North Carolina Department of Environmental Quality

November 27, 2024

University of North Carolina at Chapel Hill Cogeneration Facility

Draft Environmental Justice Report

It is the policy of the North Carolina Department of Environmental Quality (DEQ) that no person shall, on the ground of race, ethnicity, national origin, sex, age or disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance, as provided by Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, the Rehabilitation Act of 1973, and all other pertinent nondiscrimination laws and requirements.

In conducting this analysis, the Environmental Justice Program pursues DEQ's mission to "Provide science-based environmental stewardship for the health and prosperity of all North Carolinians" and advance environmental justice in DEQ's activities.



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Executive Summary

Objective

The primary goal of this Environmental Justice Report is to encourage comments and suggestions from the surrounding community, industry, and environmental groups throughout the comment period for the University of North Carolina at Chapel Hill (UNC-CH) Cogeneration Facility to inform agency decision-making. Using available 2022 American Community Survey 5-year estimates, the report provides recommendations for appropriate enhanced public outreach and engagement to facilitate public input. Specifically, this report highlights census tracts within a one-mile radius of the UNC-CH Cogeneration Facility and the potential for environmental justice concerns.

Key Findings

Based on this report's analysis and using NCDEQ Potentially Underserved Block Groups (on the basis of Race/Ethnicity and Poverty) and standard EJ guidelines established by the U.S. EPA and in the NEPA documentation, the potential environmental justice concerns for particular populations in the 14 census tracts located within a one-mile radius of the UNC-CH Cogeneration Facility have been identified as follows:

• Race and Ethnicity:

- Total people of color populations in the project area and four of 14 census tracts (107.07, 107.08, 113, and 116.02.)
- The following race/ethnic population categories:
 - Black or African American
 - Hispanic or Latino
 - American Indian or Alaskan Native
 - Asian
 - Some other race
 - Two or more races

• Tribal Communities:

- o The Occaneechi Band of the Saponi Nation resides within Orange County.
- UNC may have additional tribal stakeholders involved in their tribal land acknowledgement, which includes the following indigenous peoples: Enos, Occaneechis, Shakoris and Sissipahaws.¹
- Age and Sex: Populations of individuals 65 years or older in census tract 122.01 and populations of individuals 5 years or younger in census tracts 107.08, 118, and 122.02.
- **Limited English Proficiency:** Households that speak the following language categories with limited English-speaking proficiency:
 - Spanish
 - o French, Haitian, or Cajun
 - German or other West Germanic languages
 - Russian, Polish or other Slavic languages
 - Chinese (including Mandarin, Cantonese)

¹ RECOGNITION OF INDIGENOUS PEOPLES' DAY, 2021; https://americanindiancenter.unc.edu/event/indigenous-peoples-day/

- Vietnamese
- Korean
- Other Asian and Pacific Island languages
- Other Indo-European languages
- Arabic
- **Disability:** Populations living with a disability in census tracts 107.07, 107.08, 107.09, 107.10, 113, and 122.01.
- **Education:** Populations of individuals at least 18 years and older whose highest educational attainment is less than a high school equivalency in census tracts 107.08, 107.09, 107.10, 113, and 118.
- **Poverty:** Populations experiencing poverty below 200% of the poverty level or below the poverty level in the project area and/or census tracts 117, 107.05, 107.07, 107.08, 107.09, 113, 114, 115, 116.01, 116.02, and 118.

Recommendations

Based on the sociodemographic indicator analysis, the Environmental Justice Program recommends the following outreach and engagement for the UNC-CH Cogeneration Facility Title V permit application public hearing:

- Public notice and one-page fact sheet with public comment and public hearing information with translation available on request.
- Consultation with community leaders about other outreach recommendations including leaders and representatives of the Occaneechi Band of the Saponi Nation.
- Mailed or emailed public notices and one-page fact sheets to local sensitive receptors and the Town of Chapel Hill and Town of Carborro.
- Evaluate options to distribute one-page fact sheets in high-traffic community areas.
- Arrange a voicemail line to receive public comments.

1. Introduction

The North Carolina Department of Environmental Quality (NCDEQ) and its Environmental Justice Program maintains an ongoing interest in integrating equitable protections for human health, vulnerable communities, the environment, and civil rights into its programs.

The Environmental Justice Program at NCDEQ works to ensure 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.

The term environmental justice describes situations where multiple factors, including both environmental and socio-economic stressors, may act cumulatively to affect health and the environment and contribute to persistent environmental health disparities and overburden communities. The U.S. EPA defines overburdened communities as a minority, low-income, tribal or indigenous populations, or geographic locations in the United States that potentially experience disproportionate environmental

harms and risks.² Disproportionality can result in greater vulnerability to environmental hazards, lack of opportunity for public participation, or other factors. Increased vulnerability may be attributable to an accumulation of negative environmental, health, economic, or social conditions within these populations or places.

The primary goal of this Environmental Justice Report is to encourage comments and suggestions from the surrounding community, industry, and environmental groups throughout the comment period for the UNC-CH Cogeneration Facility Title V permit application. Using available 2022 American Community Survey 5-year estimates, the report provides recommendations for appropriate enhanced public outreach and engagement to facilitate public input. Specifically, this report highlights census tracts within a one-mile radius of the UNC-CH Cogeneration Facility and the potential for environmental justice concerns.

2. Environmental Justice Evaluation Approach

NCDEQ has assessed the current permit conditions and the demographics of the communities in the area surrounding the facility. Accordingly, this Draft EJ Report includes:

- Permit information and facility history overview
- 2024 County Distress Ranking as determined by the NC Department of Commerce
- Sociodemographic analysis of census tracts within the one-mile radius and potential EJ concerns based on a comparison of local area demographics to both county and statewide census data
- Presence or absence of state or federally recognized Tribes or Urban Indian Associations
- County health assessment from the County Health Rankings and Roadmaps and potential cumulative impacts
- Local sensitive receptors
- Conclusions and outreach recommendations

2.1 Sociodemographic Indicators

The Environmental Justice Program examined the following sociodemographic indicators:

- Race and Ethnicity
- Age and Sex
- Disability
- Limited English Proficiency (LEP)
- Educational Attainment
- Poverty and Low-income

The sociodemographic indicators examined are in alignment with DEQ's policy that no person shall, on the grounds of race, color, Tribal affiliation, national origin, sex, age, or disability be excluded from participation in, be denied the benefits of or be subjected to discrimination under Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Action of 1987, the Rehabilitation Act of 1973, and all other pertinent nondiscrimination laws and regulations.

² EJ 2020 Glossary. Environmental Protection Agency (EPA). https://www.epa.gov/caa-permitting/what-definition-overburdened-community-relevant-epa-actions-and-promising-practices.

Demographics for the state of North Carolina and its counties are compared to the census tracts on a local geographic scale using data available through the U.S. Census Bureau. See Appendix A for descriptions of all U.S. Census source data used in this report. Demographics for the one-mile radius around the UNC-CH Cogeneration Facility – which will be referred to as the project area in this report – are provided through EPA's EJScreen (See Appendix C for the full EJScreen 2.3 ACS 2018-2022 report for the project area).³

Race and Ethnicity

To analyze potential EJ concerns based on race, color, national origin, and ethnicity, the Environmental Justice Program examined populations in the following U.S. Census-defined race and ethnicity categories:

- White (Not Hispanic)
- Black or African American
- Hispanic or Latino
- American Indian or Alaska Native
- Asian
- Native Hawaiian and Other Pacific Islander
- Some Other Race
- Two or More Races

Age and Sex

To analyze potential EJ concerns based on age and sex, the Environmental Justice Program examined populations of two different age categories for both males and females. The populations of ≤ 5 years old and ≥ 65 years old were examined because the Centers for Disease Control and Prevention (CDC) considers these age ranges as vulnerable.⁴

Disability

To analyze potential EJ concerns based on disability status, the total population with a disability was examined.

To analyze potential EJ concerns regarding accessibility to public information and public hearings concerning public health or environmental impacts of programs, policies, and activities the types of difficulties experienced by the total population with a disability was also examined.

Limited English Proficiency

Eleven language categories with Limited English Proficiency (LEP; speak English "Less than Very Well") ⁵ were analyzed. These LEP language categories are within the top LEP language categories in the State and are as follows:

³ EPA's Environmental Justice Screening and Mapping Tool (Version 2.3). Environmental Protection Agency (EPA). https://ejscreen.epa.gov/mapper/

⁴ Sensitive Populations and Chemical Exposure. Centers for Disease Control and Prevention (CDC) and Agency for Toxic Substances Disease Registry (ATSDR).

https://www.atsdr.cdc.gov/emes/public/docs/Sensitive%20Populations%20FS.pdf

⁵ *Table B16001 2021: ACS 5-Year* Estimates. U.S. Census Bureau. https://data.census.gov/table/ACSDT1Y2022.B16001?t=Language+Spoken+at+Home&g=040XX00US53

- Spanish
- Chinese (including Mandarin and Cantonese)
- Vietnamese
- Arabic
- French (including Cajun)
- Korean
- Other Asian and Pacific Island Languages
- Russian, Polish or other Slavic Languages
- Other Indo-European Languages
- Tagalog (including Filipino)
- German or other West Germanic Languages

To analyze potential EJ concerns regarding accessibility to public information concerning public health or environmental impacts of programs, policies, and activities, these identified populations with LEP were examined.

Educational Attainment

To analyze potential EJ concerns based on socioeconomic status, populations with varying levels of educational attainment (bachelor's degree and higher and high school degree and lower) for adults of 25 years or older were examined. Educational attainment (specifically those with a high school degree and lower) for those between 18 and 24 years old were also examined.

Poverty and Low-income

To analyze potential EJ concerns based on income levels, populations below the poverty level and 'low income" populations were examined. Poverty status is determined by annual income relative to the number of individuals and dependents living in a household. The poverty level for 2022 was defined as having a household income less than \$14,880 for a household with one individual or having a household income of less than \$29,950 for a household with four individuals. The U.S. Census Bureau considers a household to be all individuals that occupy a housing unit as their usual place of residence. Analyzed poverty data from the U.S. Census Bureau considered total populations in poverty as a count of individuals, which had already been determined on a household level according to these guidelines.

The US EPA Assesses income and poverty conditions using the threshold of "low income." Low income is defined as a household income below twice the federal poverty level⁸. The low-income level for 2022 was defined as having a household income less than \$29,760 for a household with one individual or having a household income of less than \$59,900 for a household with four individuals. The US Census Bureau labels this value as "below 200% of the poverty level."

⁶ https://www.census.gov/library/publications/2023/demo/p60-280.html

⁷ Household Definition. (n.d.). In *US Census Bureau Glossary*. https://www.census.gov/glossary/?term=Household.

⁸ Overview of Socioeconomic Indicators in EJScreen. US EPA, 2024. https://www.epa.gov/ejscreen/overview-socioeconomic-indicators-ejscreen.

3. Permit Information and Facility History Overview

The UNC-CH Cogeneration Facility was built in 1993⁹ and has historically been permitted under the Clean Air Act of 1990. The most recent Title V permit was renewed in 2021. In the last 5 years, there has been one informal enforcement action taken at this facility for violation of the Clean Air Act based on the ICS-Air system.¹⁰ As of June 25, 2024, this facility has no violations identified.

Facility/Permit Details

The University of North Carolina at Chapel Hill (UNC; the facility) currently operates a cogeneration facility in Chapel Hill that produces electricity and steam for use at UNC's Chapel Hill campus. The cogeneration facility includes two boilers (Units 6 and 7) that primarily burn coal and natural gas.

UNC has applied to modify its air quality permit, allowing it to add engineered pellets as a fuel source in Units 6 and 7. These pellets are manufactured by Convergen Energy (a company based in Wisconsin). UNC plans to evaluate these engineered pellets as a means of supplementing coal as a fuel to Units 6 and 7; in the future, UNC says it may entirely replace coal with these engineered pellets. Based on data provided by Convergen Energy and UNC, the new pellet fuel is expected to reduce emissions of particulate matter, sulfur dioxide and greenhouse gas emissions while increasing emissions of nitrogen oxides, volatile organic compounds and carbon monoxide.

Based on the information provided by UNC, if UNC were to completely replace coal with the new engineered pellets, emissions from Units 6 and 7 would change by the following:

Annual Emissions (tons/year)				
Pollutant	Current Baseline	Potential Changes		
NOx	127	+22		
PM/PM ₁₀ /PM _{2.5}	16	-8		
SO ₂	182	-118		
VOC	3	+9		
СО	59	+16		
Sulfuric Acid	11	-7		
Greenhouse Gases (CO ₂ e)	189,758	-22,871		

⁹ Names in Brick and Stone: Histories from UNC's Built Landscape. UNC History. https://unchistory.web.unc.edu/building/cogeneration-facility/

¹⁰ Detailed Facility Report. EPA ECHO. https://echo.epa.gov/detailed-facility-report?fid=NC0000003706800043

UNC has stated that no physical changes to Units 6 or 7 will be needed to use the engineered pellets. UNC has also stated that the switch to engineered pellets would not cause an increase in operations of the cogeneration facility.

The facility is classified as a major source requiring a Title V air quality permit. The facility is also classified as a major source of hazardous air pollutants (HAPs) and a major stationary source under the Prevention of Significant Deterioration (PSD) program. The use of engineered pellets will not affect UNC's status as a major source under Title V, a major source of HAPs, or a major stationary source for PSD.

Emissions from Units 6 and 7 are controlled by a bagfilter (which controls particulate matter) and a combination of calcium carbonate and dry sorbent injection (which control sulfur dioxide and acid gases). The draft air quality permit would require UNC to continue to operate these control devices.

In UNC's current Title V permit, Units 6 and 7 are subject to New Source Performance Standards for utility boilers (NSPS Subpart Db) and Maximum Achievable Control Technology limits for boilers (MACT Subpart DDDDD). Furthermore, Units 6 and 7 are subject to a site-specific emission limit for sulfur dioxide. UNC will continue to be required to comply with these limits.

UNC is required to operate continuous monitors for sulfur dioxide, nitrogen oxides, and particulate matter. UNC is also required to perform regularly scheduled testing pursuant to MACT Subpart DDDDD. UNC will continue to operate these monitors and perform testing.

DAQ conducted air dispersion modeling for this application, which demonstrated that the facility's emissions of toxic air pollutants (TAPs) are expected to comply with all applicable standards and would not cause an exceedance of any acceptable ambient level.

Because the pellets have been shown to contain small amounts of per- and polyfluoroalkyl substances (PFAS), DAQ will require UNC to perform regular sampling of the pellets for PFAS and test its boilers to determine actual PFAS emissions. Based on an analysis of the pellets included in UNC's application, the facility would not emit more than 1.2 pounds of PFAS per year.

Previous Public Engagement

When the facility's Title V permit was renewed in 2021, NCDEQ engaged in a public participation process. Outreach conducted during this public participation process followed the recommendations provided by NCDEQ's 2021 Draft Environmental Justice Report: University of North Carolina at Chapel Hill. The following activities were conducted to engage community stakeholders in the permitting process as outlined in the Final Hearing Officer's Report¹¹:

- Public comment period and public hearing noticed on DAQ website
- Press release issued

¹¹ University of North Carolina at Chapel Hill Title V Permit. NCDEQ. https://www.deq.nc.gov/about/divisions/air-quality-permitting/university-north-carolina-chapel-hill-unc-title-v-permit

- Public hearing noticed in News of Orange Newspaper
- Copies of the air quality permit application, permit applications' reviews, draft air permit, and draft Environmental Justice Report published
- Outreach emails concerning the draft permit, hearing, and comment period sent by DAQ to stakeholders

4. Geographic Area

NCDEQ defines a Potentially Underserved Community by examining the race/ethnicity and poverty criteria for each block group. The block group is then compared to both the county and the state and is classified by the Department as a Potentially Underserved Block Group if it meets the following criteria for race/ethnicity and poverty:

- Race/Ethnicity: Share of nonwhites and Hispanic or Latino (of any race) is over fifty percent OR
 Share of nonwhites and Hispanic or Latino (of any race) is at least ten percent higher than
 County or State share. AND
- **Poverty:** Share of population experiencing poverty is over twenty percent AND Share of households in poverty is at least five percent higher than the County or State share.

These selections occur on a block group level and this dataset is a selection of the 2022 ACS data from the data tables B03002—Hispanic or Latino Origin by Race—and S1701—Poverty Status in the Past 12 Months. Learn more about NC DEQ's Potentially Underserved Block Groups 2024 - Overview.

The UNC-CH Cogeneration Facility is in census tract 117 in Orange County and by NCDEQ's definition, is not located in a Potentially Underserved Community. 6 out of 24 block groups within a 1-mile radius of the facility are designated as Potentially Underserved Communities. According to the NC Department of Commerce 2024 County Tier Designations for County Distress Rankings, Orange County is a Tier 3 county (on a scale of Tiers 1-3 with Tier 1 being the most distressed), which is categorized as least distressed, and has an economic distress rank of 87 out of 100 (with a rank of 1 being most economically distressed and 100 being least economically distressed).

County tiers in the state are calculated by the NC Department of Commerce using four factors: average unemployment rate, median household income, percentage growth in population, and adjusted property tax base per capita. Tier 1 encompasses the 40 most distressed counties, Tier 2 encompasses the next 40, and Tier 3 encompasses the 20 least distressed counties. Visit the NC Department of Commerce's County Distress Rankings for more details on county tier calculations.

