



# Enviva Pellets- Ahoskie Environmental Justice Report

North Carolina Department of Environmental Quality  
November 15, 2022

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## 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 Hertford County, as well as census tracts 9504.01 and 9504.02, and the one-mile radius around the property boundary of the Enviva Pellets - Ahoskie facility. Finally, the demographics of the entire state of North Carolina are also considered as they compare to both the county and local census tract and radius settings.

The primary goal of the 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 surrounding the requested permit application. Accordingly, this Environmental Justice Report includes:

- Permit application submitted
- 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
- Surrounding sensitive receptors
- Local industrial sites (using the NCDEQ Community Mapping System <https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=1eb0fbe2bcfb4ccb3cc212af8a0b8c8>).
- Community outreach plans

Demographics for Hertford County as well as the state, will be 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 US EPA and National Environmental Policy Act (NEPA) documentation, certain areas will be flagged as communities having the potential for environmental justice concerns (more details in Section 5: Regional and Local Settings on page 8).

### 3 Proposed Project

Enviva Pellets Ahoskie, LLC (Enviva) operates a wood pellets manufacturing plant in Hertford County, North Carolina under the authorization of North Carolina Division of Air Quality (NC DAQ) permit 10121T04 issued on June 6, 2016. Enviva submitted a permit application for the procedural renewal of the Title V permit and proposed other operational modifications. The proposed modifications include a request to install air pollution control devices, increase facility production from 481,800 oven dried tons to 630,000 oven dried tons per year, and increase the percentage of softwood to a maximum of 100%.

To increase production, the facility will be adding truck tippers, hoppers, green hammermills, dry hammermills, pellet mills, and one pellet cooler system. To reduce volatile organic compound and hazardous air pollutant (HAP) emissions, the facility proposes to install a regenerative thermal oxidizer and a regenerative catalytic/thermal oxidizer. The oxidizers will control all of the existing and new green and dry hammermills, the existing dryer system, and all of the existing and new pellet mill/cooler systems. After all of the proposed modifications have been completed, the facility will be classified as a PSD minor source for all criteria pollutants, HAP minor source for any single HAP, and HAP minor source for all combined HAPs.

*Table 1. Changes in Potential to Emit*

Enviva's Estimated PTE	CO (tpy)	NO <sub>x</sub> (tpy)	PM (tpy)	PM <sub>10</sub> (tpy)	PM <sub>2.5</sub> (tpy)	SO <sub>2</sub> (tpy)	VOC (tpy)	CO <sub>2e</sub> (tpy)	Total HAPs (tpy)
Baseline Permit 10121T04	45.09	183.98	129.66	129.63	129.63	19.2	391.60	162,292	29.88
12/29/2021 Proposed Modification Addendum	173.65	146.04	55.95	53.63	45.49	19.42	125.43	238,661	23.5
Change in Estimated PTE	<b>+128.56</b>	<b>-37.94</b>	<b>-73.71</b>	<b>-76.00</b>	<b>-84.14</b>	<b>+0.22</b>	<b>-266.17</b>	<b>+76,369</b>	<b>-6.38</b>

Additional technical discussion is available in the permit review as well as the application.

## 4 Geographic Area

Enviva Ahoskie is located at 142 NC-561, Ahoskie, NC 27910 (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 socioeconomics to appropriately include the surrounding community and help inform public outreach efforts. The one-mile buffer around the Enviva Ahoskie facility is located wholly within Hertford County.



Figure 1. Enviva Ahoskie facility location.

