

North Carolina Department of Environmental Quality

August 3, 2023

Animal Feeding Operations General Permit Renewal

Draft Environmental Justice Report

It is the policy of the North Carolina Department of Environmental Quality (DEQ) that no person shall, on the grounds of race, religion, color, national origin, ethnicity, sex, pregnancy, gender identity or expression, sexual orientation, age, political affiliation, National Guard or veteran status, genetic information, 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 Act of 1987, the Rehabilitation Act of 1973, and all other pertinent nondiscrimination laws and regulations.

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 EJ in DEQ's activities.



Table of Contents

Table of Contents	3
List of Figures	5
List of Tables	5
Glossary	6
Executive Summary	9
Objective	9
Key Findings	9
Recommendations	10
1. Introduction	11
2. Environmental Justice Evaluation	12
2.1 Methods	13
<i>Methodology of Spatial AFO Analysis</i>	13
<i>Methodology of Sociodemographic Analysis</i>	13
2.2 Animal Feeding Operation Geographic Distribution.....	14
<i>Swine Animal Feeding Operations</i>	14
<i>Cattle Animal Feeding Operations</i>	14
<i>Wet Poultry Animal Feeding Operations</i>	15
2.3 Sociodemographic Indicators	19
Race & Ethnicity	19
Age & Sex	19
Disability	19
Limited English Proficiency	19
Educational Attainment.....	20
Poverty & Low-Income	20
3. Sociodemographic Analysis	21
3.1 Race & Ethnicity	21
Potential for EJ Concerns	21
Results.....	21
3.2 Age & Sex.....	26
Potential for EJ Concerns.....	26
3.3 Disability	27
Potential for EJ Concerns	27

Results	28
3.4 Limited English Proficiency.....	29
Potential for EJ Concerns.....	29
Results	29
3.5 Educational Attainment.....	31
Potential for EJ Concerns.....	31
Results	31
3.6 Poverty & Low-Income	34
Potential for EJ Concerns.....	34
Results	34
4. Health	36
4.1 County Health Outcome Ranks.....	36
4.2 Sensitive Receptors.....	37
5. Cumulative Impacts	38
6. Limitations	41
Census Data.....	41
Cumulative Impacts and Health	41
Permitted Facilities	41
7. Conclusion	43
Potential Cumulative Impacts.....	43
Key Findings	43
Recommendations.....	44
References	45
Appendix	46
Appendix A: Census Data Tables for Sociodemographic Indicators.....	47
Appendix B: Additional Data Sources	48
Appendix C: Sociodemographic Indicators	49
80 th percentiles of Swine, 80 th percentile of Cattle, and Wet Poultry	49
All Swine AFO and All Cattle AFO Census Tracts.....	52
Appendix D: Swine, Cattle, and Wet Poultry Counties and Census Tracts	59
Appendix E: CDC Environmental Justice Index Model	66
Appendix F: Cumulative Impact Analysis Census Tracts	67
Appendix G: Sensitive Receptors for Outreach	68

List of Figures

Figure 1. Steady State Live Weight per Square Mile for all AFO types by census tract 16

Figure 2. Distribution of Animal Feeding Operation Steady State Live Weight per Square Mile Across NC Census Tracts by Animal Type (top: swine, middle: cattle; bottom: wet poultry). The darkest green census tracts indicate the 80th percentile of swine census tracts and darkest blue indicates the 80th percentile of cattle census tracts. 17

Figure 3. NC Census Tracts containing Animal Feeding Operations and NCDEQ's Potentially Underserved Block Groups (PUBG) by animal type. The darkest shade of green for swine and blue for cattle indicates census tracts in the 80th percentile of SSLW 18

Figure 4. Population Percentages of Different Races & Ethnicities in NC and AFO Census Tracts. 24

Figure 5. *Minority Population Percentage in NC & AFO Census Tracts; * indicates a 10% difference when compared to the State*..... 25

Figure 6. Spanish-Speaking Population Percentage with Limited English Proficiency in NC and AFO Census Tracts; * indicates a 10% difference when compared to the State 30

Figure 7. Population Percentage of those 18 - 24 Years with Less than a High School Graduate Degree in NC and AFO Census Tracts; * indicates a 10% difference when compared to the State 32

Figure 8. Population Percentage of Ages 25 Years and Above Based on the Highest Level of Education Attained in NC and AFO Census Tracts * indicates a 10% difference when compared to the State 33

