filter area, ID No. CD-05), for particulate matter (PM) control

The facility will be classified as Title V. The facility will avoid being major for hazardous air pollutants (HAP) requirements by properly operating and maintaining the dry sorbent injection control system and the fabric filter for control of the boiler emissions.

In accordance with 15A NCAC 02Q .0702(a)(27), this facility is exempt from North Carolina (NC) Air Toxics (State only requirement); however, the NC Division of Air Quality (DAQ) was required to perform a health risk assessment during the addition of the biomass-to-energy equipment to the Prestage Farms – Moltonville permit (07210R09) in 2017 and again (07210R12) in 2018 when the biomass-to energy equipment was updated for better operation with the current sources and control devices in the Title V application (8200158.20A). The facility completed NC air toxics review in those previous applications and performed modeling on nine toxic air pollutants (TAPs) because emissions exceeded the Toxics Permitting Emissions Rates (TPERs) in 15A NCAC 02Q .0711. The TAP analyses, parts of the previous air permit reviews by the Fayetteville Regional Office (FRO) dated March 15, 2017 and May 21, 2018, determined that an unacceptable risk to human health was not presented.

The expected emissions submitted with the 2018 application, as reflected in the current 2020 application, included changes in emissions of three of the toxic pollutants for which modeling was performed: Arsenic, Hydrochloric Acid, and Sulfuric Acid. The previously modeled emissions and the emissions projected in this application are listed below. NC DAQ compared the results to the Acceptable Ambient Level (AAL) from the previous modeling and assumed a linear correlation to determine the new projected % AAL in the table below for each pollutant. Emissions of other toxic pollutants did not change from the previous permit applications.

**Table 1. Toxic Air Pollutant Emissions and Modeling Results**

Pollutant	Emissions listed in the 2016 application	2016 Modeled % AAL	Projected emissions listed in the 2018 application	2018 Projected % AAL
Arsenic	1.778 lb/yr	2.9	0.326 lb/yr	0.53
Hydrochloric Acid	1.92 lb/hr	4.3	2.26	5.1
Sulfuric Acid	10.57 lb/hr	2.1	2.67 lb/hr	0.54
	253.7 lb/day	2.7	64.1 lb/day	0.69

Based on the updated analysis from the permit review from the FRO dated May 21, 2018, the TAP emissions do not present an unacceptable risk to human health. Therefore, the NC DAQ believes that the toxic emissions from this facility will not pose an unacceptable health risk.

**Table 2. Facility Emissions Overview**

Pollutant	Expected Actual Emissions (tons/yr)	Potential Emissions Before Controls (tons/yr)	Potential Emissions After Controls (tons/yr)	Potential Emissions Changes from 2018 After Controls (tons/yr)
PM	27.0	1,098	27.0	-46.4
PM <sub>10</sub>	27.0	1,098	27.0	-46.4
PM <sub>2.5</sub>	27.0	1,098	27.0	-46.4
SO <sub>2</sub>	92.6	92.6	92.6	0.00
NO <sub>x</sub>	158.2	158.2	158.2	+70.4
CO	159.4	159.4	159.4	+70.0
VOC	5.43	5.43	5.43	0.00
Highest Individual HAP (HCl)	9.91	102	9.91	0.00
Total HAP	15.7	108	15.7	0.00
CO <sub>2</sub> e	72,574	72,574	72,574	0.00

The PM emissions changes from 2018 include an update in PM control to a fabric filter from a previously permitted venturi scrubber.

The NO<sub>x</sub> and CO emissions changes from 2018 include removal of the synthetic minor limitations (less than 100 tons per year (tpy)).

The permit contains limitations for HAPs (HCl less than 10 tpy and Total HAP less than 25 tpy).

## 4 Geographic Area

Prestage AgEnergy is located at 311 Prestage Mill Lane Clinton, NC 28328 (Figure 1). The highest off-site ambient air impacts will occur at the plant fence line. A one-mile radius was used to evaluate the local demographics and socioeconomic to appropriately include the surrounding community and help inform public outreach efforts. The one-mile buffer around the proposed facility is located wholly within Sampson County.

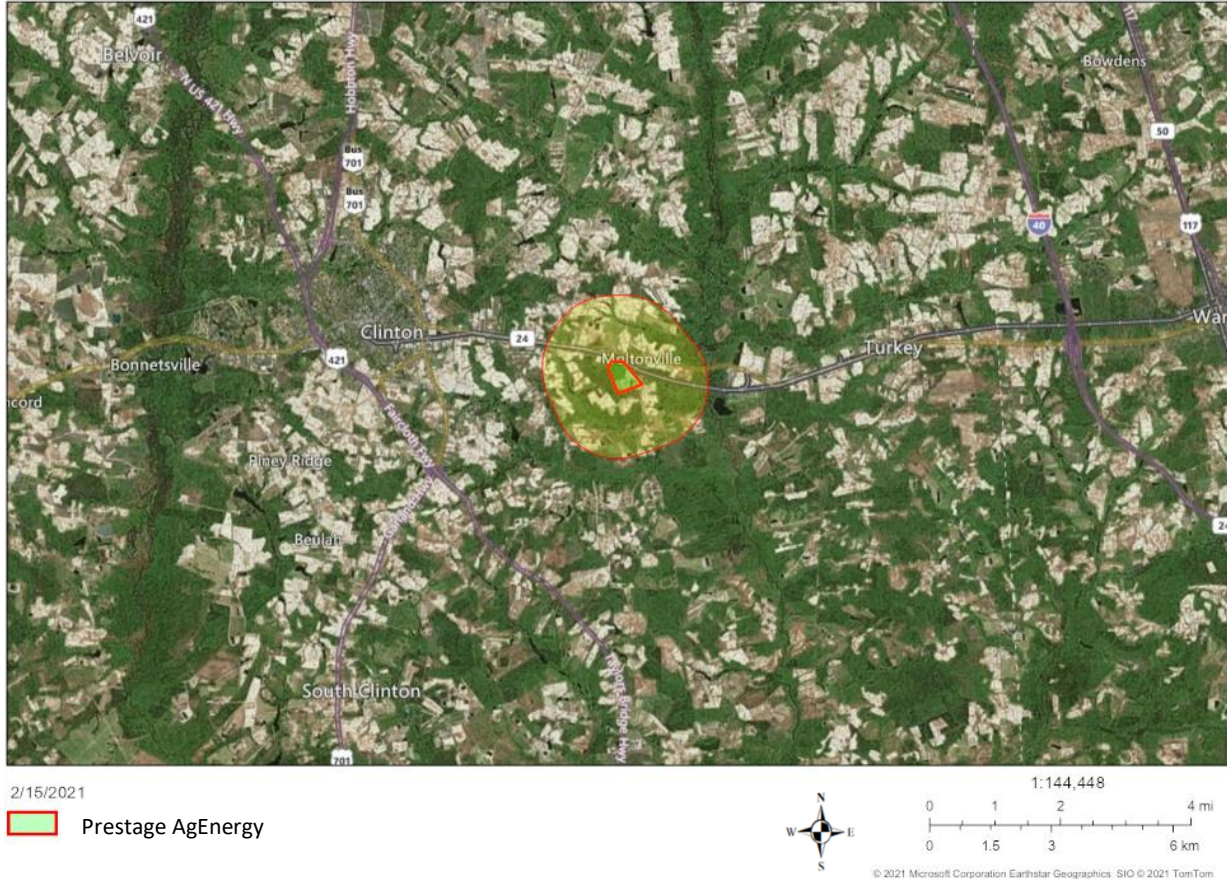


Figure 1. Prestage AgEnergy - Moltonville location with the one-mile radius.