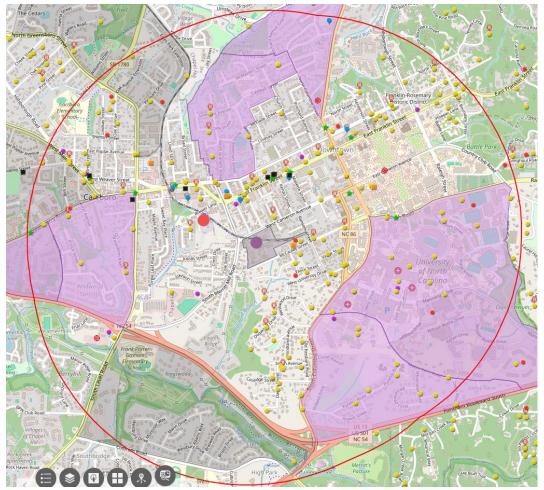
According to EPA's EJScreen, the project area is in the 48th percentile for broadband internet gaps (See Appendix C). This means 52% of areas in the state have more broadband internet gaps, meaning the project area may have sufficient internet access.

Demographics for the project area and census tracts intersecting the project area were analyzed for this report. **Table 1**, **Figure 1**, and **Figure 2** summarize the geographic area and census tracts within a one-mile radius of the UNC-CH Cogeneration Facility.

Table 1. Geographic area summary of the facility

GEOGRAPHIC AREA SUMMARY			
Facility Address	575 W Cameron Ave CB #1858		
	Chapel Hill, NC 27516		
Geographic Coordinates	35.907072, -79.062222		
Located in a PUC (Yes/No)	No		
County	Orange County		
2024 County Tier for County Distress	Tier 3		
Rankings			
2024 Economic Distress Ranking out of	87		
100			
Census Tract with the facility	117		
	107.05		
	107.07		
	107.08		
	107.09		
	107.10		
Census Tracts within a one-mile radius of	113		
facility	114		
ladiney	115		
	116.01		
	116.02		
	118		
	122.01		
	122.02		
Presence of State- or Federally	The Occaneechi Band of the Saponi		
recognized Tribes or Urban Indian	Nation State Designated Tribal Statistical		
Organizations	Area is within Orange County.		

Figure 1. The UNC-CH Cogeneration Facility with a one-mile radius in the DEQ Community Mapping System



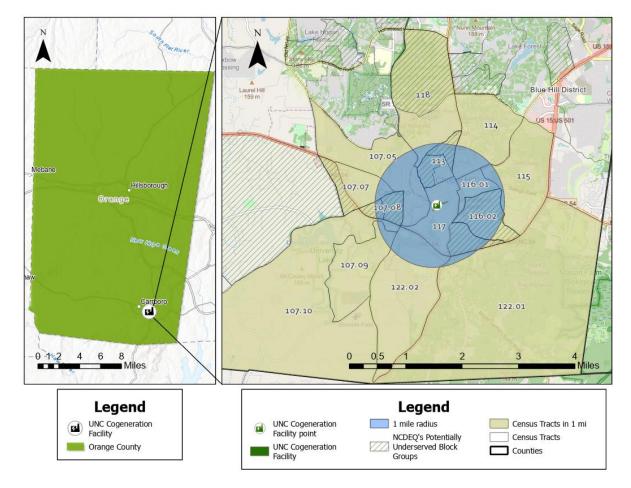


Figure 2. Census tracts within a one-mile radius of the UNC-CH Cogeneration Facility

5. Sociodemographic Analysis

Using standard environmental justice guidelines from the U.S. Environmental Protection Agency (EPA) and National Environmental Policy Act (NEPA) documentation, the following conditions are highlighted as communities with the potential for EJ concerns:

- 1. A 10% or more difference when compared to the county or state for race and ethnicity, age and sex, disability, and educational attainment (up to high school or equivalent level);
- 2. A 50% or more population of color;
- 3. Share of population experiencing poverty is 20% or more;
- 4. Percentage increase of 5% or more compared to the county or state average for poverty;
- 5. At least 5% of the population or 1,000 people (whichever is smaller) speaks English less than very well.

The U.S. Census Bureau uses and provides margins of error which is used as an indicator of potential sampling errors and relative reliability. A larger margin of error corresponds to a larger degree of uncertainty. Estimates and margins of error and DEQ calculated confidence intervals for sociodemographic indicators are provided in Appendix C as available through the U.S. Census Bureau.

5.1 Race and Ethnicity

Potential for EJ Concerns

- The project area and census tracts 107.07, 107.08, 113, and 116.02 had an overall people of color population greater than 10% higher when compared to the county or state.
- The project area and census tracts 107.08, 107.09, 113, 114, and 116.02, had an overall Black or African American population greater than 10% higher when compared to the county or state.
- Census tracts 107.07, 107.08, and 115 had an overall Hispanic or Latino population greater than 10% higher when compared to the county or state.
- The average of the census tracts within a 1-mile radius and census tracts 107.05, 114, 116.01, and 122.02 had an overall American Indian or Alaska Native population greater than 10% higher when compared to the county or state.
- Orange County, the project area, the average of the census tracts within a 1-mile radius and census tracts 117, 107.07, 107.08, 107.09, 107.10, 113, 114, 115, 116.01, 116.02, 118, and 122.02 had an overall Asian population greater than 10% higher when compared to the county or state.
- Orange County, the project area, and census tracts 117, 114, 116.02, and 122.02 had a
 population identifying as "some other race" greater than 10% higher when compared to the
 county or state.
- Census tracts 117, 107.10, 113, 114, 118, and 122.02 had a population identifying as "two or more races" greater than 10% higher when compared to the county or state.

Results

Table 2. Race & Ethnicity percentage comparisons to the county and state

RACE & ETHNICITY (%)				
	NORTH CAROLINA (n=2672)	ORANGE COUNTY (n=42)	PROJECT AREA	CENSUS TRACTS WITHIN 1-MILE (n=14)
White (Not Hispanic)	61.66	68.5	64.99	69.66
Black or African American	20.65	10.64	15.18 [†]	11.64
Hispanic or Latino	10.04	8.73	5.21	5.68
American Indian or Alaska Native	0.87	0.31	0.17	0.43 [†]
Asian	3.08	7.79*	11.51*†	9.53*†
Native Hawaiian or Other Pacific Islander	0.06	0.02	0.00	0.00
Some other Race	0.37	0.47*	0.42*	0.29
Two or More Races	3.27	3.54	2.51	2.78
Total Population	10,470,214	145,919	25,047	49,402
Source: US Census Bureau, 2022 American Community Survey (ACS) 5-year estimate				

All **bolded*** cells indicate a percentage increase of 10% or more for non-white populations in the county or group of census tracts compared to the **state**.

All cells **bolded**[†] indicate a percentage increase of 10% or more for non-white populations in the group of census tracts when compared to the **county**.

Table 3. Population of color percentage comparisons to the county and state

POPULATION OF COLOR (%)				
	NORTH CAROLINA (n=2672)	ORANGE COUNTY (n=42)	PROJECT AREA	CENSUS TRACTS WITHIN 1-MILE (n=14)
Population of Color	38.34	31.5	35.01 [†]	30.34
Total Population	10,470,214	145,919	25,047	49,402

Source: US Census Bureau, 2022 American Community Survey (ACS) 5-year estimate

All **bolded*** cells indicate a percentage increase of 10% or more for non-white populations in the county or group of census tracts compared to the **state**.

All cells **bolded**[†] indicate a percentage increase of 10% or more for non-white populations in the group of census tracts when compared to the **county**.

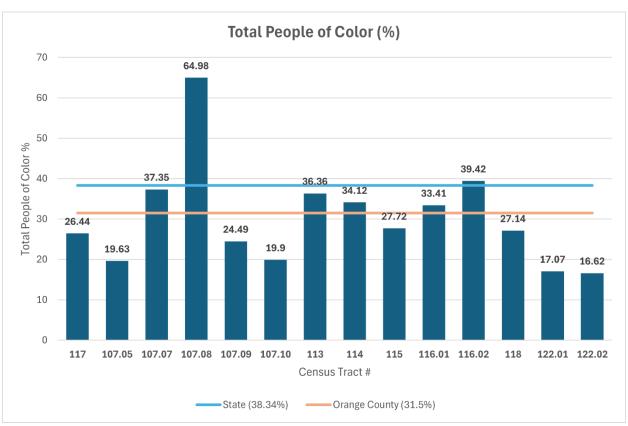


Figure 3. Population of color percentage comparisons to the county and state

5.2 Age and Sex

Potential for EJ Concerns

- Census tracts 107.08, 118, and 122.02 have a population of individuals who are under 5 years old that is greater than 10% higher when compared to the state or county.
- Census tract 122.01 has a population of individuals who are 65 years old and over that is greater than 10% higher when compared to the state or county.
- The overall median age of census tract 122.01 is greater than 10% higher than the state or county average.
- Census tracts 107.08, 114, 116.01 has a total female population that is greater than 10% higher than the state or county average.
- The median age for females in census tracts 107.10, 122.01, and 122.02 is greater than 10% higher than the state or county average.
- The median age for males in census tract 115 and 122.01 is greater than 10% higher than the state and county averages.

Results

Table 4. Median Age & Sex for North Carolina and Orange County

	MEDIAN AGE & SEX								
NORTH CAROLINA (n=2672) ORANGE COUNTY (n=42)						TRACTS W			
	Male	Female	Both	Male	Female	Both	Male	Female	Both
Median Age	37.7	40.4	39.1	36.1	36.3	36.2	30.74	29.61	29.54
Total (%)	49.01	50.99		47.9	52.1		46.31	53.69	

Source: US Census Bureau, 2022 American Community Survey (ACS) 5-year estimate

All **bolded*** cells indicate a percentage increase of 10% or more for populations in the county or group of census tracts compared to the **state**.

All cells **bolded**[†] indicate a percentage increase of 10% or more for populations in the group of census tracts when compared to the **county**.

Table 5. Age percentage comparisons to the county and state

		AGE (%)		
	NORTH CAROLINA (n=2672)	ORANGE COUNTY (n=42)	PROJECT AREA	CENSUS TRACTS WITHIN 1-MILE (n=14)
Below 5 Years Old	5.63	4.21	2	2.94

Above 65 Years	16.69	15 20	_	10.58
Old	10.09	15.38	5	10.58

Source: US Census Bureau, 2022 American Community Survey (ACS) 5-year estimate

All **bolded*** cells indicate a percentage increase of 10% or more in the group of census tracts compared to the **state**.

All cells **bolded**[†] indicate a percentage increase of 10% or more in the group of census tracts when compared to the **county**.

5.3 Disability

Potential for EJ Concerns

• The population living with a disability in census tracts 107.07, 107.08, 107.09, 107.10, 113, and 122.01 was greater than 10% higher when compared to the state or county.

Results

Table 6. Disability percentage comparisons to the county and state

DISABILITY (%)					
	NORTH CAROLINA (n=2672)	ORANGE COUNTY (n=42)	CENSUS TRACTS WITHIN 1-MILE (n=14)		
Population with a Disability	13.33	8.3	7.45		
Type of Difficulty					
Hearing	27.69	26.61	29.72		
Vision	18.82	15.39	14.25		
Cognitive	38.09	37.27	48.15*†		
Ambulatory	50.82	42.65	34.64		
Self-care	18.52	13.62	18.62 ⁺		
Independent Living	34.07	31.26	31.32		

Source: US Census Bureau, 2022 American Community Survey (ACS) 5-year estimate

All **bolded*** cells indicate a percentage increase of 10% or more in the group of census tracts compared to the **state**.

All cells **bolded**[†] indicate a percentage increase of 10% or more in the group of census tracts when compared to the **county**.

5.4 Limited English Proficiency

Potential for EJ Concerns

• The population of Spanish-speaking persons with limited-English proficiency in tracts 107.08 and 115 is greater than 5% higher when compared to the state or county.

- The population of French, Haitian, or Cajun-speaking households with limited-English proficiency in tracts in Orange County, the census tracts within a 1-mile radius, and census tracts 107.07, 107.10, and 116.02 is greater than 5% higher when compared to the state or county.
- The population of German or other West Germanic language-speaking households with limited-English proficiency in tracts in Orange County, the census tracts within a 1-mile radius, and census tracts 117, 116.01, 116.02 and 122.02 is greater than 5% higher when compared to the state or county.
- The population of Russian, Polish, or other Slavic language-speaking households with limited-English proficiency in tracts in the census tracts within a 1-mile radius, and census tracts 114, 116.01, and 122.01 is greater than 5% higher when compared to the state or county.
- The population of Chinese (including Mandarin, Cantonese) language-speaking households with limited-English proficiency in Orange County, the census tracts within a 1-mile radius, and census tracts 117, 107.07, 114, 115, 116.02, 118, and 122.02 is greater than 5% higher when compared to the state or county.
- The population of Vietnamese-speaking households with limited-English proficiency in tracts in census tract 107.10 is greater than 5% higher when compared to the state or county.
- The population of Korean-speaking households with limited-English proficiency in Orange County, the census tracts within a 1-mile radius, and census tracts 107.07, 107.08, and 116.02 is greater than 5% higher when compared to the state or county.
- The population of other Asian and Pacific Island language-speaking households with limited-English proficiency in tracts in Orange County and census tracts 107.05, 107.07, 113, 116.02, 118, is greater than 5% higher when compared to the state or county.
- The population of other Indo-European language-speaking households with limited-English proficiency in Orange County, the census tracts within a 1-mile radius, and census tracts 107.07, 107.08, 113, 115, 118, and 122.02 is greater than 5% higher when compared to the state or county.
- The population of other Arabic-speaking households with limited-English proficiency in Orange County and census tracts 107.10 and 116.02 is greater than 5% higher when compared to the state or county.

Results

Table 7. Limited English Proficiency percentage comparisons to the county and state

LIMITED ENGLISH PROFICIENCY (%)					
	NORTH CAROLINA (n=2672)	ORANGE COUNTY (n=42)	CENSUS TRACTS WITHIN 1-MILE (n=14)		
Speak only English	87.69	83.93	85.15		
Spanish	3.18	2.66	1.01		
French, Haitian, or Cajun	0.10	0.16*	0.15*		
German or other West Germanic languages	0.04	0.06*	0.09*†		
Russian, Polish, or other Slavic languages	0.09	0.03	0.04 [†]		

Chinese (including Mandarin, Cantonese)	0.16	0.81*	0.45*
Vietnamese	0.15	0.03	0.02
Korean	0.08	0.36*	0.31*
Tagalog (including Filipino)	0.04	0	0.00
Other Asian and Pacific Island Languages	0.27	0.48*	0.21
Other Indo-European Languages	0.27	0.31*	0.54*†
Arabic	0.11	0.2*	0.07
Total Population 5 Years and over	9,880,447	139,773	47,948

Source: US Census Bureau, 2022 American Community Survey (ACS) 5-year estimate

All **bolded*** cells indicate a percentage increase of 5% or more in the group of census tracts compared to the **state**.

All cells **bolded**[†] indicate a percentage increase of 5% or more in the group of census tracts when compared to the **county**.

5.5 Educational Attainment

The project is sited within the University of North Carolina campus and the student population is heavily reflected in the nearby census tracts. The population enrolled in college or graduate school in Orange County, the census tracts within a 1-mile radius, and census tracts 117, 107.05, 107.07, 107.08, 107.09, 113, 114, 115, 116.01, 116.02, 118, and 122.02 is greater than 10% higher when compared to the state or county.

Potential for EJ Concerns

- The population 18-24 years old with less than a high school education in census tracts 107.09, 107.10, and 118 is greater than 10% higher when compared to the state or county.
- The population 25 and over with less than a 9th grade education in census tracts 107.08 and 113 is greater than 10% higher when compared to the state or county.
- The population 25 and over with a 9th –12th grade education and no diploma in census tract 113 is greater than 10% higher when compared to the state or county.

Results

Table 8. College or graduate school enrollment percentage comparisons to the county and state

COLLEGE OR GRADUATE SCHOOL ENROLLMENT (%)			
	NORTH CAROLINA (n=2672)	ORANGE COUNTY (n=42)	CENSUS TRACTS WITHIN 1- MILE (n=14)
Population enrolled in college or graduate school	9.60	29.59*	42.83*†

Total Population	10,470,214	145,919	49,402
Source: US Census Bureau, 2022 American Community Survey (ACS) 5-year estimate			
All bolded* cells indicate a percentage increase of 10% or more in the county or group of census tracts compared to the state .			

All cells **bolded**[†] indicate a percentage increase of 10% or more in the group of census tracts when compared to the **county**.

Table 9. Educational Attainment percentage comparisons to the county and state (Populations between 18-24 years)

EDUCATIONAL ATTAINMENT (%)				
	NORTH CAROLINA (n=2672)	ORANGE COUNTY (n=42)	CENSUS TRACTS WITHIN 1- MILE (n=14)	
Less than High School Graduate	11.67	4.63	1.47	
High school graduate (includes equivalency)	33.43	13.98	8.39	
Population age 18-24 years	1,014,214	25,409	18,937	
Source: US Census Bureau, 2022 American Community Survey (ACS) 5-year				

Source: US Census Bureau, 2022 American Community Survey (ACS) 5-year estimate

All **bolded*** cells indicate a percentage increase of 10% or more in the county or group of census tracts compared to the **state**.