Figure 9. 2023 NC County Health Outcome Ranks 36

Figure 10. 2023 NC County Health Factors Ranks..... 37

Figure 11. Bivariate Analysis of CDC Environmental Justice Index Scores with Total Swine Steady State Live Weights in 2019 NC Census Tracts (County Boundaries) 39

Figure 12. Bivariate Analysis of CDC Environmental Justice Index Scores with Total Swine Steady State Live Weights in 2019 NC Census Tracts (County Boundaries and Labels)..... 40

List of Tables

Table 1. 80th Percentile Swine Census Tracts in Counties with Tribes or Urban Indian Organizations..... 22

Table 2. 80th Percentile Cattle Census Tracts with Tribes or Urban Indian Organizations 23

Table 3. Wet Poultry Counties with Tribes or Urban Indian Organizations 23

Table 4. Population Percentages of Different Races & Ethnicities in NC and AFO Census Tracts 25

Table 5. Minority Population Percentage in AFO Census Tracts..... 26

Table 6. Median Age & Sex Distribution in NC and AFO Census Tracts..... 27

Table 7. Age Distribution for Ages 5 and Below and Ages 65 and Above in NC and AFO Census Tracts 27

Table 8. Population Percentage of Civilians with a Disability and the Types of Difficulties Experienced in NC and AFO Census Tracts 28

Table 9. Population Percentages of Limited English-Speaking Proficiency for Six Most-Spoken Non-English Languages in the State for NC and AFO census tracts 30

Table 10. Population Percentage Based on the Highest Level of Education Attained in NC and AFO Census Tracts 33

Table 11. Population Percentage Experiencing Poverty in NC and AFO Census Tracts 34

Glossary

TERM	DEFINITION
Age	The length of time in completed years that a person has lived.
Animal Feeding Operation (AFO)	Agricultural feedlot activity, including confined feeding, breeding, raising, and holding of animals in lots or buildings specifically designed as confinement areas, in which animal waste may accumulate or plant cover cannot be maintained. ¹ To be classified as an Animal Feeding Operation, feedlots would involve a minimum of 250 swine, 100 confined cattle, 75 horses, 1,000 sheep, or 30,000 poultry with a liquid waste management system.
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.
Cattle AFO	Animal feeding operation involving 100 or more confined cattle (sometimes referred to as cows).
Census Tract	<p>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.</p> <p>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</p>

¹ NC Gen Stat § 143-215.10B (2022)
https://www.ncleg.net/enactedlegislation/statutes/html/bysection/chapter_143/gs_143-215.10b.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.
Hazardous Air Pollutants	Also known as toxic air pollutants or air toxics; substances released into the air that can cause cancer, reproductive/birth effects, and other serious health and environmental effects. ²
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.
Minority 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.

² *What are Hazardous Air Pollutants?* (2022). US EPA. <https://www.epa.gov/haps/what-are-hazardous-air-pollutants>

Overburdened Communities	A minority, low-income, tribal or indigenous populations, or geographic locations in the United States that potentially experience disproportionate environmental harms and risks (US EPA). This disproportionality can be as a result of greater vulnerability to environmental hazards, lack of opportunity for public participation, or other factors. Increased vulnerability may be attributable to an accumulation of negative or lack of positive environmental, health, economic, or social conditions within these populations or places. The term 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.
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. NC DEQ 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 US 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.
Steady State Live Weight (SSLW)	The number of animal feeding operations covered by a state swine certificate of coverage.
Swine AFO	Animal feeding operation involving 250 or more confined swine (hogs/pigs).
Wet Poultry AFOs	Otherwise known as facilities with poultry and a liquid waste management system. Animal feeding operation with a liquid waste management system involving 30,000 or more confined poultry (chickens, turkeys, ducks, and others). Poultry facilities with a dry litter waste management system are not regulated by the Department of Environmental Quality.

Executive Summary

Objective

The North Carolina Department of Environmental Quality (NC DEQ) is required to finalize the renewal of six state general permits for Animal Feeding Operations effective on October 1, 2024, as part of its five-year review and revision cycle. For 2024, NC DEQ will update the 2019 State General Animal Waste Management Permits and 2022 Digester System General Permits for three types of operations: swine, cattle, and poultry with a liquid waste management system (i.e., wet poultry).

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 2024 Animal Feeding Operations General Permits. Using available 2020 American Community Survey 5-year estimates, the report provides recommendations for appropriate enhanced public outreach and engagement to facilitate public input. Specifically, this reports highlights census tracts where density of existing permitted animal feeding operations may indicate the potential for environmental justice concerns.