Sampson County is designated as a Tier 1 county by the NC Department of Commerce 2021 rankings. According to the Department of Commerce, Tier 1 counties encompass the 40 most distressed counties based on average unemployment rate, median household income, percentage growth in population, and adjusted property tax per capita. Tier 2 counties encompass the next 40 counties based on this ranking system.<sup>1</sup> Prestage AgEnergy – Moltonville, and the one-mile radius surrounding it is located within census tracts 9707 and 9708 in Sampson County (Figure 2). Census tracts are small, relatively permanent statistical subdivisions of a county with a unique numeric code (US Census Bureau). The census tracts do not encompass land within a state-designated tribal statistical area. However, Sampson County

<sup>1</sup> 2021 rankings had a tie for 40<sup>th</sup> place so there are 41 in Tier 1 and 39 in Tier 2 this year.

is identified by the North Carolina Commission of Indian Affairs as a county in which the state-recognized Coharie Tribe resides.

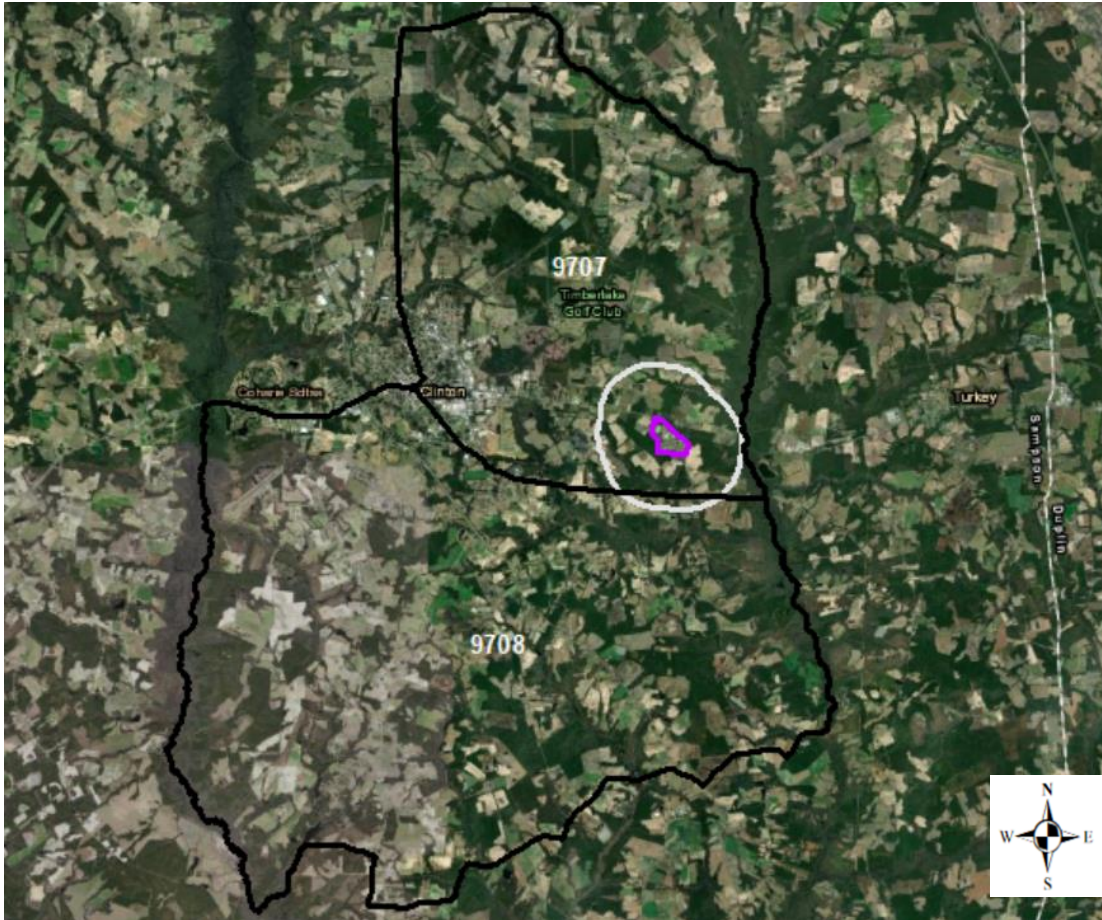


Figure 2. Census tracts encompassing the facility location and one-mile radius.

## 5 Regional and Local Settings

The following sections on race and ethnicity, age and sex, disability, poverty, household income, and Limited English Proficiency (LEP) populations are based on U.S. Census Bureau data, first at a state and county level (regional setting), and then at a census tract- and project-radius level (local setting). The surrounding census tracts included are those that overlap into the one-mile radius. Demographics of the county will be compared to the local level data to identify any disparities surrounding the project area. Using standard environmental justice guidelines from the EPA and NEPA documentation, the following conditions will be flagged as potential communities of concern:

1. 10% or more in comparison to the county or state average
2. 50% or more minority
3. 5% or more in comparison to the county or state average for poverty



For example, if a census tract has 35% of the population classified as low income but the county consists of 30% low income, the census tract would exceed the county average by 16.7% and thus be flagged as a potential area of concern. For this report, census data from 2010 and census data estimates from 2011-2015 and 2018 were used. 2010 Census Bureau data is real data gathered every ten years, whereas the estimates from the more recent years are modeled based on the real data. For the data gathered from the 2018 and 2011-2015 estimates, the margin of error (MOE) has been included. This value is a measure of the possible variation of the estimate around the population value (U.S. Census Bureau). The Census Bureau standard for the MOE is at the 90% confidence level and may be any number between 0 and the MOE value in either direction (indicated by +/-).

## 5.1 Race and Ethnicity

### Regional Setting

According to the 2010 US Census Data Table 9: Hispanic or Latino, and Not Hispanic or Latino by Race, North Carolina's population totaled 9,535,483 individuals (Table 3). The three most common racial groups across the state were White alone (65.3%), Black or African-American (21.2%), and Hispanic or Latino (of any race) at 8.4%.

Sampson County had a total population of 46,639 individuals (Table 3). The three most common racial or ethnic groups in Sampson County were White alone (53.21%), Black or African American (26.72%), and Hispanic or Latino (of any race) (16.46%). Black or African American and Hispanic or Latino (of any race) were greater than 10% different when compared to the state.

**Table 3. Regional Setting - Race and Ethnicity**

Subject	North Carolina		Sampson County	
	Number	Percent	Number	Percent
Total:	9,535,483	100.00	63,431	100.00
Not Hispanic or Latino:	8,735,363	91.61	52,991	83.54
White alone	6,223,995	65.27	33,754	53.21
Black or African American alone	2,019,854	21.18	16,948	<b>26.72</b>
American Indian and Alaska Native alone	108,829	1.14	1,130	1.78
Asian alone	206,579	2.17	217	0.34
Native Hawaiian and Other Pacific Islander alone	5,259	0.06	43	0.07
Some other race alone	15,088	0.16	81	0.13
Two or more races:	155,759	1.63	818	1.29
Hispanic or Latino (of any race):	800,120	8.39	10,440	<b>16.46</b>
Source: US Census Bureau, 2010 Census				
All <b>bolded and orange</b> highlighted cells indicate a difference that is greater than 10% different when compared to the State.				

## Local Setting

According to the 2010 US Census Data Table 9: Hispanic or Latino, and Not Hispanic or Latino by race or ethnicity, the largest population within Census Tract 9707 was White alone at 50.4, followed by Black or African American at 34.0%. The largest population within Census Tract 9708 was White alone at 42.3%, followed by Black or African American at 30.7%. Within the one-mile radius, White alone was the largest population (51%), followed by Black or African American (30%). For both census tracts and within the one-mile radius, Black or African American and Hispanic or Latino (of any race) were both greater than 10% different when compared to the county and state or just compared to the state (Table 4). American Indian or Alaska Native was greater than 10% different in Census Tract 9708 when compared to the county and state.