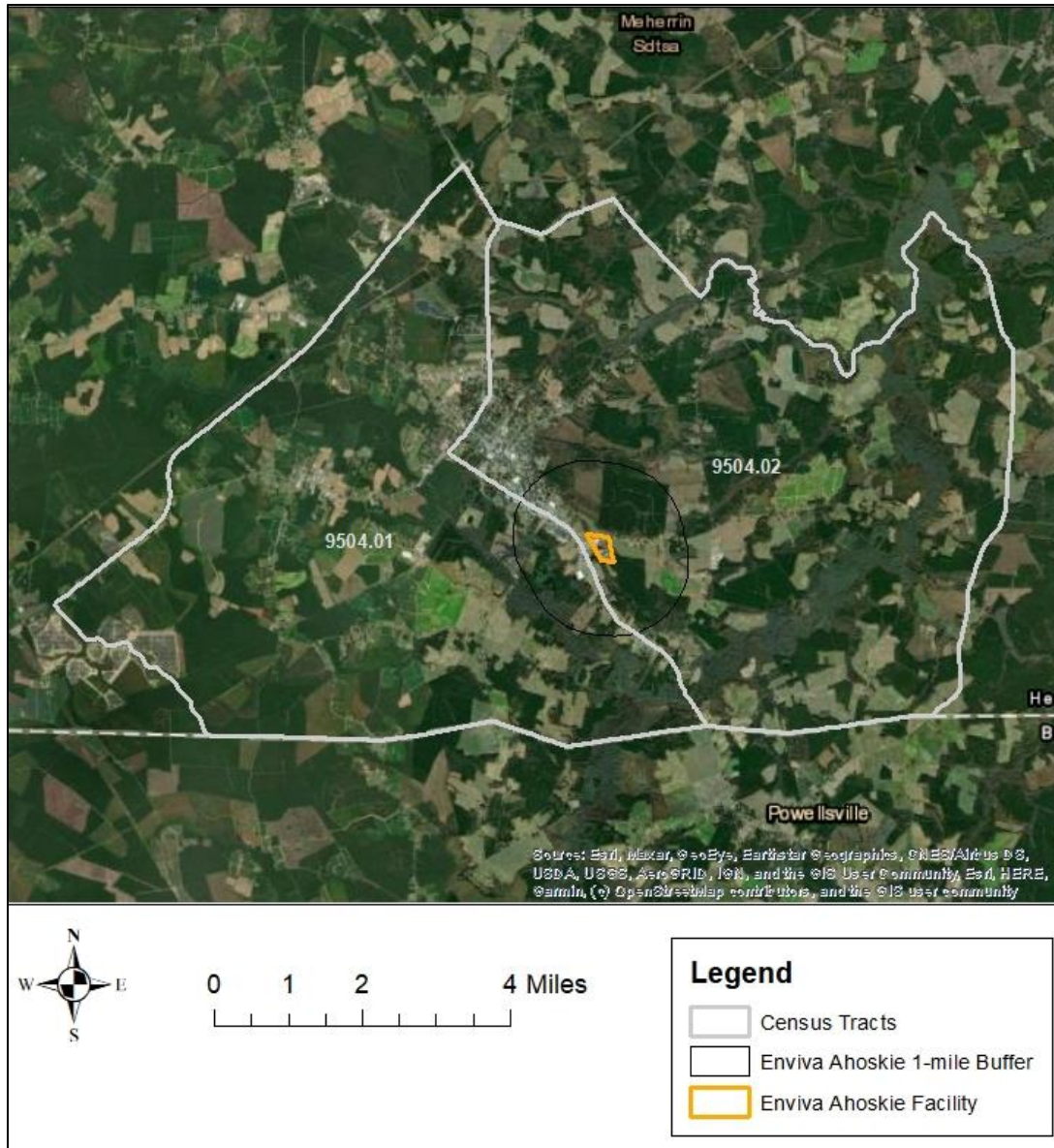


Figure 2. Enviva Ahoskie facility location with one-mile radius and census tracts.

Hertford County is designated as a Tier 1 county by the NC Department of Commerce. 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. Enviva Ahoskie and the one-mile radius surrounding the proposed project is located within census tracts 9504.01 and 9504.02 in Hertford County (Figure 2). Census tracts are small, relatively permanent statistical subdivisions of a county with a unique numeric code (US Census Bureau). These census tracts encompass land within the state-designated tribal statistical area for the Meherrin Tribe, and Hertford County is recognized by the NC Commission of Indian Affairs as a County in which the Meherrin Tribe Resides.

## 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 US EPA and NEPA documentation, the following conditions will be flagged as communities with the potential for having environmental justice concerns:

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 2014-2019 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 2011-2015 and 2014-2019 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 2). The three most common racial groups across the state were White (65.3%), Black or African-American (21.2%), and Hispanic or Latino (of any race) (8.4%).

Hertford County had a total population of 24,669 individuals (Table 2). The three most common racial or ethnic groups within Hertford County were Black or African American (60.2%), White (34.4%), and Hispanic or Latino (2.6%). Black or African American was greater than 10% different as compared to the state.

**Table 2. Regional Setting - Race and Ethnicity**

Race and Ethnicity	North Carolina		Hertford County	
	Number	Percent	Number	Percent
Total Population	9,535,483	100.0%	24,669	100.0%
White	6,223,995	65.3%	8,479	34.4%
Black or African American	2,019,854	21.2%	14,845	<b>60.2%</b>
American Indian or Alaska Native	108,829	1.1%	271	1.1%
Asian	206,579	2.2%	127	0.5%
Native Hawaiian and Other Pacific Islander	5,259	0.1%	1	0.0%
Some other Race	15,088	0.2%	46	0.1%
Two or More Races	155,759	1.6%	256	1.0%
HISPANIC OR LATINO (of any race)	800,120	8.4%	644	2.6%
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 9: Hispanic or Latino, and Not Hispanic or Latino by race or ethnicity, the largest population within Census Tract 9504.01 was Black or African American at 50.0%, followed by White at 46.3%.

The largest population within Census Tract 9504.02 was Black or African American at 69.0%, followed by White at 25.1%. Within the one-mile radius, Black or African American (64.0%) was the largest population, followed by White (31.0%). Black or African American for both census tracts and the one-mile radius was greater than 10% different when compared to the county and state or just the state (Table 3).

**Table 3. Local Setting– Race and Ethnicity**

Race and Ethnicity	Project Area - 1 Mile		Census Tract 9504.01		Census Tract 9504.02	
	Number	Percent	Number	Percent	Number	Percent
Total Population	1,175	100.0%	3,543	100.0%	4,356	100.0%
White	366	31.0%	1,641	46.3%	1,094	25.1%
Black or African American	751	<b>64.0%</b>	1,770	<b>50.0%</b>	3,006	<b>69.0%</b>
American Indian or Alaska Native	14	1.0%	19	0.5%	89	2.0%
Asian	2	0.0%	34	1.0%	38	0.9%
Native Hawaiian and Other Pacific Islander	0	0.0%	0	0.0%	0	0.0%
Some other Race	3	0.0%	3	0.1%	6	0.1%
Two or More Races	12	1.0%	26	0.7%	45	1.0%
HISPANIC OR LATINO (of any race)	28	2.0%	50	1.4%	78	1.8%
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						

## 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 4).

Hertford County had a total population of 24,669 individuals. The median age for Hertford County was slightly higher than for the state as a whole.

**Table 4. Regional Setting- Age Groups and Sex**

Age	North Carolina						Hertford County					
	Number			Percent			Number			Percent		
	Both sexes	Male	Female	Both sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
Total Population	9,535,483	4,645,492	4,889,991	100.0%	49.0%	51.0%	24,669	12,062	12,607	100.0%	49.0%	51.0%
<b>Median Age</b>	37.4	36.0	38.7				41.0	39.0	43.3			

Source: US Census Bureau, 2010 Census  
 All **bolded and orange** 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 9504.01 had a similar median population to Census Tract 9504.02 (Table 5). Both census tracts had slightly higher median ages than the state and the county.