Key Findings

Based on this report's analysis and using NC DEQ's definition for 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 National Environmental Policy Act (NEPA) documentation, the key findings are as follows:

- **Census tracts with swine animal feeding operations, and census tracts within or above the 80th percentile for swine SSLW/mile², have ≥5% higher or ≥10% higher differences when compared to the state for the following: households which speak Spanish with limited English proficiency (≥5%), minority race & ethnic populations (≥10%), and populations below the poverty level (≥10%).**
- **Census tracts with swine and wet poultry animal feeding operations have a ≥10% higher difference for population of individuals living below 200% of the poverty level when compared to the state.**
- **Census tracts with cattle, swine, and wet poultry animal feeding operations have a ≥10% higher difference in the population of those who live with a disability and who have lower educational attainment when compared to the state. These census tracts also have a ≥10% higher difference in the population whose highest level of education is a high school degree when compared to the state.**
- **Census tracts with wet poultry animal feeding operations have a ≥10% higher difference in populations ≥65 years of age when compared to the state.**

The following potential EJ concerns have been identified:

- **Race and Ethnicity:**
 - Total minority populations – census tracts with swine AFOs have a ≥10% higher difference in total minority populations when compared to the state.

- Specific minority populations – Black or African American, Hispanic or Latino, American Indian or Alaskan Native, Native Hawaiian or Pacific Islander, and those who are two or more races.
- **Tribal Communities:**
 - Up to five state or federally recognized tribes or urban Indian organizations residing within counties with census tracts within or above the 80th percentile for swine steady-state live weight per square mile, census tracts within or above the 80th percentile for cattle steady-state live weight per square mile, or with wet poultry facilities.
- **Age and Sex:** Populations of age 65 and older.
- **Limited English Proficiency:** Spanish-speaking populations.
- **Disability:** Populations with hearing, vision, cognitive, ambulatory, self-care, and independent living difficulties.
- **Education:** Populations whose highest level of educational attainment is less than a bachelor's degree.
- **Poverty:** Populations experiencing poverty below the poverty level and 200% below the poverty level.

Recommendations

DEQ has committed to a full public engagement process for the general permits, including four public hearings (one virtual) with 60-days of notice, a 90-day comment period, translation and interpretation services for Spanish-speaking residents and enhanced outreach as outlined in the DEQ Public Participation Plan.

In addition, the Environmental Justice Program recommends the following outreach for the Animal Feeding Operations General Permits public hearings:

- Generate a one-page flyer in Spanish and English.
- Conduct outreach and media releases through Spanish radio and news outlets as well as non-profits leaders and community leaders with connections to the Spanish-speaking community.
- Arrange an English and Spanish voicemail line to receive public comments by phone.
- Engagement with the following state or federally recognized tribes:
 - Coharie
 - Haliwa Saponi
 - Metrolina Native American Association
 - Lumbee
 - Waccamaw Siouan
- Prioritize outreach to identified sensitive receptors by email.
- Ensure the selected site for public hearing(s) has wheelchair accessibility.
- Ensure the selected site for public hearing(s) has enough space for public commenters.
- Consult known community leaders for additional outreach options.

1. Introduction

The North Carolina Department of Environmental Quality (NC DEQ) is required to finalize the renewal of six state general permits for Animal Feeding Operations effective on October 1, 2024, as part of its five-year review and revision cycle. For 2024, NC DEQ will update the 2019 State General Animal Waste Management Permits and 2022 Digester System General Permits for three types of operations: swine, cattle, and poultry with a liquid waste management system (i.e., wet poultry).

Animal operations are defined by General Statute 143-215.10B as feedlots involving more than 250 swine, 100 confined cattle, 75 horses, 1,000 sheep, or 30,000 poultry with a liquid waste management system. The general permits contain the required performance standards, operation and maintenance requirements, monitoring and reporting requirements, policy for inspections and entry to the farms, general conditions and the penalty policy. Each general permit is issued with a Certificate of Coverage that is permittee-specific and designates the permitted number and type of animals. These general permits are non-discharge permits, meaning they do not allow for waste to be discharged to waters of the state.

As of July 31, 2023, North Carolina has issued approximately 1,943 Certificates of Coverage for swine facilities under the 2019 General Permit. Of those, 8 facilities also hold certificates of coverage under the 2022 Digester System General Permit.