All cells **bolded**[†] indicate a percentage increase of 10% or more in the group of census tracts when compared to the **county**.

Table 10. Educational Attainment percentage comparisons to the county and state (Populations age 25 years and over)

EDUCATIONAL ATTAINMENTS (%)				
	NORTH CAROLINA (n=2672)	ORANGE COUNTY (n=42)	CENSUS TRACTS WITHIN 1-MILE (n=14)	
Less than 9th grade	4.00	2.98	1.98	
9th to 12th grade, no diploma	6.58	3.6	2.74	
High school graduate (includes equivalency)	25.16	12.65	7.46	

7 172 112		
7,172,112	92,484	24,211
Source: US Census Bureau, 2022 American Community Survey (ACS) 5-year estimate		
All bolded* cells indicate a percentage increase of 10% or more in the county or group of census tracts compared to the state .		
	2022 American Co percentage increas	2022 American Community Survey (A

All cells **bolded**[†] indicate a percentage increase of 10% or more in the group of census tracts when compared to the **county**.

5.6 Poverty and Low-income

The project is sited within the University of North Carolina campus and the student population is heavily reflected in the nearby census tracts. US Census Bureau researchers and UNC demographic studies have found that the inclusion of students housed off-campus has a statistically significant impact on local poverty rate estimates, in some cases increasing the rate by 10 or more percentage points.^{12,13}

Potential for EJ Concerns

- The project area, census tracts within a 1-mile radius and census tracts 117, 107.05, 107.07, 107.08, 107.09, 113, 114, 116.01, 116.02 and 118 have a population below 200% of the poverty level greater than 10% higher when compared to the state or county.
- Census tracts within a 1-mile radius and census tracts 117, 107.05, 107.07, 107.08, 107.09, 113, 114, 115, 116.01, 116.02, and 118 have a population below the poverty level greater than 10% higher when compared to the state or county.

Results

Table 11. Poverty percentage comparisons to the county and state

POVERTY (%)				
	NORTH CAROLINA (n=2672)	ORANGE COUNTY (n=42)	PROJECT AREA ¹⁴	CENSUS TRACTS WITHIN 1-MILE (n=14)
Below Poverty Level	13.54	12.28	***	22.16*†

¹² Small and Large College Towns See Higher Poverty Rates, US Census Bureau.

https://www.census.gov/library/stories/2018/10/off-campus-college-students-poverty.html

¹³ Impact of Off-Campus College Students on Local Poverty Rates, UNC Carolina Population Center. https://carolinademography.cpc.unc.edu/2015/03/09/impact-of-off-campus-college-students-on-local-poverty-rates/

¹⁴ The U.S. EPA's EJScreen ACS 2017-2021, 5-year estimates data reports the low-income population percentage for a one-mile radius. The agency defines low-income as the percent of a block group's population in households where the household income is less than or equal to twice the federal poverty level. Neither the "total population for whom poverty status is determined" nor population percentage for those "below poverty level" are reported for the one-mile radius EJScreen report.

Below 200% of the Poverty Level	31.99	24.8	52* †	34.66 [†]
Total Population for whom Poverty Status is Determined	10,186,155	134,428	25,047	8,606

Source: US Census Bureau, 2022 American Community Survey (ACS) 5-year estimate

All **bolded*** cells indicate a percentage increase of 5% or more in the group of census tracts compared to the **state**.

All cells **bolded**[†] indicate a percentage increase of 5% or more in the group of census tracts when compared to the **county**.

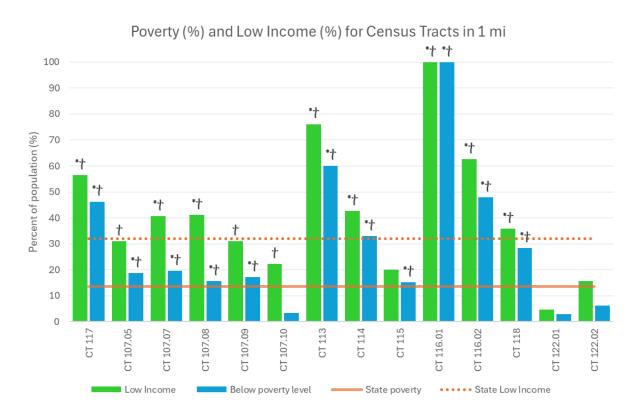


Figure 4. Poverty percentage comparisons to the county and state

5. Health & Cumulative Impacts

5.1 County Health Outcome Ranks

For this report, the Environmental Justice Program examined how sensitive populations (specifically the census tracts identified in Section 4) compared to the rest of the state's health outcomes and health factors. 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

(<u>www.countyhealthrankings.org</u>). This 2024 County Health Rankings National Data¹⁵ is based on health outcomes (such as lifespan and self-reported health status) and health factors (such as environmental, social, and economic conditions). **Figure 5 Figure 5** and **Figure 6** display rankings for all 100 counties in North Carolina on a scale from "least healthy" to "healthiest".

Rankings are provided as a z-score value between -2 (healthiest) and 2 (least healthy), which are sorted into ranges. Out of the 100 counties in the state, Orange County has a health outcome score of -1.06 and a health factors score of -1.04. The health outcome score for Orange County is within the two healthiest ranges for the state. The health factors score for Orange County is within the two healthy ranges for the state.

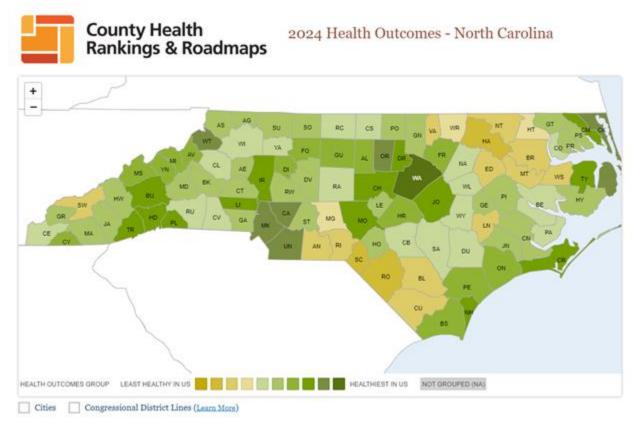


Figure 5. NC County Health Outcome Ranks for 2024

¹⁵ University of Wisconsin Population Health Institute. 2022 Environmental Justice Index. https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation.

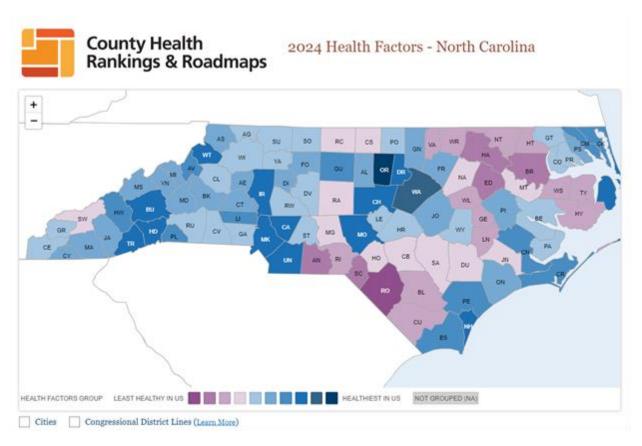


Figure 6. NC County Health Factors Ranks for 2024

5.2 CDC/ATSDR EJ Indexes

Cumulative impacts are the combined, environmental burdens, pre-existing health conditions, and social factors which may harm human health. At this time, there is no formal, standardized method to assess cumulative impacts. However, cumulative impacts that may affect public health and quality of life are a frequently raised concern among communities across the nation.

Environmental Justice Index (EJI) scores were sourced from the Centers for Disease Control and Prevention (CDC) and the Agency for Toxic Substances and Disease Registry (ATSDR; See Appendix E for more information on the CDC's EJI score and model).¹³ For EJI scores in **Table 12**, the NC Department of Health and Human Services NC Environmental Health Data Dashboard was referenced (See Appendix B).

The EJI delivers a single score ranging from 0.0 - 1.0 with a score of 1.0 representing a community with the highest environmental burdens for each census tract. The composite score is calculated from a variety of social, environmental, and health indicators.

According to the NC Environmental Health Data Dashboard, census tract 117 – where the UNC-CH Cogeneration Facility is located – has a EJI score of 0.38 (**Table 12** and **Figure 7**). This means 38% of census tracts in the state have less environmental burdens than census tract 117 and that 62% of census

¹⁶ Federal Health Agencies Unveil National Tool to Measure Health Impacts of Environmental Burdens. (2022). Centers for Disease Control and Prevention (CDC). https://www.cdc.gov/media/releases/2022/p0810-environmental-burdens.html.

tracts in the state have higher environmental burdens. Census tracts within a one-mile radius of the facility have scores ranging from 0.06 to 0.59 (**Table 12**). No census tracts within a mile of the facility are within the top 25^{th} percentile for EJI scores indicating higher environmental burdens.

Table 12. CDC/ATSDR Environmental Justice Index (EJI)

CDC/ATSDR Environmental Justice Index (EJI)			
Census Tract	Environmental Burden Rank	Social Vulnerability Index	EJI Rank
117	0.42	0.22	0.38
107.03	0.26	0.61	0.28
107.04	0.15	0.24	0.06
107.05	0.27	0.49	0.22
113	0.56	0.48	0.59
114	0.51	0.37	0.51
115	0.47	0.24	0.19
116.01	0.40	0.03	0.26
116.02	0.31	0.46	0.45
118	0.53	0.39	0.31
122.01	0.29	0.14	0.07
112.02	0.26	0.21	0.08

A *bolded value indicates that the census tract has a rank in the top 25th percentile.

Note: EJI data is available for 2010 decennial census tract boundaries and may differ slightly from the current 2020 decennial census tract boundaries.

Figure 8 displays the EJ Index generated using EJScreen and represents data from within the one-mile radius of the facility. The EJ Index combines data related to the listed environmental indicators and demographic data, in order from left to right in **Figure 8**: particulate matter, ozone, diesel particulate matter, air toxics cancer risk, air toxics respiratory hazards index (HI), toxic releases to the air, traffic proximity, lead paint, superfund proximity, Risk Management Program (RMP) facility proximity, hazardous waste proximity, underground storage tanks, and wastewater discharge. The EJ Index analyzes the relative potential environmental justice concern for the area as compared to the state, as well as the U.S., in the form of a percentile from 0 to 100. The higher the EJ Index, the higher the percentile, and the more vulnerable an area. More information on the EJScreen Environmental Justice Indexes can be found on EPA's website.¹⁷

The area within one-mile of the facility is in the top 25th percentile in the state for 7 out of the 13 EJ Indexes and the top 25th percentile in the nation for 1 out of 13 of the EJ Indexes. This means at least

¹⁷ EJScreen EJ Index Metadata: https://www.epa.gov/ejscreen/ej-and-supplemental-indexes-ejscreen#What.

75% of other areas in the state and nation have lower EJ Indexes compared to the area near the facility (**Figure 8**).

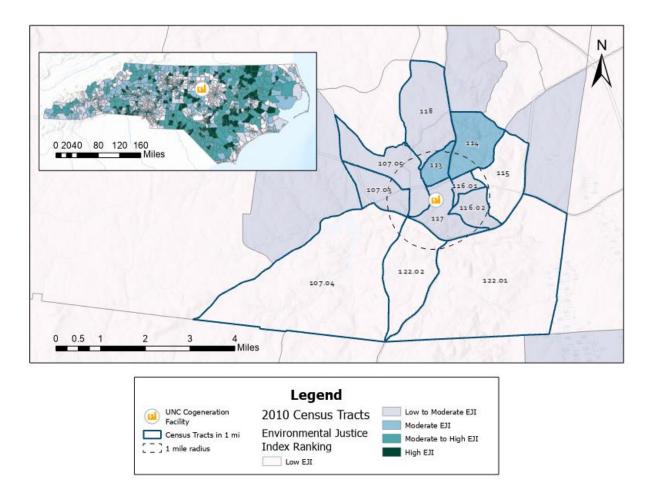


Figure 7. Census tracts within the one-mile radius and corresponding CDC Environmental Justice Index scores

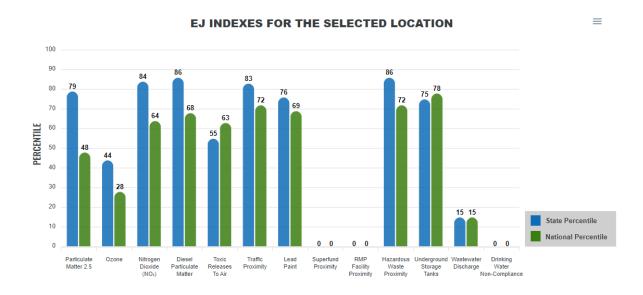


Figure 8. EJScreen Environmental Justice Indexes for a one-mile radius around the UNC-CH Cogeneration Facility

5.3 Local Industrial Sites

According to the DEQ Community Mapping System, there are a total of 9 permits and 183 incidents within the one-mile radius of UNC Cogeneration Facility as of October 8, 2024 (**Figure 9**; **Table 13**). Of those, 3 permits or incidents have been issued to the UNC-CH Cogeneration Facility: 1 Air quality permit, 1 NPDES Wastewater Discharge Permit, and 1 Inactive Hazardous Site.

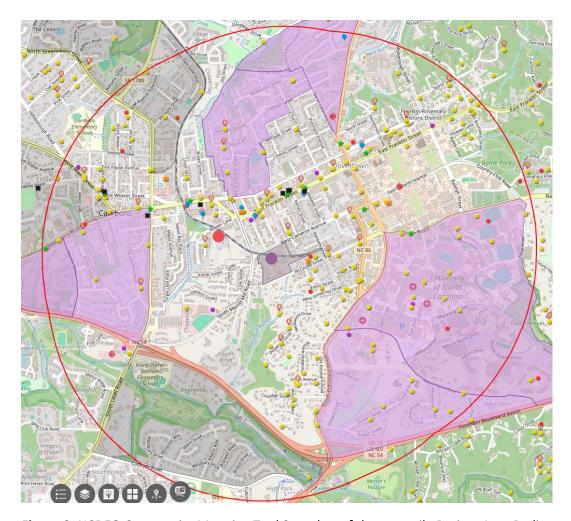


Figure 9. NCDEQ Community Mapping Tool Snapshot of the one-mile Project Area Radius

 Table 13. List of Permits, Incidents, and Sites within the one-mile Project Area Radius

List of Permits, Incidents, and Sites		
Туре	Quantity	Details
		2 Air Quality Permit Sites
Permits	9	2 NPDES Wastewater Treatment Facility Permits
		5 NPDES Stormwater Permits
Incidents		7 Contaminated Dry-Cleaning Sites
	183	10 Hazardous Waste Sites
incidents	103	155 Underground Storage Tank Incidents
		11 Above Ground Storage Tank Incidents
Sites and Active Facilities 17	7 Brownfield Program Sites	
	17	10 Underground Storage Tank Active Facilities

6. 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 healthy individuals aged between 18 and 64.

Within and near the one-mile radius surrounding the facility location, the following EPA EJScreen-identified and NCDEQ-identified sensitive receptors are listed below (*Table 14*; Figure 10):

Table 14. List of Sensitive Receptors within the One-Mile Project Area Radius

Sensitive Receptor Type	Name
	Afton Nature School
	Carrboro Elementary
	FGP Elementary
SCHOOLS & DAYCARES	Northside Elementary
SCHOOLS & DATCARLS	Spanish Academy for Fun, Inc.
	University of North Carolina at Chapel Hill
	University United Methodist Church Preschool
	Virtual Academy School
	Adelaide Walters Apartments
	CAC of Orange County
PUBLIC AND	First Baptist and Manley Estates
SUBSIDIZED HOUSING	Purefoy Road Group Home
	Town of Chapel Hill Department of Housing: Lindsay - North Columbia (29)
	Town of Chapel Hill Department of Housing: S. Estes – S. Roberson – CWW (3)
	North Carolina Cancer Hospital
	North Carolina Memorial Hospital
	Taylor Student Health Center
HOSPITALS	University of North Carolina Health Care Systems
	University of North Carolina Neurosciences Hospital
	University of North Carolina's Children's Hospital
	University of North Carolina's Women's Hospital
COMMUNITY CENTERS	Campus Y
COMMONT CLIVIERS	Carrboro Farmer's Market

	Davis Library
	Hargraves community center
	Lincoln Park
	Morehead Planetarium and Science Center
	Pine Knolls Community Center and Park
	Umstead Park
	Wilson Library
	Carrboro First Church of God
	Chabad of Durham/Chapel Hill
	Chapel Hill Chinese Christian Church
	Chapel Hill Christian Church
	Chapel of the Cross
	Community Church of Chapel Hill Unitarian Universalist
	First Baptist Church
	Holy Trinity Lutheran Church
	Iglesia Adventista del Séptimo Día Hispana de Carrboro
	Love Chapel Hill
PLACES OF WORSHIP	New Vision Church
PLACES OF WORSHIP	Newman Catholic Student Center
	O'Bryant Chapel AME Zion Church
	Presbyterian Campus Ministry
	Second Baptist Church
	St. Joseph Christian Methodist Church
	St. Paul African Methodist Episcopal Church
	University Baptist Church
	University Presbyterian Church
	University United Methodist Church
	Village West Club House
	Wesley Campus Ministry

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

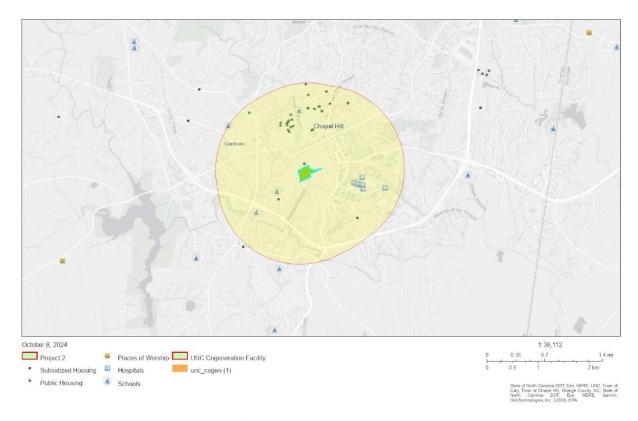


Figure 10. EPA EJScreen Snapshot of Potential Sensitive Receptors within the one-mile Project Area Radius

8. Conclusion

If an affected community has a large percentage of LEP individuals (typically greater than 5%), the Department will implement appropriate LEP measures. These measures may include having a bilingual DEQ staff member or interpreter present at public hearings or information sessions, disseminating Department information sheets or public notices in multiple languages, distributing media notices in different languages, or communicating with community organizations and leaders to determine other appropriate measures to reach LEP individuals.