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

Age	Census Tract 9504.01						Census Tract 9504.02					
	Number			Percent			Number			Percent		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Total Population	3,543	1,542	2,001	100%	44.0%	56.0%	4,356	1,980	2,376	100.0%	45.0%	55.0%
Median Age	42.7	40.5	44.6				41.5	37.9	44.3			

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

### Project Radius

EJSCREEN identified a population of 1,175 individuals in the one-mile radius surrounding the proposed facility (Table 6).

**Table 6. Project Radius- Age Groups and Sex**

Age	Project Area - 1 Miles					
	Number			Percent		
	Both sexes	Male	Female	Both sexes	Male	Female
Total Population	1,175	526	649	100	45	55

Source: US Census Bureau, 2010 Census. Obtained through EJSCREEN 2019

## 5.3 Disability

### Regional Setting

According to the 2019 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 10,060,249 noninstitutionalized citizens. Of those individuals, an estimated 13.4% (MOE +/- 0.1%) had a disability. By race, American Indian and Alaskan Native had the highest estimated disability rate of 18.2% (MOE +/- 0.8%). Black or African-American and White (not Hispanic or Latino) were the next highest population estimates with disabilities in North Carolina, at 14.6% (MOE +/-0.2%) and 14.5% (MOE +/- 0.1%), respectively (Table 7).

Hertford County had an estimated total population of 22,534 noninstitutionalized citizens. Of those, an estimated 21.0% (MOE +/- 1.6%) had a disability. The majority of subjects displayed estimates that were greater than 10% different when compared to the state. By race, Some other Race had the highest estimated disability rate of 29.5% (MOE +/- 37.6%). American Indian and Alaska Native and Black or African American were the next highest population estimates with disabilities in Hertford County, at 23.5% (MOE +/- 8.8%) and 22.0% (MOE +/- 2.2%) respectively.

**Table 7. Regional Setting- Disability**

Subject	North Carolina						Hertford 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	10,060,249	2,163	1,352,783	8,378	13.4%	0.1%	22,534	234	4,726	351	<b>21.0%</b>	1.6%
RACE AND HISPANIC OR LATINO ORIGIN												
White (not Hispanic or Latino)	6,357,724	2,614	919,485	7,082	14.5%	0.1%	7,656	102	1,574	167	<b>20.1%</b>	2.1%
Black or African American	2,144,532	5,119	312,780	4,850	14.6%	0.2%	13,349	325	2,939	299	<b>22.0%</b>	2.2%
American Indian and Alaska Native	120,813	1,815	22,048	842	18.2%	0.8%	255	36	60	22	<b>23.5%</b>	8.8%
Asian	290,103	1,968	15,414	800	5.3%	0.3%	160	27	17	17	<b>10.6%</b>	11.2%
Native Hawaiian and Other Pacific Islander	6,694	677	638	183	9.5%	2.7%	38	43	0	23	0.0%	49.9%
Some other Race	313,224	7,444	16,846	1,231	5.4%	0.4%	220	129	65	74	<b>29.5%</b>	37.6%
Two or more races	265,791	6,168	29,353	1,430	11.0%	0.4%	567	235	71	42	12.5%	8.3%
Hispanic or Latino	942,342	855	59,694	2,120	6.3%	0.2%	750	77	116	76	<b>15.5%</b>	10.0%
DISABILITY TYPE												
With a hearing difficulty			375,385	4,061	3.7%	0.1%			1,122	164	<b>5.0%</b>	0.7%
With a vision difficulty			263,064	4,326	2.6%	0.1%			1,242	227	<b>5.5%</b>	1.0%
With a cognitive difficulty			511,243	5,636	5.4%	0.1%			1,968	284	<b>9.2%</b>	1.3%
With an ambulatory difficulty			716,908	6,389	7.6%	0.1%			2,950	294	<b>13.8%</b>	1.4%

Source: US Census Bureau, ACS 2019 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 2019 American Community Survey 5-Year Estimates, Table S1810 Disability Characteristics from the US Census Bureau, Census Tract 9504.01 had an estimated total population of 3,344 noninstitutionalized citizens (Table 8). Of those individuals, an estimated 12.7% (MOE +/- 2.8%) had a disability. The largest population with a disability by race or ethnicity was American Indian and Alaska Native at 35.0% (MOE +/- 25.6%), followed by Hispanic or Latino at 32.6% (MOE +/- 33.0%). Both of these population groups had estimates that were greater than 10% when compared to the state and the county.

Census Tract 9504.02 had an estimated total population of 3,734 noninstitutionalized citizens. Of those individuals, an estimated 25.9% (MOE +/- 3.1%) had a disability. The largest population by race was two or more races at 38.9% (MOE +/- 26.3%). The majority of the estimates were greater than 10% different when compared to both the state and the county, or the state alone.