**Table 4. Local Setting - Race and Ethnicity**

Subject	Census Tract 9707		Census Tract 9708		Project Area-1-mile Buffer	
	Number	Percent	Number	Percent	Number	Percent
Total:	6,104	100.0	6,969	100.0	407	100.0
Not Hispanic or Latino:	5,313	87.0	5,506	79.0	341	84.0
White alone	3,077	50.4	2,947	42.3	209	51.0
Black or African American alone	2,074	<b>34.0</b>	2,138	<b>30.7</b>	124	<b>30.0</b>
American Indian and Alaska Native alone	52	0.9	300	<b>4.3</b>	4	1.0
Asian alone	45	0.7	36	0.5	1	0.0
Native Hawaiian and Other Pacific Islander alone	3	0.0	0	0.0	0	0.0
Some other race alone	2	0.0	7	0.1	1	0.0
Two or more races:	60	1.0	78	1.1	3	1.0
Hispanic or Latino:	791	<b>13.0</b>	1463	<b>21.0</b>	66	<b>16.0</b>

Source: US Census Bureau, 2010 Census  
 All **bolded and blue** cells indicate a difference that is greater than 10% when compared to the county and the State  
 All **bolded and orange** highlighted cells indicate a difference that is greater than 10% different when compared to the State.

## 5.2 Age and Sex

### Regional Setting

According to the 2010 US Census Data Table P 12: Sex by Age, and Table P13: Median Age, North Carolina had a total population of 9,535,483 individuals (Table 5). The largest percentage of the total state population was between the ages of 18 and 64 (63.1%), followed by under 18 years (23.9%), and 65 years and older (12.9%).

Sampson County had a total population of 63,431 individuals. The largest percentage of the total county population was between the ages of 18 and 64 (60.08%), followed by under 18 years (25.66%). The median age was slightly higher in Sampson County than the state.

**Table 5. Regional Setting - Age Groups and Sex**

Subject	North Carolina		Sampson County	
	Number	Percent	Number	Percent
Total Population:	9,535,483	100.00	63,431	100.00
Under 5 years:	632,040	6.63	4,405	6.94
Under 18 years:	2,281,635	23.93	16,277	25.66
18 to 64 years:	6,019,769	63.13	38,110	60.08
65 years and older:	1,234,079	12.94	9,044	14.26
Median Age	37.4		38.2	
Male:	4,645,492	100.00	31,108	100.00
Under 5 years:	322,871	6.95	2,202	7.08
Under 18 years:	1,167,303	25.13	8,334	26.79
18 to 64 years:	2,954,233	63.59	19,023	61.15
65 years and older:	523,956	11.28	3,751	12.06
Median Age	36.0		36.9	
Female:	4,889,991	100.00	32,323	100.00
Under 5 years:	309,169	6.32	2,203	6.82
Under 18 years:	1,114,332	22.79	7,943	24.57
18 to 64 years:	3,065,536	62.69	19,087	59.05
65 years and older:	710,123	14.52	5,293	16.38
Median Age	38.7		39.4	
Source: US Census Bureau, 2010 Census				
All <b>bolded and orange</b> cells indicate a difference that is greater than 10% when compared to the State				

## Local Setting

According to the 2010 US Census Data Table P 12: Sex by Age, and Table P13: Median Age, Census Tract 9708 had a slightly younger median population than Census Tract 9707, yet both census tracts had median ages similar to Sampson County and the state (Table 6).

**Table 6. Local Setting - Age Groups and Sex**

Subject	Census Tract 9707		Census Tract 9708	
	Number	Percent	Number	Percent
Total Population:	6,104	100.00	6,969	100.00
Under 5 years:	370	6.06	488	7.00
Under 18 years:	1,458	23.89	1,807	25.93
18 to 64 years:	3,706	60.71	4,037	57.93
65 years and older:	940	15.40	1,125	16.14
Median Age	39.8		37.8	
Male:	2,855	100.00	3,303	100.00
Under 5 years:	191	6.69	243	7.36
Under 18 years:	741	25.95	943	28.55
18 to 64 years:	1,729	60.56	1,927	58.34
65 years and older:	385	13.49	433	13.11
Median Age	38.5		35.9	
Female:	3,249	100.00	3,666	100.00
Under 5 years:	179	5.51	245	6.68
Under 18 years:	717	22.07	864	23.57
18 to 64 years:	1,977	60.85	2,110	57.56
65 years and older:	555	17.08	692	18.88
Median Age	41.1		40.0	
Source: US Census Bureau, 2010 Census				
All <b>bolded and orange</b> cells indicate a difference that is greater than 10% when compared to the State				

## Project Radius

EJSCREEN identified a population of 407 individuals within the one-mile radius surrounding the proposed facility. The largest population was 18+ years (72%), followed by under 18 years at 28% (Table 7).

**Table 7. Project Radius - Age Groups and Sex**

Subject	1-mile Buffer	
	Number	Percent
Age 0-4	26	6
Age 0-17	116	28
Age 18+	291	72
Age 65+	46	11
Source: 2019 EJSCREEN, 2010 Census		

## 5.3 Disability

### Regional Setting

According to the 2018 American Community Survey 5-Year Estimates, Table S1810 Disability Characteristics from the US Census Bureau, the state of North Carolina had an estimated total population of 9,952,031 noninstitutionalized citizens. Of those individuals, an estimated 13.6% (MOE +/- 0.1%) had a disability. The largest population of disabled civilians were 75 years and over (50.1%, MOE +/- 0.4%). The second largest population was the 65 years to 74 years at 26.6% (MOE +/- 0.3%). By race, American Indian and Alaskan Native had the highest estimated disability rate of 18.5% (MOE +/- 0.8%). Black or African-American, White alone, and Two or More Races had the next three highest population estimates with disabilities in North Carolina, at 14.8% (MOE +/-0.2%), 14.6% (MOE +/- 0.1%), and 11.4% (MOE +/- 0.5%), respectively (Table 8).

Sampson County had an estimated total population of 62,900 noninstitutionalized citizens. Of those, an estimated 18.7% (MOE +/- 1.3%) had a disability. The largest population of disabled civilians by race was Black or African American (27.4%, MOE +/- 2.4%), followed by American Indian and Alaska Native alone (22.0%, MOE +/- 6.6%). The majority of the disabled population in Sampson County have estimates greater than 10% different when compared to the state.