Key Findings

Based on this report's analysis and using NCDEQ Potentially Underserved Block Groups (on the basis of Race/Ethnicity and Poverty) and standard EJ guidelines established by the U.S. EPA and in the NEPA documentation, the potential environmental justice concerns for particular populations within a one-mile radius of the UNC-CH Cogeneration Facility have been identified as follows:

Race and Ethnicity:

- Total people of color populations in the project area and census tracts 107.07, 107.08, 113, and 116.02.
- o The following race/ethnic population categories:
 - Black or African American
 - Hispanic or Latino

- American Indian or Alaskan Native
- Asian
- Some other race
- Two or more races

• Tribal Communities:

- The Occaneechi Band of the Saponi Nation resides within Orange County.
- The University of North Carolina has a land acknowledgement for historically aboriginal territories as homelands for the following Indigenous peoples: Enos, Occaneechis, Shakoris and Sissipahaws.¹⁸
- Age and Sex: Populations of individuals 65 years or older in census tracts 122.01 and populations of individuals 5 years or younger in census tracts 107.08, 118, and 122.02.
- **Limited English Proficiency:** Households that speak the following language categories with limited English-speaking proficiency:
 - Spanish
 - o French, Haitian, or Cajun
 - German or other West Germanic languages
 - o Russian, Polish or other Slavic languages
 - Chinese (including Mandarin, Cantonese)
 - Vietnamese
 - o Korean
 - Other Asian and Pacific Island languages
 - Other Indo-European languages
 - Arabic
- **Disability:** Populations living with a disability in census tracts 107.07, 107.08, 107.09, 107.10, 113, and 122.01.
- **Education:** Populations of individuals at least 18 years and older whose highest educational attainment is less than a high school equivalency in census tracts 107.08, 107.09, 107.10, 113, and 118.
- **Poverty:** Populations experiencing poverty below 200% of the poverty level or below the poverty level in the project area and/or census tracts 117, 107.05, 107.07, 107.08, 107.09, 113, 114, 115, 116.01, 116.02, and 118.

Recommendations

Based on the sociodemographic indicator analysis, the Environmental Justice Program recommends the following outreach and engagement for the UNC-CH Cogeneration Facility Title V permit application public hearings:

- Public notice and one-page fact sheet with public comment and public hearing information with translation available on request.
- Consultation with community leaders about other outreach recommendations including leaders and representatives of the Occaneechi Band of the Saponi Nation.

¹⁸ RECOGNITION OF INDIGENOUS PEOPLES' DAY, 2021; https://americanindiancenter.unc.edu/event/indigenous-peoples-day/

- Additional tribal outreach may be performed in accordance with the University of North Carolina's tribal land acknowledgement.
- Mailed or emailed public notices and one-page fact sheets to local sensitive receptors and the Town of Chapel Hill.
- Evaluate options to distribute one-page fact sheets in high-traffic community areas with translation available on request.
- Arrange a voicemail line to receive public comments.

Appendix

Appendix A: U.S. Census Data Sources

All data for this report accessed from data.census.gov and collected at a census tract level for all tracts in North Carolina. Data is from 2022 American Community Survey (ACS) 5-year estimates.

Dataset ID	Name
B03002	"Hispanic or Latino Origin by Race"
S0101	"Age and Sex"
S1810	"Disability Characteristics"
C16001	"Language Spoken at Home for the Population 5 Years and Older"
S1501	"Educational Attainment"
S1701	"Poverty Status in the Last 12 Months"
S1401	"School Enrollment"

Appendix B: Additional Data Sources

DATA SOURCES							
Organization	Source	Date Accessed	Year Published				
NC Department of Commerce	2024 County Distress Rankings	9/30/24	2024				
University of Wisconsin Population Health Institute	2024 County Health Rankings National Data	9/30/24	2024				
NC Department of Health and Human Services	Environmental Health Data Dashboard	9/30/24	2024				
CDC/ATSDR	Environmental Justice Index (EJI)	7/2024	2022				

Appendix C: Sociodemographic Indicators and EPA EJScreen ACS Report

The tables below display estimates and margins of error as available from the U.S. Census Bureau 2022 ACS 5-year estimates and calculations performed for each sociodemographic indicator. Calculations are displayed as averages with upper and lower confidence intervals for state and county estimates and margin or error (MOE) for individual tracts.

CATEGORY	INDICATOR			N	IORTH CAROLI	NA (n=2,672)			
		SUM	PERCENT	AVG	LOWER CI	UPPER CI	STD DEV	95% CI	MOE (+/-)
	Total Population	10,470,214		3918.49326	3852.02519	3984.96134	1753.00533	66.46807	
	White	6,455,988	61.66	2416.163174	2361.887946	2470.438402	1431.435518	54.27523	3456
	Black or African American	2,161,841	20.65	809.0722305	775.8734836	842.2709774	875.5719232	33.19875	5845
	American Indian and Alaska Native	91,599	0.87	34.28106287	26.13296856	42.42915718	214.8949368	8.148094	1042
RACE & ETHNICITY	Asian	322,895	3.08	120.8439371	109.6665866	132.0212876	294.7874604	11.17735	2347
RACE & ETHNICITY	Native Hawaiian and Other Pacific Islander	6,114	0.06	2.288173653	1.77853679	2.797810516	13.44098108	0.509637	587
	Some other race alone (Not Hispanic or Latino)	38,864	0.37	14.54491018	13.07014422	16.01967614	38.89495196	1.474766	2626
	Two or more races (Not Hispanic or Latino)	341,905	3.27	127.9584581	123.0807372	132.836179	128.6432734	4.877721	6989
	Hispanic or Latino	1,051,008	10.04	393.3413174	376.6636128	410.019022	439.8518391	16.6777	247
	People of Color (sum of non-White population)	4,014,226	38.34	1502.33009					***
	Total Population 5 Years and over	9,880,447		3697.772081	3635.535552	3760.00861	1641.404056	62.23653	775
	Speak only English	8,663,829	87.69	3242.450973	3187.830314	3297.071632	1440.545807	54.62066	11,009
	Spanish	313,821	3.18	117.447979	110.2908149	124.6051431	188.7604958	7.157164	4,686
	French, Haitian, or Cajun	10,083	0.10	3.773577844	2.883989725	4.663165963	23.46168015	0.889588	1,455
	German or other West Germanic languages	3,513	0.04	1.314745509	0.939553079	1.689937938	9.895191481	0.375192	662
LEP	Russian, Polish, or other Slavic languages	8,945	0.09	3.347679641	2.738224441	3.957134841	16.07355434	0.609455	1,149
(Speak English Less	Chinese (including Mandarin, Cantonese)	15,636	0.16	5.851796407	4.991170775	6.712422039	22.69783385	0.860626	1,214
than Very well)	Vietnamese	14,599	0.15	5.46370	4.31328	6.61411	30.34061	1.15041	1,532
	Korean	7,707	0.08	2.884356287	2.36592	3.40279	13.67304696	0.51844	741
	Tagalog (including Filipino)	4,035	0.04	1.51010479	1.15793	1.86228	9.288245414	0.35218	641
	Other Asian and Pacific Island Languages	26,509	0.27	9.921032934	8.66594264	11.17612323	33.10130432	1.25509	1,677
than Very well) AGE & SEX	Other Indo-European Languages	26,324	0.27	9.851796407	8.458949017	11.2446438	36.7344609	1.392847	1,878
	Arabic	10,932	0.11	4.091317365	3.302435404	4.880199326	20.80569182	0.788882	1,510
	Under 5 years	589,767	5.63	220.7211826	214.5934334	226.8489318	161.6110753	6.127749	773
	65 years and over	1,747,925	16.69	654.1635479	639.9581533	668.3689425	374.6480176	14.20539	969
	Median age (years)			39.1					
AGE & SEX	Male Total population	5,131,370	49.01	1920.422904	1886.507503	1954.338305	894.4726967	33.9154	1,483
	Male Median age (years)			37.7					
LEP (Speak English Less than Very well) AGE & SEX POVERTY EDUCATION (>25 yrs for most)	Female Total population	5,338,844	50.99	1998.070359	1963.49348	2032.647238	911.9182929	34.57688	1,484
	Female Median age (years)			40.4					
	Population for whom poverty status is determined	10,186,155	97.29	3812.183757	3745.869494	3878.49802	1748.948745	66.31426	2,180
POVERTY	Below poverty level: 200 percent below poverty level	3,258,214	31.99	1203.820734	1175.421759	1232.219709	748.9844385	28.39897	27,203
	Below poverty level: Population for whom poverty status is determin	1,379,672	13.54	508.0157186	492.6340158	523.3974214	405.671549	15.3817	18,811
	Population 18 - 24 years	1,014,214	9.69	379.5711078	361.1360329	398.0061827	486.2000986	18.43507	1,543
	18 to 24 years: Less than high school graduate	118,402	11.67	44.31212575	42.33452473	46.28972677	52.15654473	1.977601	3,019
	18 to 24 years: High school graduate (includes equivalency)	339,085	33.43	126.903069	119.5512578	134.2548799	193.8940453	7.351811	5,437
FDUCATION	Population 25 and Over	7,172,112	68.50	2684.173653	2639.509123	2728.838183	11 STD DEV 12 1753.00533 140 1753.00533 140 1753.00533 140 1753.00533 140 1753.00533 140 1875.5719232 148 124.8949368 140 188.89495196 151 1641.404056 152 1440.545807 151 1641.404056 152 1440.545807 151 168.7604958 152 1440.545807 151 168.7604958 152 146.7545807 151 168.7604958 152 146.7545807 151 168.7604958 152 158.7604958 153 13.67304696 153 157304696 153 157304696 154 157304696 155 1574.6480176 155 1574.6480176 156 1574.6480176 157 1574.6480176 158 158 11.9182929 158 168.51176 159 1748.948745 159 1748	44.66453	1,556
	Above 25: Less than 9th grade	286,553	4.00	107.2428892	102.8269748	111.6588036	116.4637539	4.415914	4,770
(223 yrs for filost)	Above 25: 9th to 12th grade, no diploma	471,586	6.58	176.4917665	171.0916177	181.8919153	142.4216009	5.400149	7,113
(Speak English Less than Very well) AGE & SEX POVERTY EDUCATION	Above 25: High school graduate (includes equivalency)	1,804,406	25.16	675.3016467	660.4582288	690.1450646	391.4750167	14.84342	11,613
	Above 25: Bachelor's degree or higher	1,533,552	21.38	909.0157186	880.2298884	937.8015488	759.1872319	28.78583	11,611
	Population enrolled in college or graduate school	688,525	9.60	257.681512	241.7886315	273.5743925	419.1531683	15.89288	6,711
	Total civilian noninstitutionalized population	10,256,318	97.96	3839.498503	3773.624144	3905.372862	1737.34688	65.87436	2,340
	Total civilian noninstitutionalized population with a disability	1,367,517	13.33	511.7952844	501.1842797	522.4062891	279.8508575	10.611	10,021
	Hearing difficulty	378,648	27.69	141.7095808	137.9580511	145.4611105	98.94150727	3.75153	4,589
DISABILITY	Vision difficulty	257,344	18.82	96.31137725	93.17967411	99.44308039		3.131703	4,748
DISABILIT	Cognitive difficulty	520,841	38.09	194.925524	189.8410036	200.0100444	134.0973288	5.08452	7,018
	Ambulatory difficulty	694,988	50.82	260.1002994	253.885311	266.3152878	163.9118903	6.214988	6,760
	Self-care difficulty	253,304	18.52	94.7994012	91.82191355	97.77688885	78.52719874	2.977488	3,803
	Independent-living difficulty	465,954	34.07	174.383982	169.8591032	178.9088608	119.3375405	4.524879	5,844
Source: US Census Bure	eau, 2022 American Community Survey (ACS) 5-year estimate	•		_	_				

				0	RANGE CO	UNTY (n=4	12)		
CATEGORY	INDICATOR	SUM	PERCENT	AVG	LOWER CI	UPPER CI	STD DEV	95% CI	MOE (+/-
	Total Population	145,919		3474.262	3095.527	3852.997	1,252.31	378.7353	
	White	99,949	68.50*	2379.738	2098.278	2661.198	930.6642	281.4598	289
	Black or African American	15,521	10.64	369.5476	288.5288	450.5664	267.8937	81.01883	525
	American Indian and Alaska Native	456	0.31	10.85714	2.527628	19.18666	27.54205	8.329515	149
	Asian	11,368	7.79*	270.6667	178.3856	362.9478	305.1331	92.28111	314
RACE & ETHNICITY	Native Hawaiian and Other Pacific Islander	34	0.02	0.809524	-0.30666	1.925703	3.690714	1.116179	43
	Some other race alone (Not Hispanic or Latino)	691	0.47*	16.45238	8.78655	24.11821	25.34754	7.665831	312
	Two or more races (Not Hispanic or Latino)	5,160	3.54	122.8571	93.48808	152.2262	97.11059	29.36906	645
	Hispanic or Latino	12,740	8.73	303.3333	209.5943	397.0724	309.9539	93.73906	
	People of Color (sum of non-White population)	45,970	31.50						
	Total Population 5 Years and over	139,773		3327.929					22
	Speak only English	117,318	83.93	2793.286	2483.429	3103.143	1.024.56	309.8572	1,140
	Spanish	3,723	2.66	88.64286	45.54519	131.7405	-		615
	French, Haitian, or Cajun	229	0.16*	5.452381	-0.10378	11.00854		5.556157	173
	German or other West Germanic languages	80	0.06*	1.904762	0.507142	3.302382			52
LEP	Russian, Polish, or other Slavic languages	42	0.03	1	-0.04338	2.043377			35
(Speak English Less	Chinese (including Mandarin, Cantonese)	1,129	0.81*	26.88095	10.24096	43.52094			303
(Speak English Less than Very well)	Vietnamese	39	0.03	0.928571	-0.15342	2.01056			48
	Korean	510	0.36*	12.14286	3.98928	20.29643			232
	Tagalog (including Filipino)	1	0.00	0.02381	-0.02286	0.07048			2
	Other Asian and Pacific Island Languages	676	0.48*	16.09524	5.873402	26.31707	33.79913	10.22184	249
	Other Indo-European Languages	439	0.31*	10.45238	4.524425	16.38034	19.60115	5.927956	171
	Arabic	279	0.20*	6.642857	-1.3374	14.62311	26.38719	7.980253	283
	Under 5 years	6,146	4.21	146.3333	112.5991	180.0676		33.73423	22
	65 years and over	22,449	15.38	534.5	457.265	611.735	255.3823		39
	Median age (years)			36.2					0.3
AGE & SEX	Male Total population	69,888	47.90	1664.0	1487.482	1840.518	583.6664	176,5177	44
	Male Median age (years)			36.1					0.2
	Female Total population	76,031	52.10	1810.3	1601.978	2018.546	688,7032	208,2838	44
	Female Median age (years)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		36.3					0.4
	Population for whom poverty status is determined	134,428	92.13	3200.667	2822.683	3578.65	1,249.83	377.9838	259
POVERTY	Below poverty level: below 200 poverty level	33,338	24.80	793.7619	633.4361	954.0877			1,797
	Below poverty level: Population for whom poverty status is deter	16,503	12.28	392.9286	277.7441	508.113	380.8645	115.1845	1,194
	Population 18 - 24 years	25,409	17.41*	604.9762					66
	18 to 24 years: Less than high school graduate	1,176	4.63	28	14.41752	41.58248	44.91129	13.58248	299
	18 to 24 years: High school graduate (includes equivalency)	3,553	13.98	84.59524	51.24138	117.9491	110.2866	33.35385	635
	Population 25 and Over	92,484	63.38	2202					67
EDUCATION	Above 25: Less than 9th grade	2,754	2.98	65.57143	37.55125	93.59161	92.65044	28.02018	563
(≥25 yrs for most)	Above 25: 9th to 12th grade, no diploma	3,333	3.60	79.35714	55.77687	102.9374	77.96961	23.58027	477
	Above 25: High school graduate (includes equivalency)	11,700	12.65	278.5714	205.5493	351.5935	241.452	73.0221	892
	Above 25: Bachelor's degree or higher	57,076	61.71*	1358.952	1155.734	1562.171	671.9556	203.2189	1,322
	Population enrolled in college or graduate school	27,369	29.59*	651.6429	304.0568	999.2289	1149.314	347.586	878
	Total civilian noninstitutionalized population	145,210	99.51	3457.381					44
	Total civilian noninstitutionalized population with a disability	12,055	8.30	287.0238	250.0021	324.0455	8 930.6642 281.4598 4 267.8937 81.01883 5 27.54205 8.329515 8 305.1331 92.28111 3 3.690714 1.116179 1 25.34754 7.665881 2 97.11059 29.36906 4 309.9539 93.73906 3 1,024.56 309.8572 5 142.5051 43.09767 4 18.3717 5.556157 2 4.621316 1.39762 7 3.449991 1.043377 4 55.02115 16.63999 3.57766 1.081988 3 26.96029 8.153573 3 10.154303 0.046666 7 33.79913 10.22184 4 19.60115 5.927956 5 12.38719 7.980253 6 111.5443 33.73423 255.3823 77.23501 8 583.6664 176.5177	642	
	Hearing difficulty	3,569	29.61	84.97619	71.92243	98.02995	43.16304	13.05376	424
DISABILITY	Vision difficulty	1,855	15.39	44.16667	31.46273	56.8706	42.00634	12.70394	308
DISABILITI	Cognitive difficulty	4,493	37.27	106.9762	89.2284	124.724	58.68414	17.74779	444
	Ambulatory difficulty	5,142	42.65	122.4286	96.96146	147.8957	84.20855	25.46711	490
	Self-care difficulty	1,642	13.62	39.09524	28.81616	49.37431			340
	Independent-living difficulty	3,768	31.26	89.71429	73.70633	105.7222	52.93129	16.00796	499
	eau, 2022 American Community Survey (ACS) 5-year estimate								
All bolded* cells indica	ate a percentage increase of 10% or more for populations in the count	or group (ot census t	racts comp	ared to the	e state.			