**Table 8. Local Setting- Disability**

Subject	Census Tract 9504.01						Census Tract 9504.02					
	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	3,344	298	426	80	12.7%	2.8%	3,734	276	967	134	<b>25.9%</b>	3.1%
RACE AND HISPANIC OR LATINO ORIGIN												
White (not Hispanic or Latino)	1,094	152	130	37	11.9%	3.5%	1,032	192	270	74	<b>26.2%</b>	5.1%
Black or African American	2,002	315	261	69	13.0%	4.1%	2,446	231	628	107	<b>25.7%</b>	3.9%
American Indian and Alaska Native	20	14	7	8	<b>35.0%</b>	25.6%	62	21	22	12	<b>35.5%</b>	16.1%
Asian	91	58	2	3	2.2%	4.7%	26	23	2	3	<b>7.7%</b>	10.5%
Native Hawaiian and Other Pacific Islander	4	6	0	12	0.0%	100.0%	1	2	0	12	0.0%	100.0%
Some other Race	0	12	0	12	-	-	31	31	2	4	<b>6.5%</b>	14.5%
Two or more races	111	70	10	14	9.0%	10.2%	54	30	21	18	<b>38.9%</b>	26.3%
Hispanic or Latino	89	77	29	31	<b>32.6%</b>	33.0%	174	88	24	26	<b>13.8%</b>	13.0%
DISABILITY TYPE												
With a hearing difficulty			81	36	2.4%	1.2%			200	62	<b>5.4%</b>	1.6%
With a vision difficulty			86	35	2.6%	1.1%			240	68	<b>6.4%</b>	1.6%
With a cognitive difficulty			106	36	3.3%	1.2%			435	82	<b>12.3%</b>	2.2%
With an ambulatory difficulty			278	63	8.7%	2.2%			599	90	<b>17.0%</b>	2.5%
Source: US Census Bureau, ACS 2019 5-year Estimates All <b>bolded and orange</b> highlighted cells indicate a difference that is greater than 10% when compared to the State All <b>bolded and blue</b> 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, 2019 American Community Survey 5-Year Estimates, from the US Census Bureau, North Carolina had an estimated population of 9,984,891, with 14.7% (MOE +/- 0.2%) below the poverty level (Table 9). Across all subjects, Some Other Race had the highest percent living below the poverty level at 27.2% (MOE +/- 1.2%). The next three subjects with the highest poverty level were Hispanic or Latino at 26.4% (MOE +/- 0.6%), American Indian and Alaska Native at 24.9% (MOE +/- 1.3%), and Black or African-American at 22.5% (MOE +/- 0.4%). The age group with the highest population below poverty was under 18 (21.2%, MOE +/- 0.4%) followed by 18 to 64 years (13.8%, MOE +/- 0.2%).

Hertford County had an estimated population of 21,826 with 21.9% (MOE +/-2.6%) living below the poverty level. Across all subjects, Native Hawaiian and Other Pacific Islander had the highest percent living below the poverty level at 86.8% (MOE +/- 32.4%). The next subjects with the highest poverty level were Some other race at 60.5% (MOE +/- 14.0%) and Hispanic or Latino (of any race) at 42.3% (MOE +/- 15.5%). Almost all subject groups had a greater than 5% difference when compared to the state.

**Table 9. Regional Setting- Poverty**

Subject	North Carolina						Hertford 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	9,984,891	1,988	1,467,591	17,844	14.7%	0.2%	21,826	263	4,786	579	<b>21.9%</b>	2.6%
RACE AND HISPANIC OR LATINO ORIGIN												
White alone (not Hispanic or Latino)	6,320,337	2,990	644,440	10,085	10.2%	0.2%	7,442	126	946	197	<b>12.7%</b>	2.6%
Black or African American	2,116,769	5,452	475,973	8,126	22.5%	0.4%	12,897	330	3,364	567	<b>26.1%</b>	4.2%
American Indian and Alaska Native	120,328	1,846	29,981	1,608	24.9%	1.3%	255	36	53	31	20.8%	13.0%
Asian	285,786	2,021	30,707	2,034	10.7%	0.7%	160	27	27	23	<b>16.9%</b>	15.6%
Native Hawaiian and Other Pacific Islander	6,630	675	1,360	332	20.5%	4.6%	38	43	33	43	<b>86.8%</b>	32.4%
Some other Race	311,206	7,397	84,699	4,639	27.2%	1.2%	220	129	133	84	<b>60.5%</b>	14.0%
Two or more races	262,580	6,121	54,627	2,414	20.8%	0.8%	532	240	144	67	<b>27.1%</b>	14.1%
Hispanic or Latino	940,295	1,251	248,474	6,013	26.4%	0.6%	735	80	311	120	<b>42.3%</b>	15.5%
All individuals below:												
200 percent of poverty level	3,420,476	24,183					9,729	748				

Source: US Census Bureau, ACS 2019 5-year Estimates

All **bolded and orange** highlighted 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, 2019 American Community Survey 5-Year Estimates, from the US Census Bureau, Census Tract 9504.01 had an estimated population of 3,341 with 15.4% (MOE +/-4.6%) living below the poverty level (Table 10). Across all subjects, Two or more races (36.9%, MOE +/- 21.9%) had the highest percent living below the poverty level, followed by Black or African American at 21.4% (MOE +/- 7.7%) Only the total population for whom poverty status is determined and two or more races had a greater than 5% difference when compared to the state.

Census Tract 9504.02 had an estimated population of 3,731 with 24.9% (MOE +/-5.0%) living below the poverty level (Table 10). Across all subjects, Some other Race 67.7% (MOE +/- 50.3%) had the highest percent living below the poverty level, followed by Hispanic or Latino at 39.7% (MOE +/- 43.9%). All subject groups with an estimate above 0% had a greater than 5% difference when compared to either the county and the state or just the state.