**Table 8. Regional Setting - Disability**

Subject	North Carolina						Sampson County					
	Total		With a Disability		Percent with a Disability		Total		With a Disability		Percent with a Disability	
	Estimate	Margin of Error (+/-)	Estimate	Margin of Error (+/-)	Estimate	Margin of Error (+/-)	Estimate	Margin of Error (+/-)	Estimate	Margin of Error (+/-)	Estimate	Margin of Error (+/-)
Total civilian noninstitutionalized population	9,952,031	1,743	1,350,533	7,387	13.6%	0.1	62,900	279	11,793	814	<b>18.7%</b>	1.3
SEX												
Male	4,786,233	2,284	647,158	4,946	13.5%	0.1	30,827	250	5,606	519	<b>18.2%</b>	1.7
Female	5,165,798	1,829	703,375	5,616	13.6%	0.1	32,073	117	6,187	447	<b>19.3%</b>	1.4
RACE AND HISPANIC OR LATINO ORIGIN												
White alone	6,864,809	7,919	955,077	6,610	13.9%	0.1	40,676	870	6,699	690	<b>16.5%</b>	1.6
Black or African American alone	2,123,353	5,762	314,216	3,706	14.8%	0.2	15,737	420	4,319	362	<b>27.4%</b>	2.4
American Indian and Alaska Native alone	118,231	1,604	21,874	929	18.5%	0.8	1,198	272	264	92	<b>22.0%</b>	6.6
Asian alone	279,615	2,022	13,450	961	4.8%	0.3	374	17	38	28	<b>10.2%</b>	7.6
Native Hawaiian and Other Pacific Islander alone	6,447	668	635	178	9.8%	2.7	0	29	0	29	-	**
Some other race alone	303,837	7,743	16,218	1,100	5.3%	0.4	3,086	786	179	119	5.8%	3.5
Two or more races	255,739	6,070	29,063	1,446	11.4%	0.5	1,829	489	294	122	<b>16.1%</b>	5.5
White alone, not Hispanic or Latino	6,316,065	2,254	920,269	6,535	14.6%	0.1	32,311	120	6,330	599	<b>19.6%</b>	1.8
Hispanic or Latino (of any race)	916,366	863	57,239	1,970	6.2%	0.2	12,225	54	680	227	5.6%	1.9
AGE												
Under 5 years	603,155	767	4,761	613	0.8%	0.1	4,089	16	7	49	0.2%	1.2
5 to 17 years	1,685,827	941	94,822	2,522	5.6%	0.2	11,548	24	846	251	<b>7.3%</b>	2.2
18 to 34 years	2,216,915	1,791	146,329	3,165	6.6%	0.1	12,391	97	1,291	231	<b>10.4%</b>	1.8
35 to 64 years	3,915,727	1,742	556,505	5,319	14.2%	0.1	24,336	187	5,070	524	<b>20.8%</b>	2.2
65 to 74 years	932,178	1,157	248,418	2,902	26.6%	0.3	6,276	143	2,249	236	<b>35.8%</b>	4
75 years and over	598,229	982	299,698	2,471	50.1%	0.4	4,260	157	2,330	228	54.7%	5.1

Source: US Census Bureau, ACS 2018 5-year Estimates  
All **bolded and orange** highlighted cells indicate a difference that is greater than 10% when compared to the State

## Local Setting

According to the 2018 American Community Survey 5-Year Estimates, Table S1810 Disability Characteristics from the US Census Bureau, Census Tract 9707 had an estimated total population of 7,468 noninstitutionalized citizens (Table 9). Of those individuals, an estimated 17.9% (MOE +/- 2.9%) had a disability. By race, the group with the largest population of disabled civilians was Two or More Races (43.6%, MOE +/- 31.8%), followed by American Indian and Alaska Native (30.2%, MOE +/- 15.0).

Census Tract 9708 had an estimated total population of 6,504 noninstitutionalized citizens. Of those individuals, an estimated 15.5% (MOE +/- 2.7%) had a disability. By race, the group with the largest population of disabled civilians was American Indian and Alaska Native (27.3%, MOE +/- 14.1%), followed by Black or African American (25.5%, MOE +/- 5.8). In both census tracts, the total civilian noninstitutionalized population, male, female, and Black or African American population groups had an estimate that was greater than 10% different when compared to the state alone, and American Indian and Alaska Native had an estimate that was greater than 10% different when compared to the state and county.

**Table 9. Local Setting - Disability**

Subject	Census Tract 9707						Census Tract 9708					
	Total		With a Disability		Percent with a Disability		Total		With a Disability		Percent with a Disability	
	Estimate	Margin of Error (+/-)	Estimate	Margin of Error (+/-)	Estimate	Margin of Error (+/-)	Estimate	Margin of Error (+/-)	Estimate	Margin of Error (+/-)	Estimate	Margin of Error (+/-)
Total civilian noninstitutionalized population	7,468	560	1,334	239	<b>17.9%</b>	2.9	6,504	572	1,007	162	<b>15.5%</b>	2.7
SEX												
Male	3,347	420	486	141	<b>14.5%</b>	4	3,068	307	403	95	<b>13.1%</b>	2.9
Female	4,121	337	848	178	<b>20.6%</b>	4.7	3,436	372	604	132	<b>17.6%</b>	4
RACE AND HISPANIC OR LATINO ORIGIN												
White alone	3,965	363	595	135	15.0%	3.5	3,940	588	448	116	11.4%	3.4
Black or African American alone	2,407	500	609	188	<b>25.3%</b>	5.6	1,897	256	484	123	<b>25.5%</b>	5.8
American Indian and Alaska Native alone	202	205	61	53	<b>30.2%</b>	15	245	93	67	40	<b>27.3%</b>	14.1
Asian alone	45	39	0	17	0.0%	45.9	63	54	7	10	<b>11.1%</b>	12
Native Hawaiian and Other Pacific Islander alone	0	17	0	17	-	-	0	17	0	17	-	-
Some other race alone	700	273	4	6	0.6%	1	219	205	0	17	0.0%	14.7
Two or more races	149	90	65	74	<b>43.6%</b>	31.8	140	95	1	3	0.7%	1.9
White alone, not Hispanic or Latino	3,244	350	550	135	<b>17.0%</b>	4.2	2,017	312	339	99	<b>16.8%</b>	3.9
Hispanic or Latino (of any race)	1,618	368	96	71	5.9%	3.7	2,174	598	141	91	6.5%	4.6
AGE												
Under 5 years	557	172	0	17	0.0%	6.1	510	216	0	17	0.0%	6.6
5 to 17 years	1,427	247	139	68	<b>9.7%</b>	4.4	1,099	204	81	46	<b>7.4%</b>	4.1
18 to 34 years	1,442	247	139	100	<b>15.8%</b>	5.9	1,438	236	99	61	6.9%	4.2
35 to 64 years	2,843	261	522	158	<b>18.4%</b>	5.5	2,517	244	381	129	15.1%	5.1
65 to 74 years	640	121	150	73	23.4%	10.8	553	93	244	65	<b>44.1%</b>	10.2
75 years and over	559	114	295	90	52.8%	11.7	387	109	202	65	52.2%	13.7

Source: US Census Bureau, ACS 2018 5-year Estimates

All **bolded and orange** highlighted cells indicate a difference that is greater than 10% when compared to the State

All **bolded and blue** highlighted cells indicate a difference that is greater than 10% when compared to both the County and the State



## 5.4 Poverty

### Regional Setting

According to the Census Table S1701, Poverty Status in the Past 12 Months, 2018 American Community Survey 5-Year Estimates, from the US Census Bureau, North Carolina had an estimated population of 9,881,292, with 15.4% (MOE +/- 0.2%) below the poverty level (Table 10). Across all subjects, Some Other Race had the highest percent living below the poverty level at 32.0% (MOE +/- 1.4%). The next three subjects with the highest poverty level were Hispanic or Latino at 30.1% (MOE +/- .8%), American Indian and Alaska Native at 26.2% (MOE +/- 1.5%), and Black or African-American at 24.9% (MOE +/- 0.4%). The age group with the highest population below poverty was under 18 (22.9%, MOE +/- 0.4%), followed by 18 to 64 years (15.3%, MOE +/- 0.2%).

Sampson County had an estimated population of 62,674 with 24.1% (MOE +/-2.0%) living below the poverty level. Across all subjects, Hispanic or Latino (of any race) had the highest percent living below the poverty level at 39.3% (MOE +/- 6.7%). The next subjects with the highest poverty level were individuals under 18 years old at 36.5% (MOE +/- 4.1%), and Black or African American at 34.9% (MOE +/- 4.4%). The majority of subject groups had a greater than 5% difference when compared to the state.