All bolded* cells indicate a percentage increase of 10% or more for populations in the county or group of census tracts compared to the state.

				TRACTS W	/ITHIN 1-M	ILE (n=14)		
CATEGORY	INDICATOR							
CATEGORY	INDICATOR	SUM	PERCENT	AVG	LOWER CI	UPPER CI	STD DEV	95% CI
	Total Population	49,402		3528.71	2808.82	4248.61	1374.31	719.89
	White	34,412	69.66*	2458.00	1915.44	3000.56	1035.77	542.56
	Black or African American	5,748	11.64	410.57	237.51	583.64	330.39	173.06
	American Indian and Alaska Native	213	0.43†	15.21	-0.44	30.87	29.88	15.65
RACE & ETHNICITY	Asian	4,708	9.53*†	336.29	170.01	502.56	317.43	166.27
TO LOCAL COMMISSION	Native Hawaiian and Other Pacific Islander	0	0.00					
	Some other race alone (Not Hispanic or Latino)	144	0.29	10.29	0.32	20.26	19.03	9.97
	Two or more races (Not Hispanic or Latino)	1,371	2.78	97.93	69.87	125.98	53.56	28.06
	Hispanic or Latino	2,806	5.68	200.43	143.13	257.73	109.39	57.30
	People of Color (sum of non-White population)	14,990	30.34	1070.71	732.35	1409.08	645.95	338.37
	Total Population 5 Years and over	47,948		3424.86	2715.04	4134.68	1355.08	709.82
	Speak only English	40,826	85.15	2916.14	2332.12	3500.17	1114.93	584.03
	Spanish	482	1.01	34.43	7.96	60.90	50.53	26.47
	French, Haitian, or Cajun	74	0.15*	5.29	-1.83	12.40	13.58	7.11
	German or other West Germanic languages	44	0.09*†	3.14	0.17	6.12	5.68	2.98
LEP	Russian, Polish, or other Slavic languages	21	0.04†	1.50	-0.52	3.52	3.86	2.02
(Speak English Less	Chinese (including Mandarin, Cantonese)	215	0.45*	15.36	4.69	26.03	20.37	10.67
than Very well)	Vietnamese	10	0.02	0.71	-0.69	2.11	2.67	1.40
	Korean	149	0.31*	10.64	-1.26	22.55	22.72	11.90
	Tagalog (including Filipino)	0	0.00					
	Other Asian and Pacific Island Languages	103	0.21	7.36	2.08	12.64	10.08	5.28
	Other Indo-European Languages	257	0.54*†	18.36	4.48	32.24	26.49	13.88
	Arabic	32	0.07	2.29	-1.17	5.74	6.60	3.46
	Under 5 years	1,454	2.94	103.86	66.31	141.41	71.69	37.55
	65 years and over	5,225	10.58	373.21	238.19	508.24	257.76	135.02
105.0.054	Median age (years)	20.077	29.54	4504.07	4040.00	4054.00	540.50	222.25
AGE & SEX	Male Total population	22,877	46.31	1634.07	1313.22	1954.92	612.52	320.85
	Male Median age (years)	26 525	30.74	1004.64	1400 10	2205 10	705.40	411.46
	Female Total population	26,525	53.69 29.61	1894.64	1483.19	2306.10	785.49	411.46
	Female Median age (years) Population for whom poverty status is determined	38,829	25.01	2773.50	2087.42	3459.58	1309.75	686.08
POVERTY	Below poverty level: 200 percent below poverty level		24 66+		609.72	1312.99	671.29	
POVERIT	Below poverty level: 200 percent below poverty level Below poverty level: Population for whom poverty status is deter	13,459 8,606	34.66† 22.16*†	961.36 614.71	321.56	907.87	559.64	351.64 293.15
	Population 18 - 24 years	18,937	22.10 1	1352.64	489.93	2215.35	1646.95	862.71
	18 to 24 years: Less than high school graduate	278	1.47	19.86	6.68	33.03	25.15	13.18
	18 to 24 years: High school graduate (includes equivalency)	1,588	8.39	113.43	32.93	193.93	153.68	80.50
	Population 25 and Over	24,211	0.33	1729.36	1274.58	2184.13	868.19	454.78
EDUCATION	Above 25: Less than 9th grade	479	1.98	34.21	-0.41	68.84	66.10	34.62
LDOCATION	Above 25: 9th to 12th grade, no diploma	663	2.74	47.36	29.30	65.41	34.47	18.06
	Above 25: High school graduate (includes equivalency)	1,806	7.46	129.00	91.46	166.54	71.67	37.54
	Above 25: Bachelor's degree or higher	7,676	31.70*	548.29	396.78	699.79	289.23	151.51
	Population enrolled in college or graduate school	21,159	42.83*†	1511.36	615.36	2407.36	1710.51	896.00
	Total civilian noninstitutionalized population	49,353		3525.21	2805.63	4244.80	1373.72	719.58
	Total civilian noninstitutionalized population with a disability	3,678	7.45	262.71	207.65	317.78	105.13	55.07
	Hearing difficulty	1,093	29.72	78.07	57.34	98.80	39.57	20.73
	Vision difficulty	524	14.25	37.43	19.76	55.09	33.72	17.67
DISABILITY	Cognitive difficulty	1,771	48.15*†	126.50	90.91	162.09	67.94	35.59
	Ambulatory difficulty	1,274	34.64	91.00	50.89	131.11	76.57	40.11
	Self-care difficulty	685	18.62†	48.93	25.87	71.99	44.02	23.06
	Independent-living difficulty	1,152	31.32	82.29	53.10	111.48	55.72	29.19
	, ,							

Source: US Census Bureau, 2022 American Community Survey (ACS) 5-year estimate

All bolded* cells indicate a percentage increase of 10% or more for populations in the county or group of census tracts compared to the state.

All cells bolded indicate a percentage increase of 10% or more for populations in the group of census tracts when compared to the county.

		CEN	ISUS TRACT	117
CATEGORY	INDICATOR	SUM	PERCENT	MOE (+/-)
	Total Population	5,341		501
	White	3,929	73.56*	515
	Black or African American	465	8.71	192
	American Indian and Alaska Native	9	0.17	21
RACE & ETHNICITY	Asian	5,341 3,929 73.56* 465 8.71 9 0.17 431 8.07* 0 0.00 28 0.52*† 192 3.59* 287 5.37 1,412 26.44 5,238 4,561 87.08 40 0.76 0 0.00 7 0.13*† 0 0.00 30 0.57* 0 0.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	169	
KACE & ETHNICITY	Native Hawaiian and Other Pacific Islander	0	0.00	19
	Some other race alone (Not Hispanic or Latino)	28	0.52*†	42
		192	3.59*	125
		287	5.37	131
	·	1,412	26.44	
		5,238		502
			87.08	458
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LEP	- V			19
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	•			235
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AGE & SEY		2 250	_	368
AGE G SEA	•	2,330		1.2
than Very well) AGE & SEX		2 983		417
		2,505		0.7
	- 11 1	2 702	21.50	494
PO\/FRTV			E6 E1*+	440
POVENTI				402
			40.20 1	402
	18 to 24 years: Less than high school graduate		150	48
	18 to 24 years: High school graduate (includes equivalency)		341 929 73.56* 165 8.71 9 0.17 131 8.07* 0 0.00 28 0.52*† 92 3.59* 187 5.37 1412 26.44 238 561 87.08 40 0.76 0 0.00 7 0.13*† 0 0.00 0 0.00 0 0.00 0	144
	Population 25 and Over	192 3.59* 287 5.37 1,412 26.44 5,238 4,561 87.08 40 0.76 0 0.00 7 0.13*† 0 0.00 30 0.57* 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 103 1.93 518 9.70 21.60 2,358 44.15 21.90 2,983 55.85 21.30 3,792 2,143 56.51*† 1,755 46.28*† 3,291 50 1.52 301 9.15 1,788 0 0.00 62 3.47 136 7.61 658 36.80* 3,484 65.23*† 5,341 330 6.18 167 50.61*† 47 14.24 157 47.58*† 23 6.97	371	
EDUCATION	Above 25: Less than 9th grade		0.00	19
EDUCATION	Above 25: Less than 9th grade Above 25: 9th to 12th grade, no diploma			78
			+	88
	Above 25: High school graduate (includes equivalency) Above 25: Bachelor's degree or higher		+	220
	Population enrolled in college or graduate school		73.56* 8.71 0.17 8.07* 0.00 0.52*† 3.59* 5.37 26.44 87.08 0.76 0.00 0.13*† 0.00 0.57* 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.93 9.70 21.60 44.15 21.90 55.85 21.30 56.51*† 46.28*† 1.52 9.15 0.00 3.47 7.61 36.80* 65.23*† 6.18 50.61*† 14.24 47.58*† 6.97 6.36	
	Total civilian noninstitutionalized population		03.23 1	417 501
			6 10	140
	Total civilian noninstitutionalized population with a disability			
	Hearing difficulty			98
DISABILITY	Vision difficulty			41
	Cognitive difficulty			124
	Ambulatory difficulty			25
	Self-care difficulty			28
	Independent-living difficulty	53	16.06	55

All **bolded*** cells indicate a percentage increase of 10% or more for populations in the county or group of census tracts compared to the **state**.

		CENS	07.05	
CATEGORY	INDICATOR	SUM	PERCENT	MOE (+/-)
	Total Population	4,504		418
	White	3,620	80.37*†	491
	Black or African American	352	7.82	108
	American Indian and Alaska Native	4,504 3,620 80.37* †	132	
RACE & ETHNICITY	Asian	63	1.40	79
NACE & ETHNICITY	Native Hawaiian and Other Pacific Islander	0	0.00	14
	Some other race alone (Not Hispanic or Latino)	18	0.40	28
	Two or more races (Not Hispanic or Latino)	68	1.51	63
	Hispanic or Latino	276	6.13	204
	People of Color (sum of non-White population)	884	19.63	***
	Total Population 5 Years and over	4,353		419
	-	4,008	92.07	457
	Spanish			46
				14
				14
LEP				14
(Speak English Less				14
				14
than Very well)				14
				14
				48
				14
				14
				103
				141
	,	233		4.9
AGE & SEX		2 1/15		382
AGE & JEX		2,145		6.3
	U VI I	2 250		308
	• • •	2,339		2.3
	* 17	4.503	29.70	
DOV/EDTV			20.004	418
POVERTY	<u> </u>			334
			18.66	250
			- 00	334
				37
			M PERCENT	45
	-			355
EDUCATION				25
				41
	Total Population White Black or African American American Indian and Alaska Native Asian Native Hawaiian and Other Pacific Islander Some other race alone (Not Hispanic or Latino) Two or more races (Not Hispanic or Latino) Hispanic or Latino People of Color (sum of non-White population) Total Population 5 Years and over Speak only English Spanish French, Haitian, or Cajun German or other West Germanic languages Russian, Polish, or other Slavic languages Pry well) Vietnamese Korean Tagalog (including Mandarin, Cantonese) Vietnamese Korean Tagalog (including Filipino) Other Asian and Pacific Island Languages Other Indo-European Languages Arabic Under 5 years 65 years and over Median age (years) Male Total population Male Median age (years) Female Total population Female Median age (years) Population for whom poverty status is determined Below poverty level: 200 percent below poverty level Below poverty level: Population for whom poverty status is determined Below poverty level: Population for whom poverty status is determined Below poverty level: 200 percent below poverty level Below poverty level: Population for whom poverty status is determined Below poverty level: Population for whom poverty status is determined Below poverty level: Population for whom poverty status is determined Below poverty level: Population for whom poverty status is determined Below poverty level: Population for whom poverty status is determined Below poverty level: Population for whom poverty status is determined Below poverty level: Population for whom poverty status is determined Below poverty level: Population for whom poverty status is determined Below poverty level: Population for whom poverty status is determined Below poverty level: Population for whom poverty status is determined Below poverty level: Population for whom poverty status is determined Below poverty level: Population for whom poverty status is determined Below poverty level: Population for whom poverty status is determined Below poverty level: Population for whom pov			119
			No. Percent	342
			21.00*	289
				418
				127
		126		71
DISABILITY		1	 	2
- JADINI I	Cognitive difficulty	138	50.36*†	78
	Ambulatory difficulty	121	44.16	97
	·	39	14.23	40
	Independent-living difficulty	129	47.08*†	89

All **bolded*** cells indicate a percentage increase of 10% or more for populations in the county or group of census tracts compared to the **state**.

All cells **bolded**' indicate a percentage increase of 10% or more for populations in the group of census tracts when compared to the **county**.

		CENS	US TRACT 1	107.07
CATEGORY	INDICATOR	SUM	PERCENT	MOE (+/-)
	Total Population	2,712		352
	White	1,699	62.65	364
	Black or African American	296	10.91	147
RACE & ETHNICITY REPOPLE of Color Total Population Speak only Eng Spanish French, Haitian German or oth Russian, Polish	American Indian and Alaska Native	0	0.00	14
DACE O ETHINICITY	Asian	2,712 1,699 62.65 296 10.91 0 0.00 345 12.72*† 0 0.00 0 0.00 91 3.36 281 10.36† 1,013 37.35† 2,650 1,964 74.11 14 0.53 12 0.45*† 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 19 0.72*† 54 0 0.00 62 2.29 299 11.03 32.40 1,217 44.87 32.30 1,495 55.13 33.10 2,697 1,099 40.75*†	161	
KACE & ETHNICITY	Native Hawaiian and Other Pacific Islander		14	
	Total Population	14		
	Two or more races (Not Hispanic or Latino)	91	3.36	70
	, , ,	281	10.36†	219
	'			***
			371331	343
	·		7/ 11	335
				22
ık English Less than Ve	·			20
				14
				14
				32
ak English Less than vei				
·				14
				82
				14
			2,712	31
				58
		0	0.00	14
	Under 5 years	62	62 2.29	52
	65 years and over	299	11.03	82
			32.40	3.2
AGE & SEX	Male Total population	1,217	44.87	227
AGE & SEX POVERTY			32.30	4.8
	Female Total population	1,495	55.13	283
	Female Median age (years)		33.10	5.3
	Population for whom poverty status is determined	2,697		352
POVERTY		1,099	40.75*†	230
	Below poverty level: Population for whom poverty status is determin	528	19.58*†	200
		335		129
	18 to 24 years: Less than high school graduate	0	0.00	14
			SUM PERCENT 2,712 1,699 62.65 296 10.91 0 0 0.00 345 12.72*† 0 0.00 91 3.36 281 10.36† 1,013 37.35† 2,650 1,964 74.11 14 0.53 12 0.45*† 0 0.00 20 0.75* 0 0.00 0 75 2.83*† 0 0.00 19 0.72*† 54 2.04*† 0 0.00 19 0.72*† 54 2.04*† 0 0.00 19 0.72*† 54 2.04*† 0 0.00 19 0.72*† 54 2.04*† 0 0.00 19 0.72*† 54 2.04*† 0 0.00 19 0.72*† 54 2.04*† 0 0.00 10 1,217 44.87 32.30 1,495 55.13 33.10 2,697 1,099 40.75*† 528 19.5	14
				321
EDUCATION	•			40
		2,712 1,699 62.65 296 10.91 0 0.00 345 12.72*† 0 0.00 0 0.00 91 3.36 281 10.36† 1,013 37.35† 2,650 1,964 74.11 14 0.53 12 0.45*† 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 19 0.72*† 54 2.04*† 0 0 0.00 19 0.72*† 54 2.04*† 0 0 0.00 62 2.29 299 11.03 32.40 1,217 44.87 32.30 1,495 55.13 33.10 2,697 1,099 40.75*† sidetermir 528 19.58*† 335 0 0 0.00 0 0 0.00 0 0 0,00 0 0 0,00 0 0 0,00 0 0 0,00 0 0 0,00 0 0 0,00 0 0 0,00 0 0 0,00 0 0 0,00 0 0 0,00 0 0 0,00 0 0 0,00 0 0 0,00 0 0 0,00 0 0 0,00 0 0 0,00 0 0 0,00 0 0 0,00 0 0 0,00 0 0 0 0,00 0 0 0 0,00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	57	
			97	
				201
	, , ,			179
				352
			11 9 21	137
				66
	·		 	28
DISABILITY				90
			†	56
	•			51
	Paul 2022 American Community Survey (ACS) 5-year estimate	89	27.55	65

All **bolded*** cells indicate a percentage increase of 10% or more for populations in the county or group of census tracts compared to the **state**.