**Table 10. Local Setting - Poverty**

Subject	Census Tract 9504.01						Census Tract 9504.02					
	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	3,341	298	516	147	<b>15.4%</b>	4.6%	3,731	275	929	192	<b>24.9%</b>	5.0%
RACE AND HISPANIC OR LATINO ORIGIN												
White alone (not Hispanic or Latino)	1,094	152	48	24	4.4%	2.3%	1,032	192	115	52	<b>11.1%</b>	4.9%
Black or African American	1,999	315	427	142	21.4%	7.7%	2,443	230	760	165	<b>31.1%</b>	5.8%
American Indian and Alaska Native	20	14	0	12	0.0%	68.8%	62	21	16	11	<b>25.8%</b>	14.8%
Asian	91	58	-	12	0.0%	30.9%	26	23	9	11	<b>34.6%</b>	32.7%
Native Hawaiian and Other Pacific Islander	4	6	-	12	0.0%	100.0%	1	2	-	12	0.0%	100.0%
Some other Race	-	12	-	12	-	-	31	31	21	29	<b>67.7%</b>	50.3%
Two or more races	111	70	41	27	<b>36.9%</b>	21.9%	54	30	8	13	<b>14.8%</b>	22.3%
Hispanic or Latino	89	77	-	12	0.0%	31.4%	174	88	69	85	<b>39.7%</b>	43.9%
All individuals below:												
200 percent of poverty level	983	182					1,954	261				
Source: US Census Bureau, ACS 2019 5-year Estimates All <b>bolded and orange</b> highlighted cells indicate a difference that is greater than 5% when compared to the State												

## 5.5 Household Income

### Regional Setting

The following table (Table 11) was compiled using data from the Census Table S1901, Income in the Past 12 Months (in 2019 Inflation-Adjusted Dollars) 2019 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 18.0% (MOE +/- 0.1). The state median household income was \$54,602 and the mean income was \$76,940.

The household income range for Hertford County with the highest percent was \$50,000 to \$74,999 at 17.5% (MOE +/- 2.4%). The median income was \$41,028 and the mean income was \$50,420. All income ranges less than \$35,000 had percentages that were more than 10% greater than the state ranges.

**Table 11. Regional Setting- Household Income**

Subject	North Carolina		Hertford County	
	Households		Households	
	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-
Total	3,965,482	10,327	8,845	273
Less than \$10,000	6.4%	0.1	<b>10.2%</b>	1.8
\$10,000 to \$14,999	5.0%	0.1	<b>8.8%</b>	2
\$15,000 to \$24,999	10.3%	0.1	<b>12.4%</b>	2.1
\$25,000 to \$34,999	10.3%	0.1	<b>13%</b>	2.1
\$35,000 to \$49,999	13.9%	0.1	<b>17.5%</b>	2.4
\$50,000 to \$74,999	18.0%	0.1	18.0%	2.1
\$75,000 to \$99,999	12.4%	0.1	8.4%	1.6
\$100,000 to \$149,999	13.1%	0.1	9.5%	1.8
\$150,000 to \$199,999	5.1%	0.1	1.1%	0.4
\$200,000 or more	5.4%	0.1	1.0%	0.4
Median income (dollars)	54,602	231	41,028	2,232
Mean income (dollars)	76,940	352	50,420	1,949
Per Capita Income	30,783	154	20,119	786

### Local Setting

The household income range for Census Tract 9504.01 with the highest percent was \$50,000 to \$74,999 at 17.2% (MOE +/- 6.5%). The median income was \$49,706 and the mean income was \$62,830 (Table 12). Only less than \$10,000 income had a difference that was greater than 10% when compared to the state.

The household income range for Census Tract 9504.02 with the highest percent was \$25,000 to \$34,999 at 16.2% (MOE +/- 3.2%). The median income was \$31,144 and the mean income was \$44,234 (Table 12). All income ranges less than \$34,999 had percentages that were more than 10% greater than the state and county.

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

Subject	Census Tract 9504.01		Census Tract 9504.02	
	Households		Households	
	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-
Total	1,322	105	1,533	122
Less than \$10,000	<b>9.7%</b>	3.3	<b>14.0%</b>	3.3
\$10,000 to \$14,999	4.6%	1.8	<b>10.7%</b>	2.2
\$15,000 to \$24,999	9.7%	3.5	<b>14.0%</b>	2.4
\$25,000 to \$34,999	12.8%	3.7	<b>16.2%</b>	3.2
\$35,000 to \$49,999	13.8%	5.1	13.8%	2.8
\$50,000 to \$74,999	17.2%	6.5	13.6%	2.7
\$75,000 to \$99,999	13.5%	5	7.7%	1.9
\$100,000 to \$149,999	13.5%	5.1	8.2%	2
\$150,000 to \$199,999	2.6%	1.5	0.4%	0.3
\$200,000 or more	2.6%	1.7	1.6%	0.9
Median income (dollars)	49,706	5,369	31,144	3,943
Mean income (dollars)	62,830	6,239	44,234	3,478
Per Capita Income	26,446	2,473	19,464	1,632

Source: US Census, 2019 ACS 5-Year Estimates  
 All **orange and bolded** 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 the county and the state.

The household income range for the one-mile radius with the highest percent was \$25,000-\$50,000 at 27.0% (Table 13). EJSCREEN data provides different income ranges that cannot be compared in the same manner. This is based off of the 432 households within the one-mile radius.

**Table 13. Local Setting (Radius)-Household Income**

Subject	1 mile		
	Number	Percent	MOE
Number of Households	432	100%	76
Per Capita Income (dollars)	19,768		
Household Income			
<\$15,000	111	26%	47
\$15,000-\$25,000	58	14%	35
\$25,000-\$50,000	116	27%	56
\$50,000-\$75,000	55	13%	54
\$75,000+	91	21%	66

Source: EJSCREEN, US Census, 2018 ACS 5-Year Estimates.

### Per Capita Income

Per Capita Income data was obtained through the Census Table B19301, Per Capita Income in the Past 12 Months (In 2019 Inflation-Adjusted Dollars), 2019 American Community Survey 5-Year Estimates. The North Carolina per capita income estimate was \$30,783. The estimate for Hertford County was lower, at \$20,119. The estimate for Census Tract 9504.01 was \$26,446. The estimate for Census Tract 9504.02 was \$19,464. The EJSCREEN analysis also provided the Per Capita Income estimate of \$19,768 for the one-mile buffer surrounding site. Hertford County, both census tracts, and the one-mile radius all had a lower Per Capita Income than that of the state.

## 6 Limited English Proficiency (LEP)

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.