**Table 10. Regional Setting - Poverty**

Subject	North Carolina						Sampson County					
	Total		Below poverty level		Percent below poverty level		Total		Below poverty level		Percent below poverty level	
	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-
Population for whom poverty status is determined	9,881,292	1,522	1,523,949	15,319	15.4%	0.2	62,674	313	15,084	1,262	<b>24.1%</b>	2.0
AGE												
Under 18 years	2,258,876	1,607	498,013	7,632	22.0%	0.3	15,366	169	5,607	642	<b>36.5%</b>	4.1
18 to 64 years	6,092,009	1,103	884,618	9,282	14.5%	0.2	36,772	233	8,300	756	<b>22.6%</b>	2.0
65 years and over	1,530,407	995	141,318	2,705	9.2%	0.2	10,536	170	1,177	270	<b>11.2%</b>	2.6
SEX												
Male	4,779,533	2,237	669,307	8,648	14.0%	0.2	30,696	278	6,912	660	<b>22.5%</b>	2.1
Female	5,101,759	2,244	854,642	8,676	16.8%	0.2	31,978	137	8,172	864	<b>25.6%</b>	2.7
RACE AND HISPANIC OR LATINO ORIGIN												
White	6,829,742	8,193	823,258	11,150	12.1%	0.2	40,561	877	7,928	1,090	<b>19.5%</b>	2.6
Black or African American	2,096,490	5,812	493,496	8,392	23.5%	0.4	15,692	420	5,473	720	<b>34.9%</b>	4.4
American Indian and Alaska Native	117,702	1,595	29,577	1,585	25.1%	1.3	1,198	272	187	103	15.6%	9.0
Asian	275,301	1,983	32,712	2,356	11.9%	0.9	372	18	101	91	<b>27.2%</b>	24.0
Native Hawaiian and Other Pacific Islander	6,414	671	1,246	264	19.4%	4.2	0	29	0	29	-	**
Some other race	302,934	7,911	89,305	5,371	29.5%	1.5	3,020	780	992	509	<b>32.8%</b>	12.3
Two or more races	252,709	6,223	54,355	2,369	21.5%	0.8	1,831	495	403	237	22.0%	9.9
Hispanic or Latino origin (of any race)	915,426	901	260,607	5,682	28.5%	0.6	12,187	92	4,790	817	<b>39.3%</b>	6.7
ALL INDIVIDUALS BELOW:												
50 percent of poverty level	663,550	10,829					5,598	887				
125 percent of poverty level	2,034,827	19,447					18,830	1,385				
150 percent of poverty level	2,526,688	21,681					23,188	1,278				
185 percent of poverty level	3,227,889	24,339					28,055	1,293				
200 percent of poverty level	3,513,670	25,035					30,086	1,314				

Source: American Community Survey 5-year Estimates, 2018

All **bolded and orange** cells indicate a difference that is greater than 5% when compared to the State

## Local Setting

According to the Census Table S1701, Poverty Status in the Past 12 Months, 2018 American Community Survey 5-Year Estimates, from the US Census Bureau, Census Tract 9707 had an estimated population of 9,465 with 27.6% (MOE +/-7.4%) living below the poverty level (Table 11). Across all subjects, Black or African American (58.5%, MOE +/- 13.3%) had the highest percent living below the poverty level. The next subjects with the highest poverty rates were under 18 years at 34.7% (MOE +/- 12.6%), and female at 29.2% (MOE +/- 6.7%). Just over half of the subject groups had a greater than 5% difference when compared to either the county and the state or just the state.

Census Tract 9708 had an estimated population of 6,491 with 25.1% (MOE +/- 7.2%) living below the poverty level (Table 10). Across all subjects, Some other race (59.4%, MOE +/- 15.6%) had the highest percent living below the poverty level. The next subjects with the highest poverty rates were under 18 years at 40.7% (MOE +/- 13.5%), and Hispanic or Latino (of any race) at 36.0% (MOE +/- 17.6%). The majority of subject groups had a greater than 5% difference when compared to the county and the state.

**Table 11. Local Setting - Poverty**

Subject	Census Tract 9707						Census Tract 9708					
	Total		Below poverty level		Percent below poverty level		Total		Below poverty level		Percent below poverty level	
	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-
Population for whom poverty status is determined	9,465	559	2064	625	<b>27.6%</b>	7.4	6,491	573	1,626	495	<b>25.1%</b>	7.2
AGE												
Under 18 years	1,972	344	684	310	<b>34.7%</b>	12.6	1,596	292	650	254	<b>40.7%</b>	13.5
18 to 64 years	4,294	369	1225	389	<b>28.5%</b>	7.9	3,955	350	857	269	<b>21.7%</b>	6.5
65 years and over	1199	138	155	83	<b>12.9%</b>	6.7	940	119	119	45	<b>12.7%</b>	4.7
SEX												
Male	3338	414	858	391	<b>25.7%</b>	9.5	3,055	307	710	259	<b>23.2%</b>	7.7
Female	4127	337	1206	282	<b>29.2%</b>	6.7	3,436	372	916	285	<b>26.7%</b>	7.9
RACE AND HISPANIC OR LATINO ORIGIN												
White alone (not Hispanic or Latino)	3,251	351	304	167	9.4%	5.4	2,017	312	253	126	12.5%	5.7
Black or African American	2407	500	1409	551	<b>58.5%</b>	13.3	1,884	256	580	201	<b>30.8%</b>	9.2
American Indian and Alaska Native	202	205	3	4	1.5%	3.1	245	93	39	33	15.9%	11.4
Asian	45	39	7	14	<b>15.6%</b>	27.9	63	54	0	17	0.0%	38.8
Native Hawaiian and Other Pacific Islander	0	17	0	17	-	-	0	17	0	17	-	-
Some other race	690	274	93	132	13.5%	20.9	219	205	130	127	<b>59.4%</b>	15.6
Two or more races	149	90	23	24	15.4%	15.9	140	95	3	5	2.1%	4.1
Hispanic or Latino origin (of any race)	1608	367	346	236	21.5%	14.6	2,174	598	783	430	<b>36.0%</b>	17.6
ALL INDIVIDUALS BELOW												
50 percent of poverty level	685	241					454	201				
125 percent of poverty level	2493	628					1973	516				
150 percent of poverty level	2827	645					2809	472				
185 percent of poverty level	3488	589					3352	480				
200 percent of poverty level	3716	595					3480	470				

Source: American Community Survey 5-year Estimates, 2018

All **bolded and orange** cells indicate a difference that is greater than 5% when compared to the State

All **bolded and blue** cells indicate a difference that is greater than 5% when compared to the county and the State

## 5.5 Household Income

### Regional Setting

The following table (Table 12) was compiled using data from the Census Table S1901, Income in the Past 12 Months (in 2018 Inflation-Adjusted Dollars) 2018 American Community Survey 5-Year Estimates for North Carolina. The North Carolina household income range with the highest percent was for \$50,000 to \$74,999, at 18.1%. The state median household income was \$52,413 and the mean income was \$73,753.

The household income range for Sampson County with the highest percent was \$50,000 to \$74,999 at 17.3% (MOE +/- 1.8%). The median income was \$39,068 and the mean income was \$56,453. All income ranges less than \$35,000 had percentages that were more than 10% greater than the state ranges. The median and mean income in Sampson County are also significantly less than the state.