		CENSUS TRACT 107.08			
CATEGORY	INDICATOR	SUM	PERCENT	MOE (+/-)	
	Total Population	3,367		807	
	White	1,179	35.02	348	
	Black or African American	1,314	39.03*†	643	
	American Indian and Alaska Native	0	0.00	14	
RACE & ETHNICITY	Asian	391	11.61*†	157	
INCL & ETHICITY	Native Hawaiian and Other Pacific Islander	0	0.00	14	
	Some other race alone (Not Hispanic or Latino)	0	0.00	14	
	Two or more races (Not Hispanic or Latino)		2.05	87	
	Hispanic or Latino	414	12.30*†	264	
	People of Color (sum of non-White population)	2,188	64.98*†	***	
	Total Population 5 Years and over	3,203		735	
	Speak only English	2,450	76.49	744	
	Spanish	195	6.09*†	148	
	French, Haitian, or Cajun	0	0.00	14	
	German or other West Germanic languages	0	0.00	14	
LEP	Russian, Polish, or other Slavic languages	0	0.00	14	
(Speak English Less	Chinese (including Mandarin, Cantonese)	0	0.00	14	
than Very well)	Vietnamese	0	0.00	14	
than Very well)	Korean	27	0.84*†	44	
	Tagalog (including Filipino)	0	0.00	14	
	Other Asian and Pacific Island Languages	0	0.00	14	
	Other Indo-European Languages	62	35.02 39.03*† 0.00 11.61*† 0.00 2.05 12.30*† 64.98*† 76.49 6.09*† 0.00 0.00 0.00 0.00 0.00 0.00 0.00	36	
	Arabic	0	0.00	14	
	Under 5 years	164	4.87†	135	
	65 years and over	286	8.49	153	
	Median age (years)		28.60	6.2	
AGE & SEX	Male Total population	1,456	43.24	444	
	Male Median age (years)			5.8	
	Female Total population	1,911		525	
	Female Median age (years)		23.80	3.7	
	Population for whom poverty status is determined	3,367		807	
POVERTY	Below poverty level: 200 percent below poverty level	1,383	41.08*†	510	
	Below poverty level: Population for whom poverty status is determine	525	15.59*†	430	
	Population 18 - 24 years	607		315	
	18 to 24 years: Less than high school graduate	0	0.00	14	
	18 to 24 years: High school graduate (includes equivalency)		7 35.02 4 39.03*† 0.00 11.61*† 0.00 0.00 2.05 12.30*† 8 64.98*† 3 76.49 6.09*† 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	14	
	Population 25 and Over			530	
EDUCATION	Above 25: Less than 9th grade			149	
	Above 25: 9th to 12th grade, no diploma		 	81	
	Above 25: High school graduate (includes equivalency)			165	
	Above 25: Bachelor's degree or higher	343	\$UM PERCENT 3,367 1,179 35.02 1,314 39.03*† 0 0.00 391 11.61*† 0 0.00 0 0.00 69 2.05 414 12.30*† 2,188 64.98*† 3,203 2,450 76.49 195 6.09*† 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 27 0.84*† 0 0.00 0 0.00 27 0.84*† 0 0.00 62 1.94*† 0 0.00 62 1.94*† 0 0.00 62 1.94*† 0 0.00 62 1.94*† 0 0.00 164 4.87† 286 8.49 28.60 1,456 43.24 32.90 1,911 56.76* 23.80 3,367 1,383 41.08*† 525 15.59*† 607 0 0.00 0 0.00 1,993 257 12.90*† 74 3.71 254 12.74 343 17.21 1,513 44.94*† 3,367 363 10.78† 41 11.29 114 31.40*† 59 16.25 135 37.19 62 17.08†	108	
	Population enrolled in college or graduate school	1,513	44.94*†	555	
	Total civilian noninstitutionalized population			807	
	Total civilian noninstitutionalized population with a disability			185	
	Hearing difficulty			65	
DISABILITY	Vision difficulty			103	
	Cognitive difficulty			69	
	Ambulatory difficulty			123	
	Self-care difficulty			77	
	Independent-living difficulty eau, 2022 American Community Survey (ACS) 5-year estimate	199	54.82*†	139	

All **bolded*** cells indicate a percentage increase of 10% or more for populations in the county or group of census tracts compared to the **state**.

		CENS	US TRACT	107.09
CATEGORY	INDICATOR	SUM	PERCENT	MOE (+/-)
	Total Population	1,809		2 54
	White	1,366	75.51*†	298
	Black or African American	294	16.25†	258
	American Indian and Alaska Native	0	0.00	14
RACE & ETHNICITY	Asian	75		86
TOTAL CO. ETTINICITY	Native Hawaiian and Other Pacific Islander	0		14
	Some other race alone (Not Hispanic or Latino)	0		14
	Two or more races (Not Hispanic or Latino)	35		45
	Hispanic or Latino	39	2.16	39
	People of Color (sum of non-White population)	443	24.49	***
	Total Population 5 Years and over	1,735		268
	Speak only English	1,691	97.46*†	260
	Spanish	8	0.46	15
	French, Haitian, or Cajun	0	0.00	14
	German or other West Germanic languages	0		14
LEP	Russian, Polish, or other Slavic languages	0	0.00	14
(Speak English Less	Chinese (including Mandarin, Cantonese)	0	0.00	14
than Very well)	Vietnamese	0	0.00	14
ciali vely well)	Korean	0	0.00	14
	Tagalog (including Filipino)	0	0.00	14
	Other Asian and Pacific Island Languages	0		14
	Other Indo-European Languages	0	0.00	14
	Arabic	0	0.00	14
	Under 5 years	74		78
	65 years and over	162	8.96	141
	Median age (years)		_	2.1
AGE & SEX	Male Total population	943		164
	Male Median age (years)		30.00	4.2
	Female Total population	866		217
	Female Median age (years)		29.30	3.6
	Population for whom poverty status is determined	1,799		256
POVERTY	Below poverty level: 200 percent below poverty level	559	 	172
	Below poverty level: Population for whom poverty status is determine	309	17.18*†	209
	Population 18 - 24 years	340		159
	18 to 24 years: Less than high school graduate	56		75
	18 to 24 years: High school graduate (includes equivalency)	14	809 366 75.51*† 94 16.25† 0 0.00 75 4.15* 0 0.00 0 0.00 35 1.93 39 2.16 43 24.49 735 691 97.46*† 8 0.46 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	17
	Population 25 and Over	1,271		189
EDUCATION	Above 25: Less than 9th grade		+	14
	Above 25: 9th to 12th grade, no diploma	48		69
	Above 25: High school graduate (includes equivalency)	129		109
	Above 25: Bachelor's degree or higher	419	75.51*† 16.25† 0.00 4.15* 0.00 0.00 1.93 2.16 24.49 97.46*† 0.46 0.00 0.00 0.00 0.00 0.00 0.00 0.00	211
	Population enrolled in college or graduate school	323	17.86*	143
	Total civilian noninstitutionalized population	1,809	46 4651	254
	Total civilian noninstitutionalized population with a disability	297		175
	Hearing difficulty	64	 	107
DISABILITY	Vision difficulty	35		62
	Cognitive difficulty	253		157
	Ambulatory difficulty	126		116
	Self-care difficulty	64		107
	Independent-living difficulty	35	11.78	38

All **bolded*** cells indicate a percentage increase of 10% or more for populations in the county or group of census tracts compared to the **state**.

All cells **bolded**' indicate a percentage increase of 10% or more for populations in the group of census tracts when compared to the **county**.

		CENSUS TRACT 107.10			
CATEGORY	INDICATOR	SUM	PERCENT	MOE (+/-	
	Total Population	3,116		578	
	White	2,496	80.10*†	417	
	Black or African American	182	5.84	210	
	American Indian and Alaska Native	0	0.00	14	
DACE O ETHINICITY	Asian	167	5.36*	142	
RACE & ETHNICITY	Native Hawaiian and Other Pacific Islander	0	0.00	14	
	Some other race alone (Not Hispanic or Latino)	0	0.00	14	
	Two or more races (Not Hispanic or Latino)	124	3.98*†	112	
	Hispanic or Latino	147	4.72	135	
	People of Color (sum of non-White population)	620	19.90	***	
	Total Population 5 Years and over	2,990		490	
	Speak only English	2,453	82.04	430	
	Spanish			22	
	French, Haitian, or Cajun	50	1.67*†	87	
	German or other West Germanic languages	0	0.00	14	
LEP	Russian, Polish, or other Slavic languages			14	
(Speak English Less	Chinese (including Mandarin, Cantonese)			7	
	Vietnamese			17	
than Very well)	Korean			14	
	Tagalog (including Filipino)			14	
	Other Asian and Pacific Island Languages			2	
	Other Indo-European Languages		PERCENT 16	14	
	Arabic			39	
	Under 5 years			134	
	65 years and over		_	83	
	Median age (years)	47.1		6	
AGE & SEX	Male Total population	1.612		444	
7102010271	Male Median age (years)	2,022	_	7.3	
	Female Total population	1.504		274	
	Female Median age (years)		42.10t	6.9	
	Population for whom poverty status is determined	3.116	12.1201	578	
POVERTY	Below poverty level: 200 percent below poverty level		22.30	276	
	Below poverty level: Population for whom poverty status is determin			71	
	Population 18 - 24 years		5.51	163	
	18 to 24 years: Less than high school graduate		9,01+	48	
	18 to 24 years: High school graduate (includes equivalency)		3,116 2,496 80.10*† 182 5.84 0 0.00 167 5.36* 0 0.00 0 0.00 124 3.98*† 147 4.72 620 19.90 2,493 82.04 14 0.47 50 1.67*† 0 0.00 0 0.00 3 0.10 10 0.33*† 0 0.00 0 1 0.03 0 0.00 1 0.03 0 0.00 1 0.03 0 1,612 1,504 471 15.12 33.60 1,612 51.73 29.60 1,504 48.27 42.10† 3,116 695 22.30 104 3.34 355 32 9.01† 46 12.96 2,062 14 0.68 40 1.94 136 6.60 660 32.01* 306 9.82 3,116 355 11.39† 72 20.28 31 8.73 186 52.39*† 125 35.21 60 16.90†	65	
	Population 25 and Over			326	
EDUCATION	Above 25: Less than 9th grade			24	
	Above 25: 9th to 12th grade, no diploma			40	
	Above 25: High school graduate (includes equivalency)			87	
	Above 25: Bachelor's degree or higher			193	
	Population enrolled in college or graduate school			149	
	Total civilian noninstitutionalized population		2.02	578	
	Total civilian noninstitutionalized population with a disability		11,39t	110	
	Hearing difficulty			47	
	Vision difficulty			35	
DISABILITY	Cognitive difficulty			88	
	Ambulatory difficulty			64	
	Self-care difficulty		 	54	

All **bolded*** cells indicate a percentage increase of 10% or more for populations in the county or group of census tracts compared to the **state**.

		CEN	ISUS TRACT	113
CATEGORY	INDICATOR	SUM	PERCENT	MOE (+/-)
	Total Population	2,750		484
	White	1,750	63.64	412
	Black or African American	526	19.13†	154
	American Indian and Alaska Native	9	2,750 1,750 63.64 526 19.13†	19
DAGE 0 ==10:10:31	Asian	235	8.55*	168
RACE & ETHNICITY	Native Hawaiian and Other Pacific Islander	0	0.00	14
	Some other race alone (Not Hispanic or Latino)	0	0.00	14
	Two or more races (Not Hispanic or Latino)	138	5.02*†	99
	Hispanic or Latino	92	3,35	60
	People of Color (sum of non-White population)		 	***
	Total Population 5 Years and over		30.301	488
	Speak only English		94.06+	500
	Spanish			14
	•			14
	French, Haitian, or Cajun Gorman or other West Cormanic languages			14
LEP	German or other West Germanic languages			14
	Russian, Polish, or other Slavic languages			
(Speak English Less	Chinese (including Mandarin, Cantonese)			14
than Very well)	Vietnamese			14
	Korean			14
	Tagalog (including Filipino)			14
	Other Asian and Pacific Island Languages			26
	Other Indo-European Languages	9	94.06† 0.00 0.00 0.00 0.00 0.00 0.00 0.00	17
	Arabic	0	0.00	14
	Under 5 years	39	1.42	51
	65 years and over	170	6.18	58
	Median age (years)		22.70	1
AGE & SEX	Male Total population	1,219	44.33	300
	Male Median age (years)		22.40	0.7
	Female Total population	1,531	55.67	486
	Female Median age (years)		23.10	1.4
	Population for whom poverty status is determined	2,750		484
POVERTY	Below poverty level: 200 percent below poverty level	2,093	76.13*†	460
	Below poverty level: Population for whom poverty status is determin	1.653	60.11*†	473
	Population 18 - 24 years	•		476
	18 to 24 years: Less than high school graduate		1.31	25
	18 to 24 years: High school graduate (includes equivalency)		63.64 19.13† 0.33 8.55* 0.00 0.77*† 0.33* 0.00 1.42 6.18 22.70 44.33 22.40 55.67 23.10 76.13*† 60.11*† 1.31 18.21† 1.31 18.21† 1.31 18.21† 1.31 18.21† 1.31 18.21† 1.31 18.21† 1.31 18.21† 1.31 18.21† 1.31 18.21† 1.31 18.21† 1.31 18.21† 1.31 18.21† 1.31 18.21† 1.31 18.21† 1.31 18.21† 1.31 18.21† 1.31 13.70† 6.24† 15.45† 28.47* 56.44*† 56.44*† 51.13† 20.92 25.82*† 52.61*† 53.92† 11.76	148
	Population 25 and Over			218
EDUCATION	Above 25: Less than 9th grade			43
LDOCATION	Above 25: 9th to 12th grade, no diploma			50
	Above 25: High school graduate (includes equivalency)			69
	Above 25: Bachelor's degree or higher			124
	Population enrolled in college or graduate school		30.44°T	447
	Total civilian noninstitutionalized population		11 121	484
	Total civilian noninstitutionalized population with a disability			82
	Hearing difficulty			55
DISABILITY	Vision difficulty			30
	Cognitive difficulty			74
	Ambulatory difficulty			59
	Self-care difficulty	36		38
	Independent-living difficulty	75	24.51	53

All **bolded*** cells indicate a percentage increase of 10% or more for populations in the county or group of census tracts compared to the **state**.