Eight potential LEP language groups were identified as having an estimate for individuals who speak English less than “very well” greater than zero (Table 14). However, no languages had a greater than 5% estimate for individuals who speak English less than “very well”.



**Table 14. Limited English Proficiency**

LANGUAGE SPOKEN AT HOME	Census Tract 9504.01		Census Tract 9504.02	
	Estimate	Margin of Error	Estimate	Margin of Error
<b>Total (population 5 years and over):</b>	<b>2,826</b>	<b>219</b>	<b>3,771</b>	<b>260</b>
Speak only English	2,755	227	3,557	236
Spanish or Spanish Creole:	15	17	191	103
Speak English "very well"	4	6	101	57
Speak English less than "very well"	11	15	90	95
Gujarati:	0	12	3	5
Speak English "very well"	0	12	0	12
Speak English less than "very well"	0	12	3	5
Chinese:	4	6	2	4
Speak English "very well"	0	12	2	4
Speak English less than "very well"	4	6	0	12
Japanese:	1	2	0	12
Speak English "very well"	0	12	0	12
Speak English less than "very well"	1	2	0	12
Korean:	2	4	2	4
Speak English "very well"	0	12	0	12
Speak English less than "very well"	2	4	2	4
Tagalog:	15	22	3	4
Speak English "very well"	4	7	0	12
Speak English less than "very well"	11	18	3	4
Other Native North American languages:	0	12	4	5
Speak English "very well"	0	12	0	12
Speak English less than "very well"	0	12	4	5
Arabic:	23	24	0	12
Speak English "very well"	0	12	0	12
Speak English less than "very well"	23	24	0	12

Source: US Census, ACS 5-year estimates, 2011-2015

## 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 2021 report, out of all 100 counties in North Carolina (with 1 indicating the healthiest), Hertford County ranks 81<sup>st</sup> in health factors and 79<sup>th</sup> in health outcomes.

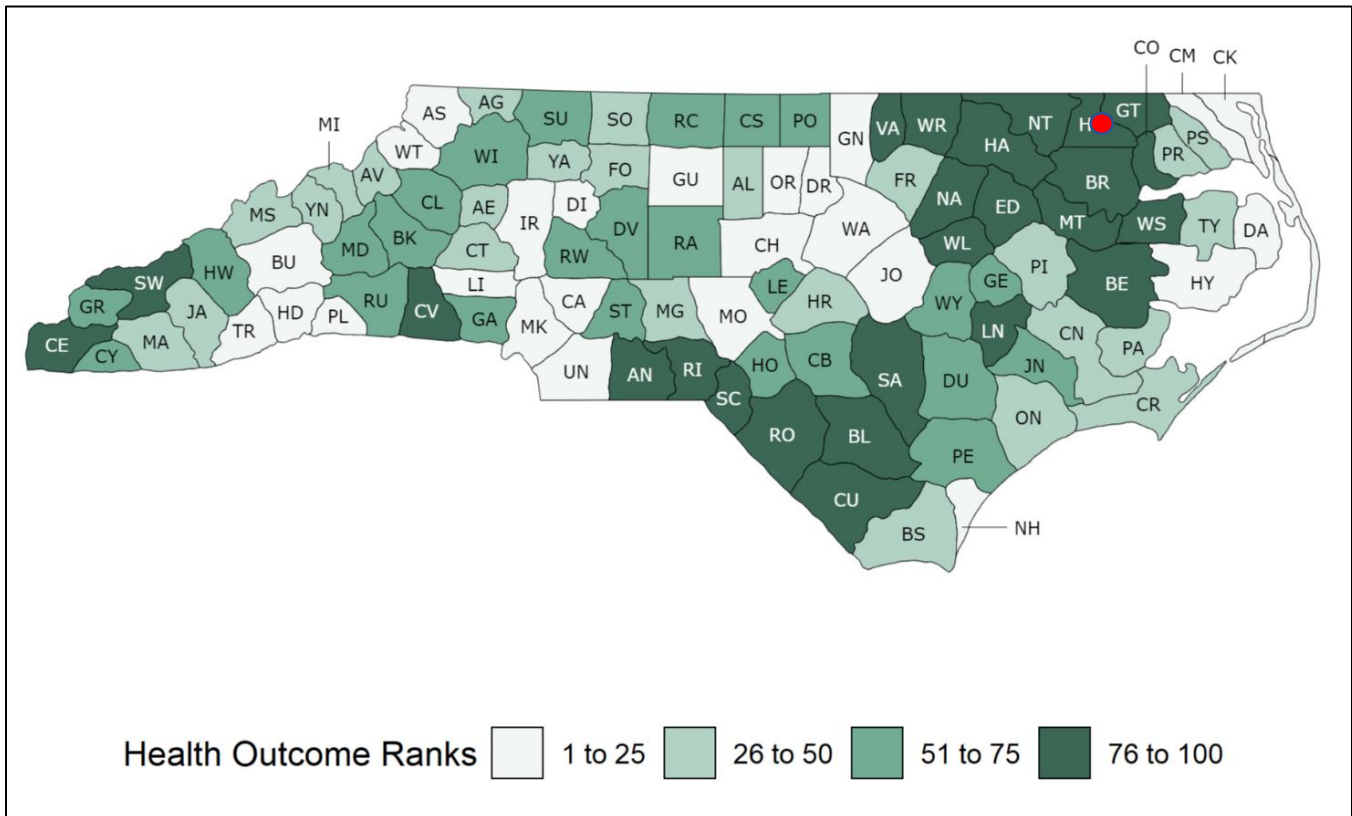


Figure 3. County Health Rankings for Health Factors in North Carolina provided by University of Wisconsin Public Health Institute

According to the NC DEQ Community Mapping System Environmental Justice Tool, the health outcome causes of death in Hertford County overall are higher than the state averages, with the exception of strokes which is slightly lower. Additionally, the hospitalizations due to asthma in Hertford County is 24 (per 100,000 individuals), as compared to the state at 90 (per 100,000 individuals). The number of primary care physicians in Hertford County (9.4 per 10,000 residents) is slightly higher than the state average (4.8 per 10,000 residents).