There are 114 Certificates of Coverage for cattle facilities and 7 Certificates of Coverage for wet poultry facilities.

The 2020 census data and corresponding sociodemographic analysis in this EJ report is informing the agency's approach to the community engagement process as the agency develops the final versions of the Swine, Cattle, and Wet Poultry General Permits.

2. Environmental Justice Evaluation

NC DEQ and its Environmental Justice (EJ) Program maintains an ongoing interest in integrating better protections for human health, vulnerable communities, the environment, and civil rights into its programs.

The Environmental Justice Program at NC DEQ 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 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 2024 Animal Feeding Operations General Permits. Using available 2020 American Community Survey 5-year estimates, the report provides recommendations for appropriate enhanced public outreach and engagement to facilitate public input. Specifically, this reports highlights census tracts where density of existing permitted animal feeding operations may indicate the potential for environmental justice concerns.

In 2022, NC DEQ's Environmental Justice Program published the Biogas Digester General Permit Development Environmental Justice Report which analyzed swine, cattle, and wet poultry facilities covered under the 2019 general permits, their respective pounds of steady-state live weights per square mile, and three different sociodemographic indicators for select block groups, census tracts, and counties. The three sociodemographic indicators analyzed were race and ethnicity, poverty, and limited English proficiency (specifically only Spanish). The report evaluated three sociodemographic indicators for the five counties with the highest values of SSLW per square mile for each type of animal.

For this environmental justice report, NC DEQ's Environmental Justice Program expands its analysis by:

- Evaluating additional sociodemographic indicators including the aforementioned sociodemographic indicators (race and ethnicity, poverty, and limited English proficiency), four additional indicators (Age, sex, disability, and educational attainment), and five additional language categories under the limited English proficiency dataset (French, German, Chinese [includes Mandarin and Cantonese], Vietnamese, and Arabic) on a census tract and county level.
- Comparing sociodemographic indicators among all North Carolina census tracts among all counties with swine, cattle, or wet poultry compared to the rest of the state.
- Using updated 2020 five-year estimates from the U.S. Census as opposed to 2020 ten-year estimates or 2019 five-year estimates.
- Further comparing sociodemographic indicators among census tracts with higher-than-average swine or cattle steady state live weight per miles² compared to the rest of the state.
- Providing an overview of potential cumulative impacts using the CDC Environmental Justice Index.³
- Identifying sensitive receptors found within 5,000 ft. of swine AFOs which may be exposed to facility odors.

³ 2022 *Environmental Justice Index*. Centers for Disease Control and Prevention (CDC) and Agency for Toxic Substances Disease Registry (ATSDR). Accessed July 12, 2023. <https://www.atsdr.cdc.gov/placeandhealth/eji/index.html>.

See section 2.3 for more information on the chosen sociodemographic indicators and Appendix A for details on U.S. census data tables used for this report compared to the 2022 Biogas report.

2.1 Methods

Methodology of Spatial AFO Analysis

The Environmental Justice Program used GIS tools to identify AFO facilities in their census tract locations and summed the total SSLW for AFOs within that census tract. The weight per square mile of the SSLW within that census tract was then determined for each census tract containing an AFO with a non-zero SSLW using the following equation:

$$\text{SSLW per mile}^2 = ([\text{Allowable count of animal types for a facility}] * [\text{Average SSLW for that animal type}]) / [\text{census tract area}]$$

The SSLW per square mile was measured in pounds (lbs) per square mile (mi²).

To analyze the upper threshold of SSLW per square mile within a census tract, the 80th percentile and above of SSLW per square mile per census tract area was selected by AFO permit type. This created the following census tract classifications to be analyzed as sociodemographic subsets:

- Tracts with swine AFOs
- 80th percentile of swine census tracts by SSLW per square mile
- Tracts with cattle AFOs
- 80th percentile cattle census tracts by SSLW per square mile
- Tracts with wet poultry AFOs.

Facilities with more than one animal type used the sum of the total combined SSLW for each type of animal to determine the AFO per square mile. Because of the low quantity of permitted wet poultry AFOs (n=8), there was not an 80th percentile calculation of the census tracts with wet poultry AFOS.

Methodology of Sociodemographic Analysis

Sociodemographic analysis was informed by NC DEQ's Potentially Underserved Block Groups. NC DEQ defines potentially Underserved Communities by examining the Race/Ethnicity and Poverty criteria of each block group. The block group is then compared to both the County and the State and selected 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,⁴ this dataset is a selection of the 2019 ACS data from the data tables B03002—Hispanic or Latino Origin by Race—and S1701—Poverty Status in the Past 12

⁴ Block groups are 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.