		CEN	CENSUS TRACT 114		
CATEGORY	INDICATOR		PERCENT	MOE (+/-)	
	Total Population	3,754		400	
	White	2,473	65.88	328	
	Black or African American	442	11.77†	258	
	American Indian and Alaska Native	15	0.40†	21	
RACE & ETHNICITY	Asian	455	12.12*†	220	
RACE & ETHNICITY	Native Hawaiian and Other Pacific Islander	0	0.00	14	
	Some other race alone (Not Hispanic or Latino)	29	0.77*†	47	
	Two or more races (Not Hispanic or Latino)	164	4.37*†	86	
	Hispanic or Latino	176	4.69	94	
	People of Color (sum of non-White population)	1,281	34.12	***	
	Total Population 5 Years and over	3,709		398	
	Speak only English	3,173	85.55	366	
	Spanish	31	0.84	71	
	French, Haitian, or Cajun	0	0.00	14	
	German or other West Germanic languages	0	0.00	14	
LEP	Russian, Polish, or other Slavic languages	5	0.13*†	8	
(Speak English Less	Chinese (including Mandarin, Cantonese)	24	0.65*	39	
than Very well)	Vietnamese	0	0.00	14	
	Korean	0	0.00	14	
	Tagalog (including Filipino)	0	0.00	14	
	Other Asian and Pacific Island Languages	4	0.11	8	
	Other Indo-European Languages	0	0.00	14	
	Arabic	0	0.00	14	
	Under 5 years	45	1.20	41	
	65 years and over	317	8.44	92	
	Median age (years)		23.30	1.5	
AGE & SEX	Male Total population	1,483	39.50	349	
	Male Median age (years)		27.30	6.1	
	Female Total population	2,271	60.50*†	355	
	Female Median age (years)	-	21.90	1.4	
	Population for whom poverty status is determined	3,267		399	
POVERTY	Below poverty level: 200 percent below poverty level	1,395	42.70*†	278	
	Below poverty level: Population for whom poverty status is determin	1,076	32.94*†	279	
	Population 18 - 24 years	1,825		298	
	18 to 24 years: Less than high school graduate	0	0.00	14	
	18 to 24 years: High school graduate (includes equivalency)	98	5.37	69	
	Population 25 and Over	1,635		275	
EDUCATION	Above 25: Less than 9th grade	1	0.06	4	
	Above 25: 9th to 12th grade, no diploma	3	0.18	4	
	Above 25: High school graduate (includes equivalency)	106	6.48	74	
	Above 25: Bachelor's degree or higher	493	30.15*	144	
	Population enrolled in college or graduate school	1,797	47.87*†	305	
	Total civilian noninstitutionalized population	3,754		400	
	Total civilian noninstitutionalized population with a disability	202	5.38	91	
	Hearing difficulty	90	44.55*†	45	
	Vision difficulty	10	4.95	11	
DISABILITY	Cognitive difficulty	104	51.49*†	71	
	Ambulatory difficulty	49	24.26	36	
	Self-care difficulty	5	2.48	5	

All **bolded*** cells indicate a percentage increase of 10% or more for populations in the county or group of census tracts compared to the **state**.

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		CENSUS TRACT 115			
CATEGORY	INDICATOR		PERCENT	MOE (+/-)	
	Total Population	2,042		379	
	White	1,476	72.28*	309	
	Black or African American	81	3.97	50	
	American Indian and Alaska Native	0	0.00	14	
DACE O ETUNICITY	Asian	128	6.27*	76	
RACE & ETHNICITY	Native Hawaiian and Other Pacific Islander	0	0.00	14	
	Some other race alone (Not Hispanic or Latino)	0	0.00	14	
	Two or more races (Not Hispanic or Latino)	52	2.55	49	
	Hispanic or Latino	305	14.94*†	234	
	People of Color (sum of non-White population)	566	27.72	***	
	Total Population 5 Years and over	1,995		377	
	Speak only English	1,708	85.61	353	
	Spanish	71	3.56*†	68	
	French, Haitian, or Cajun	0	0.00	14	
	German or other West Germanic languages	0	0.00	14	
LEP	Russian, Polish, or other Slavic languages	0	0.00	14	
(Speak English Less	Chinese (including Mandarin, Cantonese)	23	1.15*†	26	
than Very well)	Vietnamese	0	0.00	14	
than very weny	Korean	0	0.00	14	
	Tagalog (including Filipino)	0	0.00	14	
	Other Asian and Pacific Island Languages	0	0.00	14	
	Other Indo-European Languages	16	0.80*†	25	
	Arabic	0	0.00	14	
	Under 5 years	47	2.30	26	
	65 years and over	364	17.83	113	
	Median age (years)		36.90	7.7	
AGE & SEX	Male Total population	995	48.73	192	
	Male Median age (years)		43.30*†	11.1	
	Female Total population	1,047	51.27	262	
	Female Median age (years)	,	32.90	8.8	
	Population for whom poverty status is determined	2,030	52.55	377	
POVERTY	Below poverty level: 200 percent below poverty level	407	20.05	135	
	Below poverty level: Population for whom poverty status is determin	308	15.17*†	109	
	Population 18 - 24 years	290	10.17	115	
	18 to 24 years: Less than high school graduate	12	4.14	15	
	18 to 24 years: High school graduate (includes equivalency)	47	16.21†	54	
	Population 25 and Over	1,305	10.21	252	
EDUCATION	Above 25: Less than 9th grade	35	2.68	31	
2200711011	Above 25: 9th to 12th grade, no diploma	27	2.07	30	
	Above 25: High school graduate (includes equivalency)	76	5.82	69	
	Above 25: Bachelor's degree or higher	436	33.41*	153	
	Population enrolled in college or graduate school	353	17.29*	185	
	Total civilian noninstitutionalized population	2,042	17.23	379	
	Total civilian noninstitutionalized population Total civilian noninstitutionalized population with a disability	184	9.01	82	
	Hearing difficulty	49	26.63	30	
	Vision difficulty	47	25.54*†	38	
DISABILITY	Cognitive difficulty	75	40.76	52	
	Ambulatory difficulty	47	25.54	29	
	Self-care difficulty	29	15.76†	23	
	Independent-living difficulty	95	51.63*†	55	
	eau, 2022 American Community Survey (ACS) 5-year estimate	93	31.03	ננ	

All **bolded*** cells indicate a percentage increase of 10% or more for populations in the county or group of census tracts compared to the **state**.

		CENSUS TRACT 116.01			
CATEGORY	INDICATOR		PERCENT	MOE (+/-)	
	Total Population	2,134		60	
	White	1,421	66.59	162	
	Black or African American	237	11.11	135	
	American Indian and Alaska Native	11	0.52†	26	
- A 45 0 1 1 1 1 4 1 7 1	Asian	317	14.85*†	121	
RACE & ETHNICITY	Native Hawaiian and Other Pacific Islander	0	0.00	14	
	Some other race alone (Not Hispanic or Latino)	0	0.00	14	
	Two or more races (Not Hispanic or Latino)	18	0.84	27	
	Hispanic or Latino	130	6.09	66	
	People of Color (sum of non-White population)	713	33.41	***	
	Total Population 5 Years and over	2,134	55.12	60	
	Speak only English	1,759	82.43	107	
	Spanish	7	0.33	17	
	French, Haitian, or Cajun	0	0.00	14	
	German or other West Germanic languages	- 8	0.37*†	17	
LEP	Russian, Polish, or other Slavic languages	2	0.091	4	
(Speak English Less	Chinese (including Mandarin, Cantonese)	0	0.00	14	
	Vietnamese	0	0.00	14	
than Very well)		0			
	Korean		0.00	14	
	Tagalog (including Filipino)	0	0.00	14	
	Other Asian and Pacific Island Languages	0	0.00	14	
	Other Indo-European Languages	0	0.00	14	
	Arabic	0	0.00	14	
	Under 5 years	0	0.00	14	
	65 years and over	0	0.00	14	
	Median age (years)		19.80	0.3	
AGE & SEX	Male Total population	921	43.16	219	
	Male Median age (years)		20.00	0.5	
	Female Total population	1,213	56.84*	216	
	Female Median age (years)		19.70	0.3	
	Population for whom poverty status is determined	16		20	
POVERTY	Below poverty level: 200 percent below poverty level	16	100.00*†	20	
	Below poverty level: Population for whom poverty status is determin	16	100.00*†	20	
	Population 18 - 24 years	2,031		81	
	18 to 24 years: Less than high school graduate	0	0.00	14	
	18 to 24 years: High school graduate (includes equivalency)	97	4.78	54	
	Population 25 and Over	99		66	
EDUCATION	Above 25: Less than 9th grade	0	0.00	14	
	Above 25: 9th to 12th grade, no diploma	0	0.00	14	
	Above 25: High school graduate (includes equivalency)	16	16.16†	20	
	Above 25: Bachelor's degree or higher	66	66.67*	54	
	Population enrolled in college or graduate school	2,118	99.25*†	57	
	Total civilian noninstitutionalized population	2,134		60	
	Total civilian noninstitutionalized population with a disability	48	2.25	33	
	Hearing difficulty	26	54.17*†	33	
	Vision difficulty	0	0.00	14	
DISABILITY	Cognitive difficulty	22	45.83*†	26	
	Ambulatory difficulty	0	0.00	14	
	Self-care difficulty	0	0.00	14	
	Independent-living difficulty	8	16.67	10	
Course LIC Consus Bus	eau. 2022 American Community Survey (ACS) 5-year estimate	-	20.07	10	

All **bolded*** cells indicate a percentage increase of 10% or more for populations in the county or group of census tracts compared to the **state**.

All cells **bolded** indicate a percentage increase of 10% or more for populations in the group of census tracts when compared to the **county**.

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		CENS	US TRACT	116.02
CATEGORY	INDICATOR		PERCENT	MOE (+/-
	Total Population	6,813		220
	White	4,127	60.58	427
	Black or African American	884	12.98†	225
	American Indian and Alaska Native	9	0.13	15
RACE & ETHNICITY	Asian	1,340	19.67*†	372
NACE & ETHNICITY	Native Hawaiian and Other Pacific Islander	0	0.00	19
	Some other race alone (Not Hispanic or Latino)	65	0.95*†	71
	Two or more races (Not Hispanic or Latino)	80	1.17	62
	Hispanic or Latino	308	4.52	108
	People of Color (sum of non-White population)	2,686	39.42†	***
	Total Population 5 Years and over	6,749		212
	Speak only English	5,365	79.49	260
	Spanish	41	0.61	73
	French, Haitian, or Cajun	12	0.18*†	22
	German or other West Germanic languages	18	0.27*†	26
LEP	Russian, Polish, or other Slavic languages	0	0.00	19
(Speak English Less	Chinese (including Mandarin, Cantonese)	15	0.22*	22
than Very well)	Vietnamese	0	0.00	19
	Korean	44	0.65*†	35
	Tagalog (including Filipino)	0	0.00	19
	Other Asian and Pacific Island Languages	22	0.33*	26
	Other Indo-European Languages	0	0.00	19
	Arabic	8	0.12*	14
	Under 5 years	64	0.94	37
	65 years and over	3	0.04	7
	Median age (years)		19.60	0.2
AGE & SEX	Male Total population	3,022	44.36	688
	Male Median age (years)		19.80	0.2
	Female Total population	3,791	55.64	672
	Female Median age (years)		19.50	0.2
	Population for whom poverty status is determined	483		125
POVERTY	Below poverty level: 200 percent below poverty level	302	62.53*†	86
	Below poverty level: Population for whom poverty status is determin	231	47.83*†	79
	Population 18 - 24 years	6,157		232
	18 to 24 years: Less than high school graduate	0	0.00	19
	18 to 24 years: High school graduate (includes equivalency)	529	8.59	297
	Population 25 and Over	533		181
EDUCATION	Above 25: Less than 9th grade	0	0.00	19
	Above 25: 9th to 12th grade, no diploma	9	1.69	15
	Above 25: High school graduate (includes equivalency)	20	3.75	18
	Above 25: Bachelor's degree or higher	285	53.47*	149
	Population enrolled in college or graduate school	6,553	96.18*†	188
	Total civilian noninstitutionalized population	6,813		220
	Total civilian noninstitutionalized population with a disability	75	1.10	51
	Hearing difficulty	39	52.00*†	40
DISABILITY	Vision difficulty	7	9.33	9
DISABILIT	Cognitive difficulty	30	40.00	29
	Ambulatory difficulty	3	4.00	5
	Self-care difficulty	0	0.00	19
	Independent-living difficulty	17	22.67	20

Source: US Census Bureau, 2022 American Community Survey (ACS) 5-year estimate

All **bolded*** cells indicate a percentage increase of 10% or more for populations in the county or group of census tracts compared to the **state**.

		CEN	118	
CATEGORY	INDICATOR		PERCENT	MOE (+/-
	Total Population	3,136		399
	White	2,285	72.86*	351
	Black or African American	302	9.63	183
	American Indian and Alaska Native	0	0.00	14
RACE & ETHNICITY	Asian	318	10.14*†	174
NACE & ETHNICHT	Native Hawaiian and Other Pacific Islander	0	0.00	14
	Some other race alone (Not Hispanic or Latino)	0	0.00	14
	Two or more races (Not Hispanic or Latino)	133	4.24*†	108
	Hispanic or Latino	98	3.13	47
	People of Color (sum of non-White population)	851	27.14	***
	Total Population 5 Years and over	2,977		397
	Speak only English	2,609	87.64	412
	Spanish	0	0.00	14
	French, Haitian, or Cajun	0	0.00	14
	German or other West Germanic languages	0	0.00	14
LEP	Russian, Polish, or other Slavic languages	0	0.00	14
(Speak English Less	Chinese (including Mandarin, Cantonese)	73	2.45*†	71
than Very well)	Vietnamese	0	0.00	14
	Korean	0	0.00	14
	Tagalog (including Filipino)	0	0.00	14
	Other Asian and Pacific Island Languages	10	0.34*	16
	Other Indo-European Languages	61	2.05*†	73
	Arabic	0	0.00	14
	Under 5 years	159	5.07†	72
	65 years and over	475	15.15	141
	Median age (years)		32.20	4.6
AGE & SEX	Male Total population	1,478	47.13	245
	Male Median age (years)		34.20	9.3
	Female Total population	1,658	52.87	268
	Female Median age (years)		31.50	8.9
	Population for whom poverty status is determined	3,136		399
POVERTY	Below poverty level: 200 percent below poverty level	1,126	35.91*†	244
	Below poverty level: Population for whom poverty status is determin	891	28.41*†	241
	Population 18 - 24 years	816		241
	18 to 24 years: Less than high school graduate	74	9.07†	74
	18 to 24 years: High school graduate (includes equivalency)	58	7.11	57
EDUCATION	Population 25 and Over	1,775		247
	Above 25: Less than 9th grade	33	1.86	36
(≥25 yrs for most)	Above 25: 9th to 12th grade, no diploma	53	2.99	67
	Above 25: High school graduate (includes equivalency)	93	5.24	84
	Above 25: Bachelor's degree or higher	532	29.97*	155
	Population enrolled in college or graduate school	700	22.32*	192
	Total civilian noninstitutionalized population	3,131		399
	Total civilian noninstitutionalized population with a disability	247	7.89	111
	Hearing difficulty	51	20.65	39
DICARUITA	Vision difficulty	23	9.31	24
DISABILITY	Cognitive difficulty	170	68.83*†	101
	Ambulatory difficulty	71	28.74	63
	Self-care difficulty	82	33.20*†	63
	Independent-living difficulty	72	29.15	62

All **bolded*** cells indicate a percentage increase of 10% or more for populations in the county or group of census tracts compared to the **state**.

		CENS	Т 122.01		
CATEGORY	INDICATOR		PERCENT	MOE (+/-)	
	Total Population	3,533		464	
	White	2,930	82.93*†	401	
	Black or African American	305	8.63	187	
	American Indian and Alaska Native	0	0.00	14	
RACE & ETHNICITY	Asian	112	3.17	92	
KACE & ETHINICITY	Native Hawaiian and Other Pacific Islander	0	0.00	14	
	Some other race alone (Not Hispanic or Latino)	4	0.11	8	
	Two or more races (Not Hispanic or Latino)	49	1.39	59	
	Hispanic or Latino	133	3.76	115	
	People of Color (sum of non-White population)	603	17.07	***	
	Total Population 5 Years and over	3,390		436	
	Speak only English	3,060	90.27	426	
	Spanish	0	0.00	14	
	French, Haitian, or Cajun	0	0.00	14	
	German or other West Germanic languages	0	0.00	14	
LEP	Russian, Polish, or other Slavic languages	14	0.41*†	20	
(Speak English Less	Chinese (including Mandarin, Cantonese)	0	0.00	14	
than Very well)	Vietnamese	0	0.00	14	
man very meny	Korean	0	0.00	14	
	Tagalog (including Filipino)	0	0.00	14	
	Other Asian and Pacific Island Languages	0	0.00	14	
	Other Indo-European Languages	0	0.00	14	
	Arabic	0	0.00	14	
	Under 5 years	143	4.05	84	
	65 years and over	938	26.55*†	233	
	Median age (years)	330	47.40*†	3	
AGE & SEX	Male Total population	1,845	52.22	295	
AGE G SEA	Male Median age (years)	1,043	48.90*†	7.3	
	Female Total population	1,688	47.78	254	
	Female Median age (years)	1,000	46.50*†	2.7	
	Population for whom poverty status is determined	3,510	40.30	465	
POVERTY	Below poverty level: 200 percent below poverty level	165	4.70	84	
POVERTI	Below poverty level: Population for whom poverty status is determine	100	2.85	61	
	Population 18 - 24 years	248	2.03	145	
	18 to 24 years: Less than high school graduate	1	0.40	6	
	18 to 24 years: Less than high school graduate 18 to 24 years: High school graduate (includes equivalency)	35	14.11	36	
	Population 25 and Over	2,593	14.11	358	
EDUCATION	•		1.20		
EDUCATION	Above 25: Less than 9th grade	36	1.39	57	
	Above 25: 9th to 12th grade, no diploma	99	3.82	85	
	Above 25: High school graduate (includes equivalency)	101	3.90	61	
	Above 25: Bachelor's degree or higher	711	27.42*	139	
	Population enrolled in college or graduate school	324	9.17	133	
	Total civilian noninstitutionalized population	3,533	11 001	464	
	Total civilian noninstitutionalized population with a disability	412	11.66†	212	
	Hearing difficulty	121	29.37	94	
DISABILITY	Vision difficulty	82	19.90t	91	
	Cognitive difficulty	66	16.02	54	
	Ambulatory difficulty	286	69.42*†	155	
	Self-care difficulty	169	41.02*†	166	
	Independent-living difficulty Paul 2022 American Community Survey (ACS) 5-year estimate	128	31.07	100	

All **bolded*** cells indicate a percentage increase of 10% or more for populations in the county or group of census tracts compared to the **state**.