**Table 15. Health Outcomes**

Cause of Death	Hertford County	North Carolina
Cancer	174.1	169.1
Heart Disease	189	163.7
Stroke	39.2	43.1
Cardiovascular Disease	259.2	221.9
Diabetes	54.9	22.8
Source: NCDEQ 2020 EJ Tool. Death rates are per 100,000 individuals		

## 8 Local Sensitive Receptors

The U.S. 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.

Within or located slightly beyond the one-mile project radius from the Enviva Pellets Ahoskie facility, the following potential sensitive receptors were identified (Figure 4):

- Higher Ground Church
- Accordius Health at Creekside Care
- Vidant Roanoke-Chowan Hospital (just beyond one-mile radius)
- Ahoskie Housing Authority Subsidized Housing (2 housing complexes)
- Carpenters Shop Church
- Great Faith Non-Denominational church
- Ahoskie Free Will Baptist church
- Canaan Missionary Baptist Church
- Ahoskie church of God
- Legal Aid of North Carolina-Ahoskie Office
- Ahoskie Public Library

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

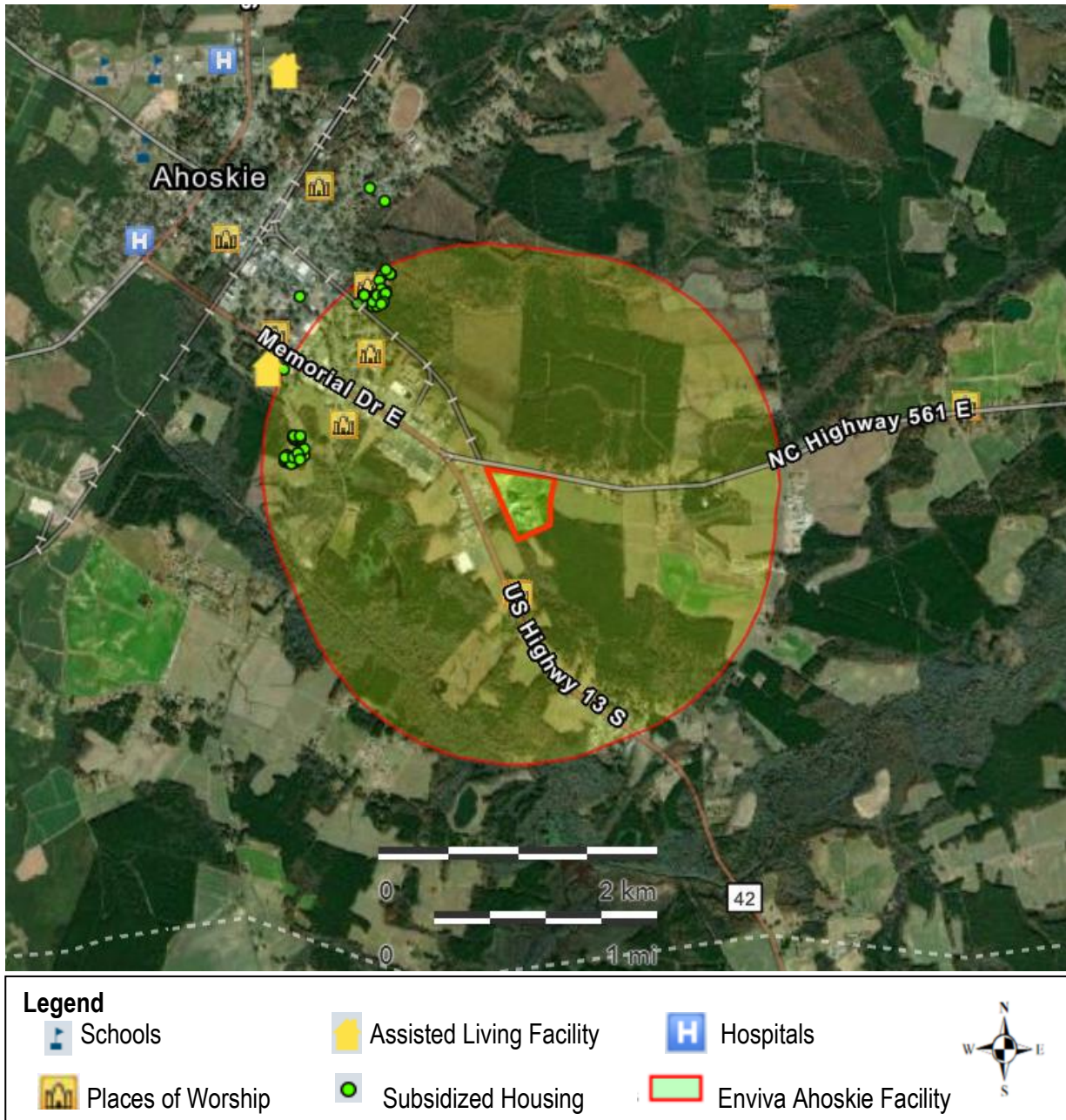


Figure 4. Sensitive receptors surrounding Enviva Ahoskie

## 9 Local Industrial Sites

Within the one-mile radius, there are 35 permits or incidents (as of June 28, 2021). Those include 1 air quality permit, 3 inactive Hazardous Sites, 1 Pre-regulatory Landfill site, 1 Hazardous Waste Site, 16 Underground Storage Tank Incidents, 1 Above Ground Storage Tank Incidents, 3 Underground Storage Tank Active Facilities, and 9 Land Use Restriction and/or Notices (Figure 5).