Months. Learn more about NC DEQ's Potentially Underserved Block Groups 2019 - Overview (arcgis.com)

2.2 Animal Feeding Operation Geographic Distribution

Swine Animal Feeding Operations

In North Carolina, 1916 locations have at least one type⁵ of regulated swine operation. The swine AFOs are located in 275 census tracts in 60 counties (Figure 2).

The 80th percentile swine census tracts were found to have a SSLW per square mile of $\geq 158,544$ lbs/mi². There are 55 census tracts in 14 counties which are at or above the 80th percentile for swine SSLW per square mile. Figure 2 (top) displays swine SSLW per square mile in North Carolina by census tract with the darkest green corresponding to 80th percentile swine census tracts.

There were 198 Potentially Underserved Block groups found within census tracts that contained swine AFOs. A total of 135 census tracts were identified with swine AFOs and Potentially Underserved Block Groups present, which is 49.1% of all census tracts with swine AFOs (Figure 3).

There were 51 Potentially Underserved Block groups identified within census tracts above the 80th percentile of total swine SSLW per square mile. A total of 35 census tracts were identified with total swine SSLW above the 80th percentile and Potentially Underserved Block Groups, which is 63.6% of census tracts above the 80th percentile of swine SSLW (Figure 3).

Appendix D identifies census tracts, counties, and SSLW per square mile for all census tracts containing any swine AFO and 80th percentile swine census tracts.

Cattle Animal Feeding Operations

In North Carolina, 114 locations have at least one type of regulated cattle operation. The cattle AFOs are located in 81 census tracts in 32 counties.

The 80th percentile of cattle SSLW per square mile census tracts was found as $\geq 97,254$ lbs/mi². There are 17 census tracts in 6 counties at or above the 80th percentile for cattle SSLW per square mile. Figure 2 (middle) displays cattle SSLW per square mile for North Carolina census tracts with the darkest blue corresponding to the 80th percentile of cattle SSLW per square mile census tracts.

There were 20 Potentially Underserved Block groups found within census tracts that contained cattle AFOs. A total of 13 census tracts were identified with cattle AFOs and Potentially Underserved Block Groups present, which is 16.0% of all census tracts with cattle AFOs (Figure 3).

There were 6 Potentially Underserved Block groups identified within census tracts above the 80th percentile of total cattle SSLW per square mile. A total of 5 census tracts were identified with total cattle SSLW above the 80th percentile and Potentially Underserved Block Groups, which is 17.6% of census tracts above the 80th percentile of cattle SSLW (Figure 3).

⁵ One animal feeding operation location may have multiple permits for the same type of animal. Each unique location was counted only once for the analysis. One location may also have multiple permits for different types of animals (e.g., swine, cattle, poultry). This location was counted once for each respective type of animal covered in this report's analysis.

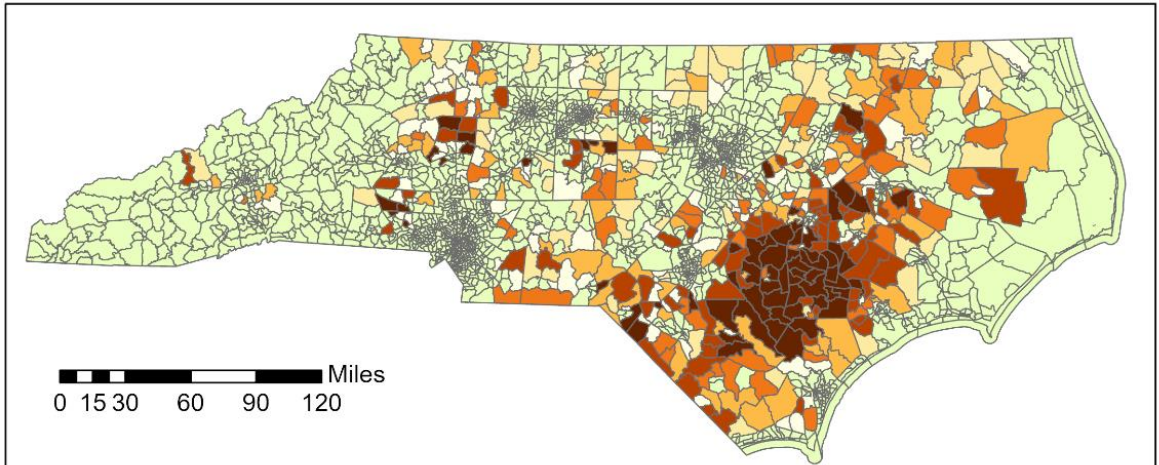
Appendix D identifies census tracts, counties, and SSLW per square mile for all census tracts containing cattle AFOs and the 80th percentile of cattle SSLW per mile census tracts.