**Table 12. Regional Setting- Household Income**

Subject	North Carolina		Sampson County	
	Households		Households	
	Estimate	Margin of Error (+/-)	Estimate	Margin of Error (+/-)
Total	3,918,597	8,585	23,537	500
Less than \$10,000	6.8%	0.1	<b>8.9%</b>	1.2
\$10,000 to \$14,999	5.4%	0.1	<b>8.1%</b>	1.4
\$15,000 to \$24,999	10.7%	0.1	<b>14.9%</b>	1.8
\$25,000 to \$34,999	10.7%	0.1	<b>14.0%</b>	1.8
\$35,000 to \$49,999	14.2%	0.1	14.4%	1.6
\$50,000 to \$74,999	18.1%	0.1	17.3%	1.8
\$75,000 to \$99,999	12.0%	0.1	10.6%	1.2
\$100,000 to \$149,999	12.5%	0.1	7.7%	1.2
\$150,000 to \$199,999	4.7%	0.1	2.0%	0.6
\$200,000 or more	4.9%	0.1	2.1%	0.5
Median income (dollars)	52,413	224	39,068	1,998
Mean income (dollars)	73,753	332	56,453	2,985
Per Capita Income (dollars)	29,456	143	21,950	1,130
Source: American Community Survey 5-year Estimates, 2018				
All <b>bolded and orange</b> cells indicate a difference that is greater than 10% when compared to the State				
All <b>bolded and blue</b> cells indicate a difference that is greater than 5% when compared to the county and the State				

### Local Setting

The household income range for Census Tract 9707 with the highest percent was \$15,000 to \$24,999 at 16.7% (MOE +/- 4.7%). The median income was \$35,290 and the mean income was

\$49,089 (Table 13). All income ranges less than \$34,999 had percentages that were more than 10% greater than either the state and county or county alone.

The household income range for Census Tract 9708 with the highest percent was \$50,000 to \$74,999 at 17.8% (MOE +/- 5.5%). The median income was \$37,083 and the mean income was \$55,385 (Table 12). All income ranges less than \$49,999 (except for \$10,000 to \$14,999) had percentages that were more than 10% greater than both the state and county.

The household income range for the one-mile radius with the highest percent was \$25,000 to \$49,999 at 27.0%. Household income data from EJSCREEN is reported in different income ranges than the American Community Survey 5-Year Estimates and therefore cannot be compared in the same manner.

**Table 13. Local Setting - Household Income**

Subject	Census Tract 9707		Census Tract 9708		1-mile radius	
	Households		Households		Households	
	Estimate	Margin of Error (+/-)	Estimate	Margin of Error (+/-)	Estimate	Margin of Error (+/-)
Total	2,669	186	2,472	161	206	166
Less than \$10,000	<b>11.5%</b>	3.8	<b>10.0%</b>	3.9	19%	
\$10,000 to \$14,999	<b>9.2%</b>	3.3	4.9%	2.1		
\$15,000 to \$24,999	<b>16.7%</b>	4.7	<b>17.2%</b>	4.1	20%	
\$25,000 to \$34,999	<b>12.3%</b>	4.4	<b>15.8%</b>	4.1	27%	
\$35,000 to \$49,999	14.8%	4.6	<b>17.2%</b>	4		
\$50,000 to \$74,999	15.8%	3.8	17.8%	5.5	18%	
\$75,000 to \$99,999	8.2%	3	6.1%	2.4	15%	
\$100,000 to \$149,999	8.0%	2.5	7.0%	3.3		
\$150,000 to \$199,999	2.4%	1.2	1.5%	0.8		
\$200,000 or more	1.0%	0.9	2.4%	1		
Median income (dollars)	35,290	5,300	37,083	7,024		
Mean income (dollars)	49,089	4,487	55,385	8,290		
Per capita Income (dollars)	18,326	2,021	22,617	4,771	15,842	
Source: American Community Survey 5-year Estimates, 2018						
All <b>bolded and orange</b> cells indicate a difference that is greater than 10% when compared to the State						

### Per Capita Income

Per Capita Income data was obtained through the Census Table B19301, Per Capita Income in the Past 12 Months (In 2018 Inflation-Adjusted Dollars), 2018 American Community Survey 5-Year Estimates. The North Carolina per capita income estimate was \$29,456. The estimate for Sampson County was \$21,950. The estimate for Census Tract 9707 was \$18,326. The estimate for Census Tract 9708 was \$22,617. Both Sampson County and the census tracts had a lower per capita income than that of the state. EJSCREEN's analysis of the per capita income estimate

for the one-mile buffer surrounding facility site was \$15,842, which was lower than the state, Sampson County, and both census tracts.

## 6 Limited English Proficiency

Per the Safe Harbor Guidelines, should an LEP Group be identified during the permit application process, written translations of vital documents for each eligible LEP language group that constitutes 5% or includes 1,000 members (whichever is less) of the population of persons eligible to be served or likely to be affected or encountered. If there are fewer than 50 persons in a language group that reaches the 5% trigger, then DEQ will not translate vital written materials, but instead will provide written notice in the primary language of the LEP language group of the right to receive competent oral interpretation of those written materials, free of cost. The safe harbor provisions apply to the translation of written documents only. Safe harbor guidelines are based on EPA guidance for LEP persons, and implemented by DEQ when deemed appropriate.

Six LEP language groups: Spanish or Spanish Creole, French (including Patois and Cajun), French Creole, Italian, Chinese, and Vietnamese were identified as having an estimate for individuals who speak English less than “very well” greater than zero (Table 14). However, only Spanish reached the 5% threshold (8.9%) that would initiate potential translation services for this project. DEQ will consult the LEP-Language Access Plan to determine if translation or interpretation services would best suit this community.

**Table 14. Limited English Proficiency**

Language Spoken at Home	Census Tract 9707		Census Tract 9708	
	Estimate	Margin of Error	Estimate	Margin of Error
Total:	6,082	366	6874	557
Speak only English	5,072	391	4890	321
Spanish or Spanish Creole:	925	432	1905	592
Speak English "very well"	382	251	573	329
Speak English less than "very well"	543	275	1332	370
French (incl. Patois, Cajun)	0	17	24	28
Speak English "very well"	0	17	15	22
Speak English less than "very well"	0	17	9	16
French Creole	11	16	0	17
Speak English "very well"	0	17	0	17
Speak English less than "very well"	11	16	0	17
Italian:	8	11	0	17
Speak English "very well"	4	6	0	17
Speak English less than "very well"	4	5	0	17
Chinese:	4	7	8	14
Speak English "very well"	0	17	5	8
Speak English less than "very well"	4	7	3	7
Vietnamese:	25	26	0	17
Speak English "very well"	8	12	0	17
Speak English less than "very well"	17	18	0	17

## 7 County Health

The University of Wisconsin Population Health Institute, in collaboration with the Robert Wood Johnson Foundation, calculated County Health Rankings for all the States in the United States ([www.countyhealthrankings.org](http://www.countyhealthrankings.org)). This ranking is based on health outcomes (such as lifespan and self-reported health status) and health factors (such as environmental, social and economic conditions). According to this 2020 report, out of all 100 counties in North Carolina (with 1 indicating the healthiest), Sampson County ranks 82<sup>nd</sup> in health factors and 77<sup>th</sup> in health outcomes (Figure 3).