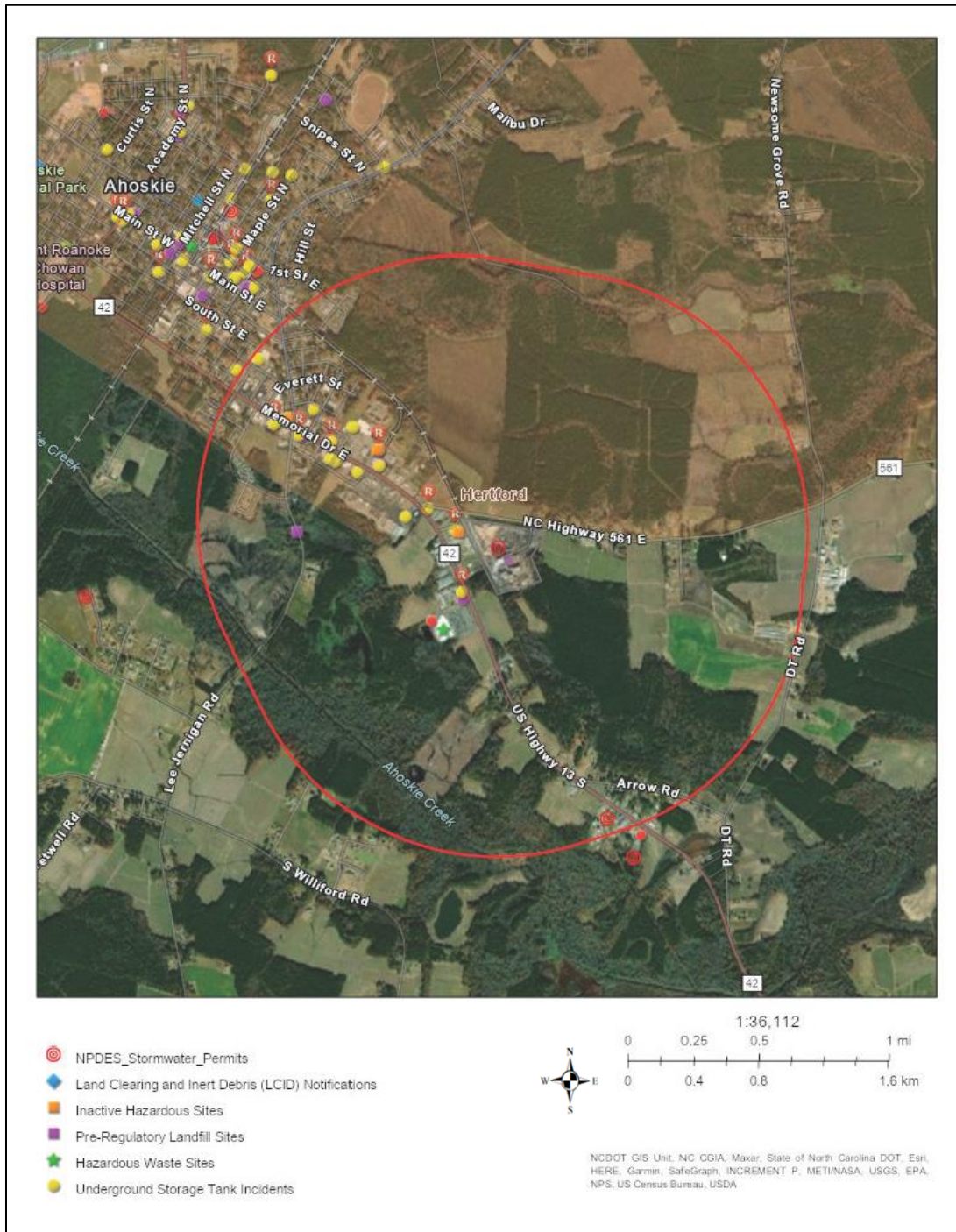


Figure 5. Permitted facilities and incidents with the one-mile radius surrounding Enviva Ahoskie

## 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, Hertford County, census tracts 9504.01 and 9504.02, and the one-mile radius around the Enviva Pellets Ahoskie facility. Potential emissions rates outlined in the permit application and county level health data are 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 2019 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 are in that small amount of overlap around the facility.

The Department assessed the available demographic and socioeconomic data of the community surrounding the Enviva Ahoskie Facility regarding its permit application. Hertford County, the project area data from the radius used, and the census tract generally exceed the state estimates for race and ethnicity. The area also showed higher percentages for the lowest income ranges, as well as elevated poverty and disability rates [as compared to the state and County]. No LEP groups were identified, however, if specific language access requests come in during the comment period or additional information regarding this community arises, DEQ will revisit the Safe Harbor Guidelines. Hertford County is identified by the NC Commission of Indian Affairs as a County in which the Meherrin Tribe resides.

Hertford County ranks within the bottom 25% in health outcomes for North Carolina, and performed worse than the state averages for most death rates included in the DEQ EJ Tool. There were 35 permits or incidents recorded within one-mile of the facility.

Based on this EJ Report, the following outreach was conducted:

- A public notice was provided in Roanoke-Chowan News Herald and on DEQ's website.
- A one-page fact sheet was created with the permit overview and information about ways to engage.
- The list of sensitive receptors was consulted while considering additional outreach options that may best fit this community's needs.
- Set up and monitored a dedicated phone line for commenters to leave comments by voicemail at their convenience in case of internet connectivity issues.
- Multiple reminders were posted on social media.
- Project information was provided to officials of the Meherrin Tribe, the Town of Ahoskie, and the Hertford County Health Department.
- Known community leaders were consulted for additional outreach options.