Wet Poultry Animal Feeding Operations

In North Carolina, 8 locations have at least one type of regulated wet poultry operation. The wet poultry AFOs are located in 6 census tracts in 5 counties. Figure 1 (bottom) displays wet poultry SSLW per square mile in NC.

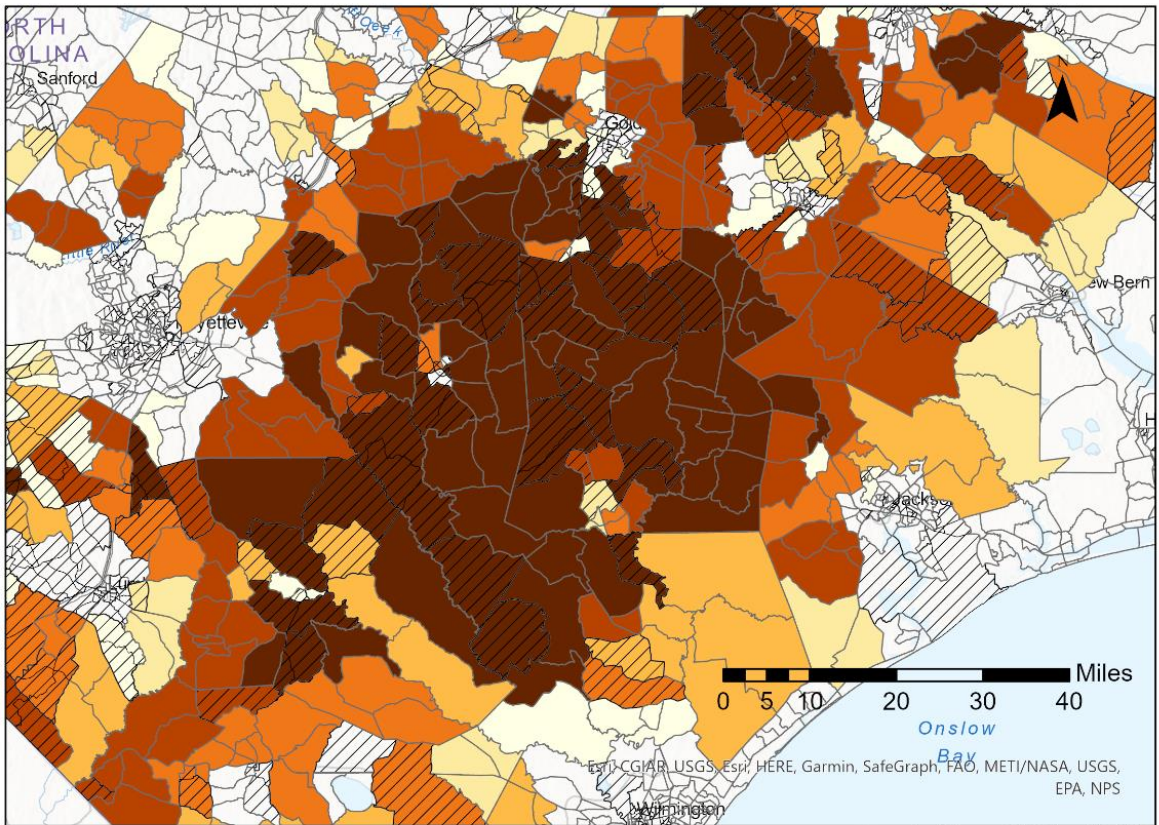
There were 5 Potentially Underserved Block groups found within census tracts that contained wet poultry AFOs. A total of 4 census tracts were identified with wet poultry AFOs and Potentially Underserved Block Groups present, which is 66.7% of all census tracts with wet poultry AFOs (Figure 3).

Appendix D identifies census tracts, counties, and SSLW per square mile for all census tracts containing any wet poultry AFO.