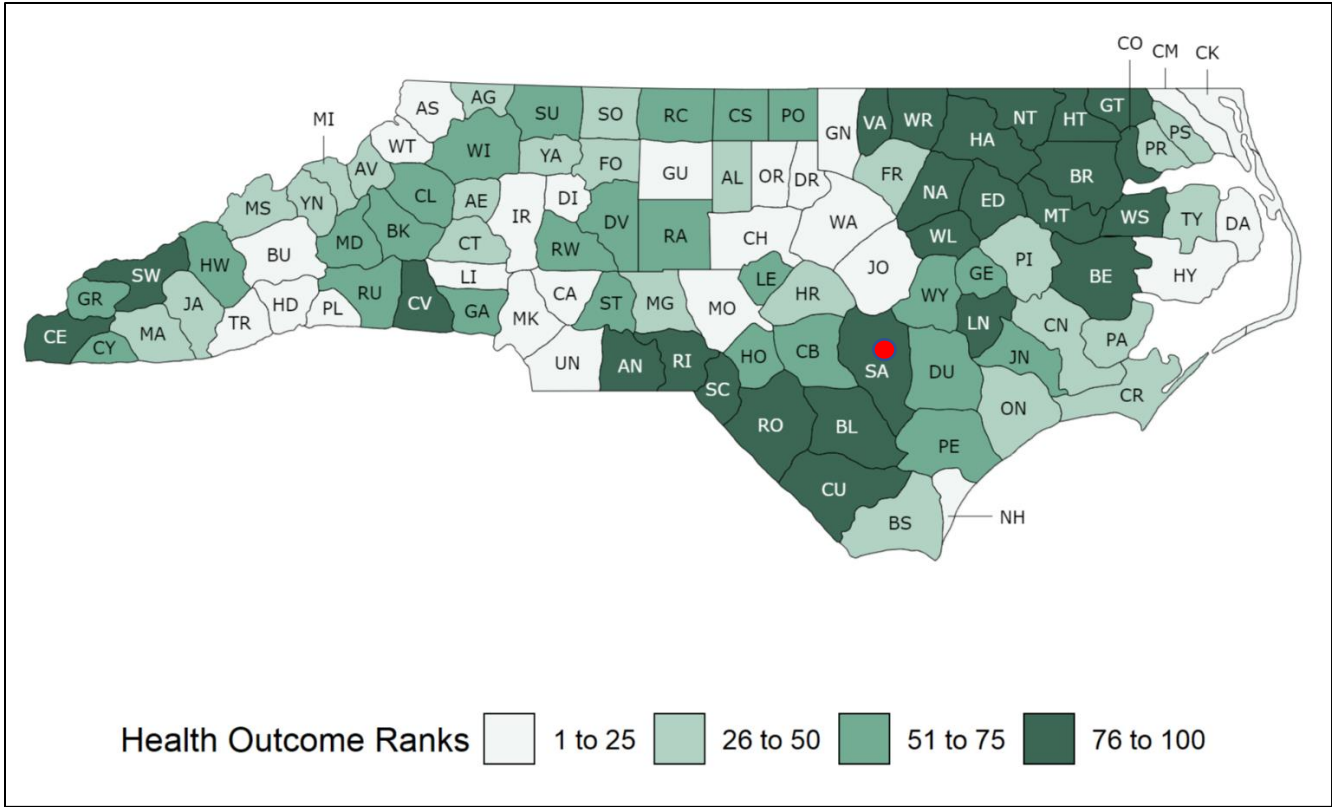


Figure 3. County Health Rankings for Health Factors in North Carolina provided by University of Wisconsin Public Health Institute.

According to the NC DEQ Community Mapping System Environmental Justice Tool, the health outcome causes of death in Sampson County are higher than the state averages for all causes of death reported (Table 15). Additionally, the hospitalizations due to asthma in Sampson County is 42 per 100,000 individuals, as compared to the state at 90 individuals per 100,000 individuals. The number of primary care physicians in Sampson County (5.746 per 10,000 residents) is slightly higher than the state average (4.812 per 10,000 residents).

Table 15. Health Outcomes

Cause of Death	Sampson County	North Carolina
Cancer	182.4	169.1
Heart Disease	175.9	163.7
Stroke	53.9	43.1
Cardiovascular Disease	245.7	221.9
Diabetes	48.2	22.8

Source: NCDEQ 2020 EJ Tool. Death rates are per 100,000 individuals

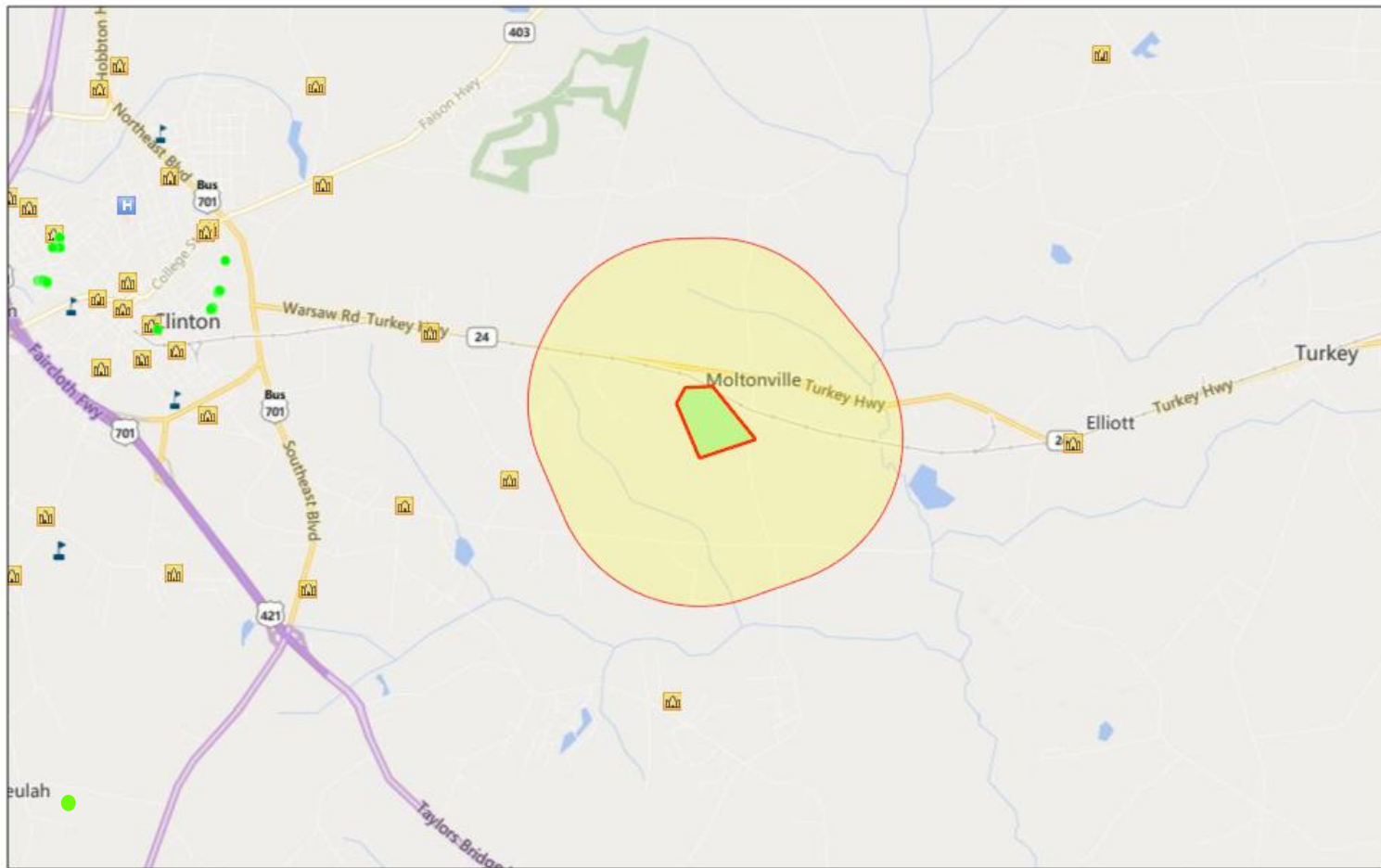
## 8 Local Sensitive Receptors

The Environmental Protection Agency suggests that sensitive receptors include, but are not limited to, hospitals, schools, daycare facilities, elderly housing, and convalescent facilities. These are areas where the occupants are more susceptible to the adverse effects of exposure to toxic chemicals, pesticides, and other pollutants. Extra care must be taken when dealing with contaminants and pollutants in close proximity to areas recognized as sensitive receptors. For instance, children and the elderly may have a higher risk of developing asthma from elevated levels of certain air pollutants than a healthy individual aged between 18 and 64 years.