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		CENS	US TRACT	122.02
CATEGORY	INDICATOR		PERCENT	MOE (+/-)
	Total Population	4,391		454
	White	3,661	83.38*†	434
	Black or African American	68	1.55	65
	American Indian and Alaska Native	53	1.21*†	82
RACE & ETHNICITY	Asian	331	7.54*	173
NACE & ETHNICITI	Native Hawaiian and Other Pacific Islander	0	0.00	14
	Some other race alone (Not Hispanic or Latino)	0	0.00	14
	Two or more races (Not Hispanic or Latino)	158	3.60*	126
	Hispanic or Latino	120	2.73	93
	People of Color (sum of non-White population)	730	16.62	***
	Total Population 5 Years and over	4,114		461
	Speak only English	3,475	84.47	403
	Spanish	23	0.56	28
	French, Haitian, or Cajun	0	0.00	14
	German or other West Germanic languages	11	0.27*†	19
LEP	Russian, Polish, or other Slavic languages	0	0.00	14
(Speak English Less	Chinese (including Mandarin, Cantonese)	27	0.66*	47
than Very well)	Vietnamese	0	0.00	14
	Korean	3	0.07	7
	Tagalog (including Filipino)	0	0.00	14
	Other Asian and Pacific Island Languages	0	0.00	14
	Other Indo-European Languages	55	1.34*†	70
	Arabic	0	0.00	14
	Under 5 years	277	6.31*†	100
	65 years and over	689	15.69	137
	Median age (years)		35.10	4.2
AGE & SEX	Male Total population	2,183	49.72	277
	Male Median age (years)		33.30	5.5
	Female Total population	2,208	50.28	275
	Female Median age (years)		40.10†	8.9
	Population for whom poverty status is determined	4,364		454
POVERTY	Below poverty level: 200 percent below poverty level	681	15.60	231
	Below poverty level: Population for whom poverty status is determin	270	6.19	118
	Population 18 - 24 years	403		150
	18 to 24 years: Less than high school graduate	0	0.00	14
	18 to 24 years: High school graduate (includes equivalency)	23	5.71	26
	Population 25 and Over	2,906		317
EDUCATION	Above 25: Less than 9th grade	13	0.45	23
	Above 25: 9th to 12th grade, no diploma	119	4.09†	92
	Above 25: High school graduate (includes equivalency)	136	4.68	85
	Above 25: Bachelor's degree or higher	812	27.94*	208
	Population enrolled in college or graduate school	572	13.03*	169
	Total civilian noninstitutionalized population	4,364		454
	Total civilian noninstitutionalized population with a disability	262	6.00	109
	Hearing difficulty	101	38.55*†	52
	Vision difficulty	25	9.54	23
DISABILITY	Cognitive difficulty	177	67.56*†	98
	Ambulatory difficulty	39	14.89	21
	Self-care difficulty	79	30.15*†	59
	Independent-living difficulty	130	49.62*†	95

All **bolded*** cells indicate a percentage increase of 10% or more for populations in the county or group of census tracts compared to the **state**.

EPA EJScreen ACS Report

The following ACS 2018-2022 report shows the demographics and information provided through EPA EJScreen for the one-mile radius around the UNC-CH Cogeneration Facility.

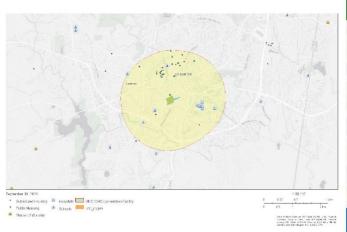
EJScreen Community Report

\$EPA

EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

UNC-CH Cogeneration



1 mile Ring around the Area Population: 25,047 Area in square miles: 3.95

COMMUNITY INFORMATION



LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	84%
Spanish	5%
German or other West Germanic	1%
Other Indo-European	4%
Korean	1%
Chinese (including Mandarin, Cantonese)	2%
Other Asian and Pacific Island	1%
Total Non-English	16%

BREAKDOWN BY RACE



BREAKDOWN BY AGE

	From Ages 1 to 4	2%
	From Ages 1 to 18	7%
_	From Ages 18 and up	93%
	From Ages 65 and up	5%

LIMITED ENGLISH SPEAKING BREAKDOWN



Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2018-2022. Life expectancy data comes from the Center's for Disease Control.

Report for 1 mile Ring around the Area Report produced September 30, 2024 using EJScreen Version 2.3

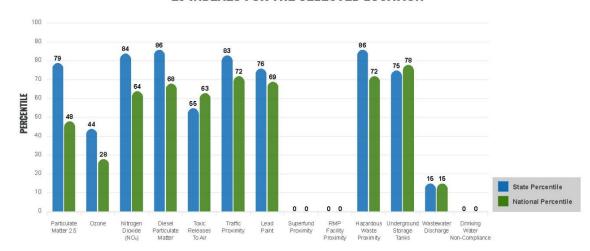
Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the <u>EJScreen website</u>.

EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

EJ INDEXES FOR THE SELECTED LOCATION

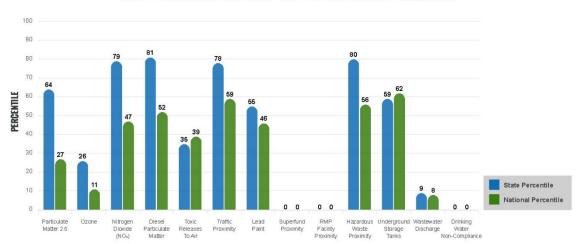


SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low income, percent persons with disabilities, percent less than high school education, percent limited English speaking, and percent low life expectancy with a single environmental indicator.

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION

=



Report for 1 mile Ring around the Area

Report produced September 30, 2024 using EJScreen Version 2.3

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
ENVIRONMENTAL BURDEN INDICATORS					
Particulate Matter 2.5 (µg/m³)	7.25	6.99	54	8.45	23
Ozone (ppb)	52.9	54	23	61.8	11
Nitrogen Dioxide (NO ₂) (ppbv)	6.6	5	79	7.8	40
Diesel Particulate Matter (µg/m³)	0.143	0.102	78	0.191	44
Toxic Releases to Air (toxicity-weighted concentration)	250	3,100	30	4,600	35
Traffic Proximity (daily traffic count/distance to road)	930,000	690,000	72	1,700,000	52
Lead Paint (% Pre-1960 Housing)	0.2	0.17	68	0.3	49
Superfund Proximity (site count/km distance)	0	0.11	0	0.39	0
RMP Facility Proximity (facility count/km distance)	0	0.29	0	0.57	0
Hazardous Waste Proximity (facility count/km distance)	1.3	0.94	76	3.5	50
Underground Storage Tanks (count/km²)	7.8	3.8	85	3.6	86
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.094	1300	18	700000	15
Drinking Water Non-Compliance (points)	0	0.58	0	2.2	0
SOCIOECONOMIC INDICATORS					
Demographic Index USA	1.95	N/A	N/A	1.34	76
Supplemental Demographic Index USA	1.54	N/A	N/A	1.64	50
Demographic Index State	2.08	1.49	75	N/A	N/A
Supplemental Demographic Index State	1.87	1.91	49	N/A	N/A
People of Color	35%	37%	54	40%	53
Low Income	52%	34%	80	30%	82
Unemployment Rate	6%	5%	66	6%	63
Limited English Speaking Households	1%	2%	70	5%	60
Less Than High School Education	6%	11%	36	11%	40
Under Age 5	2%	5%	22	5%	21
Over Age 64	5%	18%	8	18%	9

*Diesel particulate matter index is from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific inclinidation in clinidation of condations. More information on the Air Toxics Data to Update can be found aft. https://www.epa.gov/lnas/sia/toxicsdata-update/corise-dat

Sites reporting to EPA within defined area:

Superfund	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities	1
Water Dischargers	7
Air Pollution	3
Brownfields	0
Toxic Release Inventory	1

Other community features within defined area:

2CIIOOIS	0
Hospitals	7
Places of Worship	0

Other environmental data:

Air Non-attainment	Ye
Impaired Waters	Ye

Selected location contains American Indian Reservation Lands*	No
Selected location contains a "Justice40 (CEIST)" disadvantaged community	No
Selected location contains an EPA IRA disadvantaged community	Yes

Report for 1 mile Ring around the Area

Report produced September 30, 2024 using EJScreen Version 2.3

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	9%	21%	0	20%	0
Heart Disease	2.2	6.1	1	5.8	1
Asthma	11	10.1	81	10.3	74
Cancer	2.3	6.5	1	6.4	0
Persons with Disabilities	5.4%	14.2%	5	13.7%	5

CLIMATE INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	4%	10%	22	12%	35
Wildfire Risk	0%	9%	0	14%	0

CRITICAL SERVICE GAPS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	11%	14%	48	13%	54
Lack of Health Insurance	4%	11%	11	9%	28
Housing Burden	Yes	N/A	N/A	N/A	N/A
Transportation Access Burden	Yes	N/A	N/A	N/A	N/A
Food Desert	No	N/A	N/A	N/A	N/A

Report for 1 mile Ring around the Area Report produced September 30, 2024 using EJScreen Version 2.3

Appendix D: County-Level Health Rankings

County health ranks and corresponding quartiles for both the health outcomes and health factors categories were taken from the University of Wisconsin Population Health Institute 2024 County Health Rankings National Data. Distributions of z-score ranges as reported by the 2024 County Health Rankings National Data for data present in the state of North Carolina for health factors and health outcomes are represented in **Figure 11** and **Figure 12**.

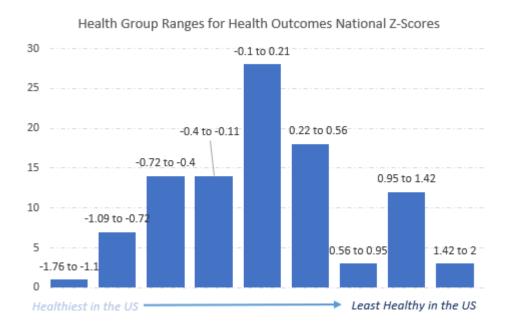


Figure 11. Histogram of health outcome ranges for national z-scores reported in 2024 County Health Rankings data.

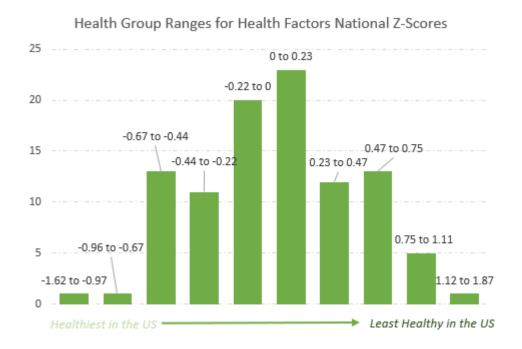


Figure 12. Histogram of health factor ranges for national z-scores reported in 2024 County Health

Appendix E: CDC Environmental Justice Index Model

The EJI is intended to evaluate the cumulative impacts of environmental injustice on health by ranking census tracts based on combined social, environmental burden, and health vulnerability indicators. Social vulnerability indicators include racial/ethnic minority status, socioeconomic status, household characteristics, and housing type. Environmental burden indicators include air pollution, potentially hazardous and toxic sites, built environment, transportation infrastructure, and water pollution. Health vulnerability is determined based on pre-existing chronic disease burden. The CDC's EJI delivers a single score for each census tract to identify areas most at risk for the health impacts of environmental burden.

Ranking calculated by multiplying the sum of health vulnerability flags (n = 5) by 0.2 to produce a number between 0 - 1. Note: Due to a lack of scientific evidence supporting a specific weighting scheme, all modules are weighted equally in calculating the Overall EJI Score. This method of equal weighting for all modules aligns with that used by the Environmental Justice Screening Method (Sadd et al., 2011). Overall EJI Scores are percentile ranked to produce a final EJI Ranking with a range of between 0-1.

Appendix F: Limitations

Census Data

Census data is collected at a national level every 10 years. Data used in this report was collected between 2010 - 2019. For each sociodemographic indicator described, the most recent available data since 2022 at a census tract level was utilized. Since not all data from the 2022 census has been published, all data utilized was collected before 2022 to maintain comparability at the tract level. Specific data tables and years available are listed in Appendix A.

Furthermore, reporting affects sample size which then affects interpretation of data. The U.S. Census Bureau uses and provides margins of error which is used as an indicator of potential sampling errors and relative reliability. A larger margin of error corresponds to a larger degree of uncertainty. Margins of error for sociodemographic indicators are provided in Appendix C as available through the U.S. Census Bureau.

- Data available through EJScreen is not compatible with all categories of data from U.S. Census Bureau data. Therefore, not all comparison tables contain the project area percentages or estimates.
- Data retrieved through EPA EJScreen is based on a one-mile radius of the UNC-CH Cogeneration Facility whereas U.S. Census Bureau data is based on census tracts. As such, the evaluated populations will differ.
- A significantly smaller portion of census tracts 107.07, 107.09, 107.10, 115, 118, 122.01 is included within the one-mile radius of the UNC-CH Cogeneration Facility compared to other intersecting census tracts. Despite this, the census tracts are still included in the analysis as it is still within proximity of the facility.

For more information about census data collection methods and sources, please visit www.data.census.gov.

Cumulative Impacts and Health

As previously mentioned, there is no standardized methodology to assess for cumulative impacts at this current time. This analysis does however examine the factors that may contribute to cumulative impacts. However, this analysis does not establish or imply any direct causal link between the environmental source exposures used in this analysis and health outcomes.

Measurements of Poverty Among Student Populations

Poverty rates based on census data rely on income thresholds to define economic hardship. However, in areas with a high percentage of university students, these measures may not accurately reflect the true material living conditions of the community.

In a 2018 analysis, Census Bureau researchers found that in a number of areas, the inclusion of off-campus students had a statistically significant impact on local poverty rates, in some cases increasing the rate by 10 or more percentage points. ¹⁹ This study included an estimate of the poverty rate in Chapel Hill that found a 10.9% reduction in the overall poverty rate when off-campus college students were excluded from poverty calculations.

Appendix G: Glossary

TERM	DEFINITION
Age	The length of time in completed years that a person has lived.
Block Group	A block is the smallest geographic unit for which the Census Bureau tabulates decennial census data. Statistical divisions of census tracts are generally defined to contain between 600 and 3,000 people and are used to present data and control block numbering. A block group consists of clusters of blocks within the same census tract that have the same first digit of their four-digit census block number.
Census Tract	A small, relatively permanent statistical subdivision of a county delineated by a local committee of census data users for the purpose of presenting data. Census tracts ideally contain about 4,000 people and 1,600 housing units. Small, relatively permanent statistical subdivisions of a county or statistically equivalent entity that can be updated by local participants prior to each decennial census as part of the Census Bureau's Participant Statistical Areas Program. Census tracts generally have a population size between 1,200 and 8,000 people, with an optimum size of 4,000 people. A census tract usually

¹⁹ Small and Large College Towns See Higher Poverty Rates, https://www.census.gov/library/stories/2018/10/off-campus-college-students-poverty.html

	covers a contiguous area; however, the spatial size of census tracts varies widely depending on the density of settlement. Census tracts occasionally are split due to population growth or merged as a result of substantial population decline.
Civil Rights Restoration Action of 1987	Amends several anti-discrimination laws, including the Civil Rights Act of 1964, to define the phrase "program or activity" and the term "program" to mean <i>all operations</i> of a (non-religious) entity that receives Federal financial assistance.
Disability	A long-lasting physical, mental, or emotional condition. This condition can make it difficult for a person to do activities such as walking, climbing stairs, dressing, bathing, learning, or remembering. This condition can also impede a person from being able to go outside the home along or to work at a job or business.
Disproportionate Effects	Term used in Executive Order 12898 to describe situations of concern where there exists significantly higher and more adverse health and environmental effects on minority populations, low-income populations, or indigenous peoples.
Environmental Justice (EJ)	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.
Income	The money income received on a regular basis (exclusive of certain money receipts such as capital gains and lump-sum payments) before payments for personal income taxes, social security, union dues, Medicare deductions, etc.
Limited English Proficiency (LEP)	The language currently used by respondents at home, either "English only" or a non-English language which is used in addition to English or in place of English.
People of Color Populations	According to the U.S. Census Bureau, population of people who are not single-race white and not Hispanic. Populations of individuals who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic.
Title VI of the Civil Rights Act of 1964	Title VI of the Civil Rights Act of 1964 and the U.S. Environmental Protection Agency (EPA) regulations prohibit discrimination on the basis of race, color, or national origin in any program or activity receiving federal financial assistance. NCDEQ is a recipient of financial assistance from the U.S. EPA and is subject to the provisions of Title VI and EPA's implementing regulations.

Race	A person's self-identification with one or more social groups. An individual can report [to the U.S. Census] as White, Black or African American, Asian, American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander, or some other race.
Sensitive Receptors	Areas where the occupants are more susceptible to the adverse effects of exposure to toxic chemicals, pesticides, and other pollutants. Sensitive receptors include, but are not limited to, hospitals, schools, daycare facilities, elderly housing and convalescent facilities.
Sex	A person's biological sex.