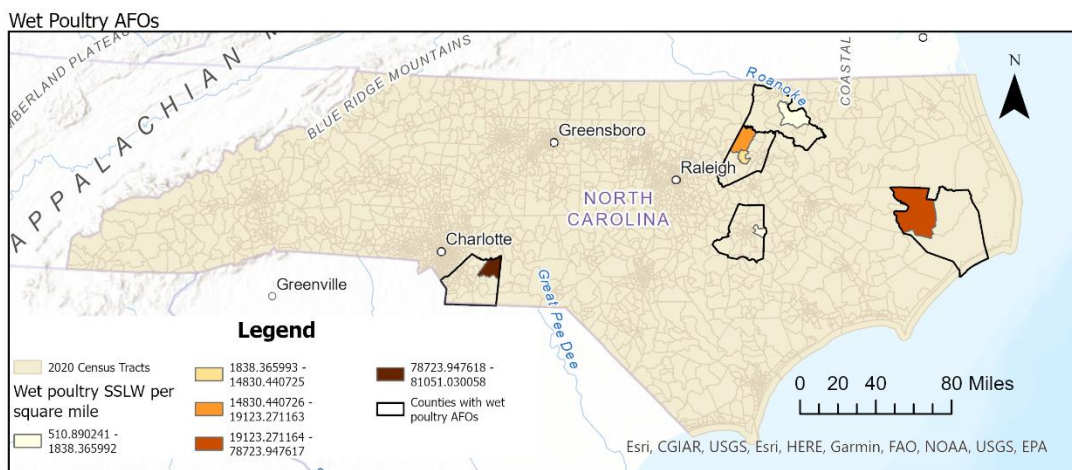
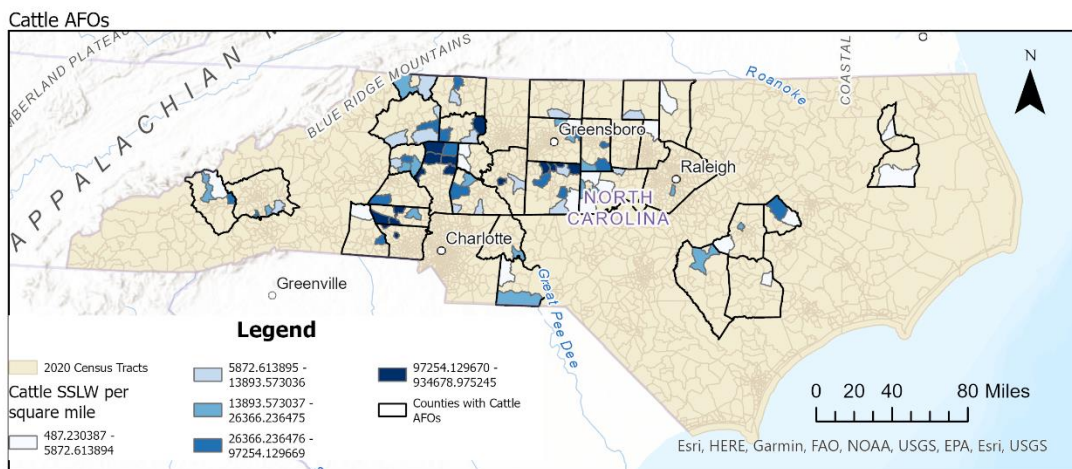
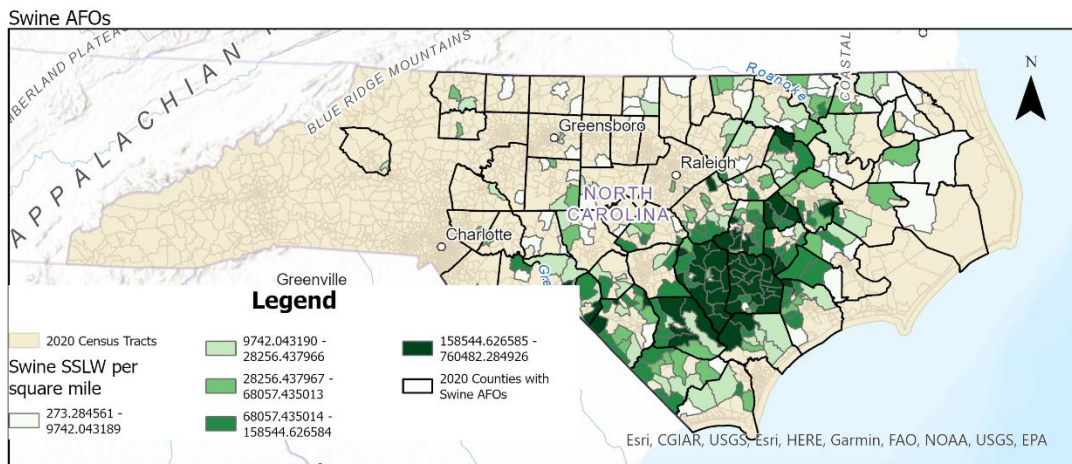
NC DEQ's Potentially Underserved Block Groups: 2020 Tracts with AFOs