Within the one-mile radius, no sensitive receptors were identified. In an effort to ensure proper outreach, the following sensitive receptors were identified slightly beyond the one-mile radius as community gathering places where information sharing may occur (Figure 4):

- St. Paul's Church-Christ
- Bethany PFWB Church

Other sensitive receptors may be identified during the remainder of the permit application process.



2/11/2021

- |                        |                        |          |            |
|------------------------|------------------------|----------|------------|
| Subsidized Housing     | Public Housing         | Schools  | Hospitals  |
| ● Interpolated rooftop | ● ZIP+4 centroid       | Churches | ■ Prestage |
|                        | ● Interpolated rooftop |          |            |

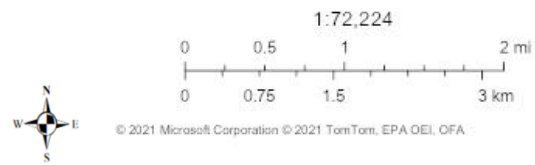


Figure 4. Sensitive receptors surrounding Prestage AgEnergy..

## 9 Local Industrial Sites

Within the one-mile project radius, there are 10 permitted facilities or reported incidents (as of February 2, 2021). These include 4 air quality permits, 4 animal feeding operation, 1 NPDES stormwater permit, and 1 pre-regulatory landfill site (Figure 5).

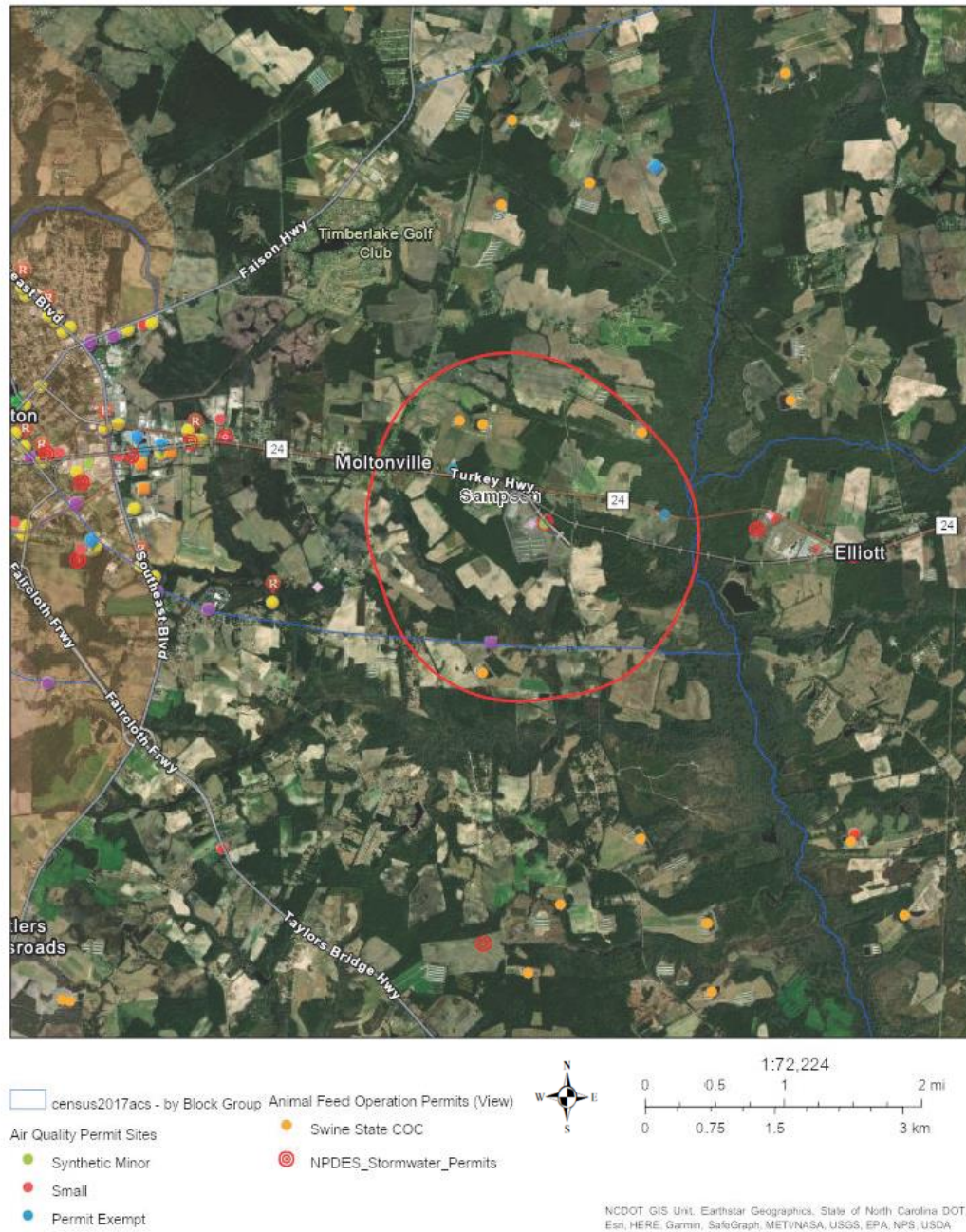


Figure 5. Permitted facilities and incidents with the one-mile radius surrounding the Prestage AgEnergy facility.

## 10 Conclusion

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (US EPA). This report examined the demographic and environmental conditions in North Carolina, Sampson County, Census Tracts 9707, 9708, and the one-mile radius around the Prestage AgEnergy facility. Potential emissions rates outlined in the permit application and county level health data were also included, as well as data from the NCDEQ Community Mapping System.

It is important to keep in mind that based on the available data, the following limitations of this report: census data is from 2010 and may be outdated; the more recent census data through 2018 are estimates; EJSCREEN does not provide all of the data categories that were used in this analysis so the census tract and county data cannot be compared to the radius used surrounding the facility boundary for all criteria; census tracts can still be large areas and do not allow for exact locations of each population; and the Department cannot determine which populations, if any, reside in that small area of overlap surrounding the facility.

The Department assessed the available demographic and socioeconomic data of the community surrounding the proposed facility. In Sampson County, the two census tracts, and the one-mile radius surrounding the project, the area generally exhibits higher percentages than the state estimates for Black or African American and Hispanic or Latino within the race and ethnicity data, and slightly higher poverty levels. Spanish was the only LEP group identified that reached a greater than 5% threshold for possible translation services.

Sampson County ranks 82<sup>nd</sup> in health factors and 77<sup>th</sup> in health outcomes, and performed worse than state averages for death rates reported in the DEQ EJ Tool.

To follow are recommendations based on the findings of this Draft EJ Report:

- Attention should be given to ensure language data is accurate and that translation or interpretation services are considered if additional LEP populations are identified at any point throughout the permitting process.
- The list of sensitive receptors should be consulted while considering additional outreach options that may best fit this community's needs.
- The Coharie Tribe should be consulted and kept informed throughout the permit application process.
- Project and permit information should be provided to local officials in Clinton and Turkey, as well as to the Sampson County Health Department.