Not Underserved	SSLW per square mile	0.010315 - 0.028382
Potentially Underserved	0	0.028383 - 0.068229
Other	<=0.010314	0.068230 - 0.158545
		0.158546 - 1.053394



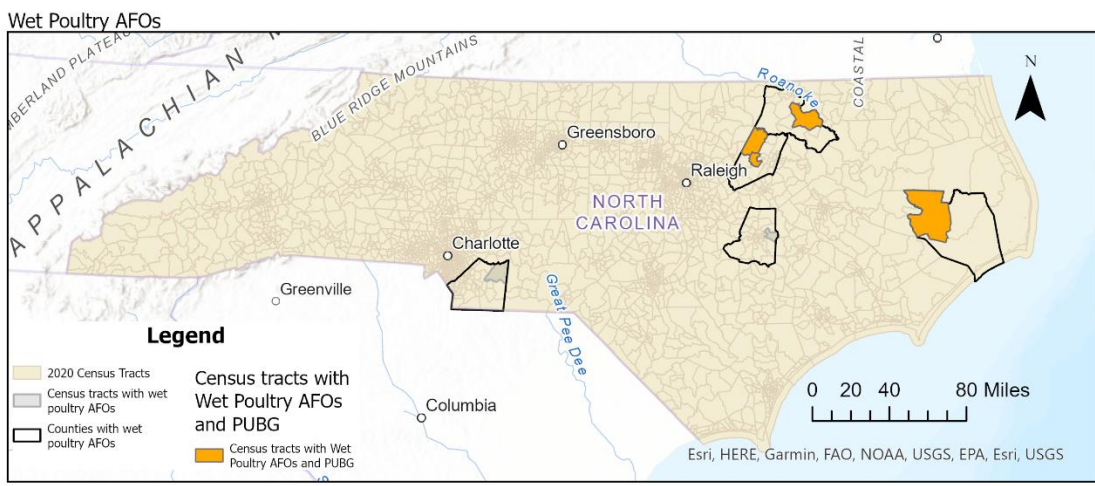
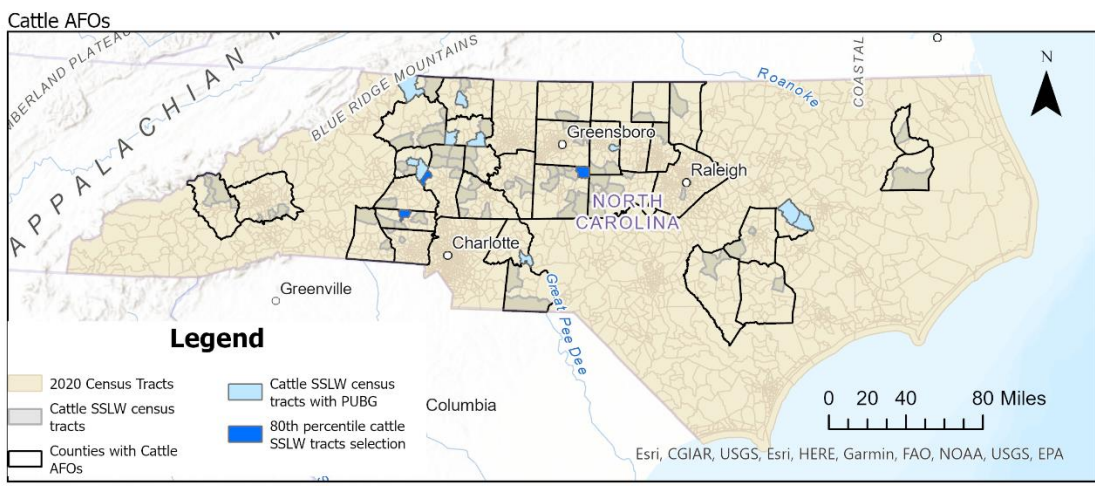
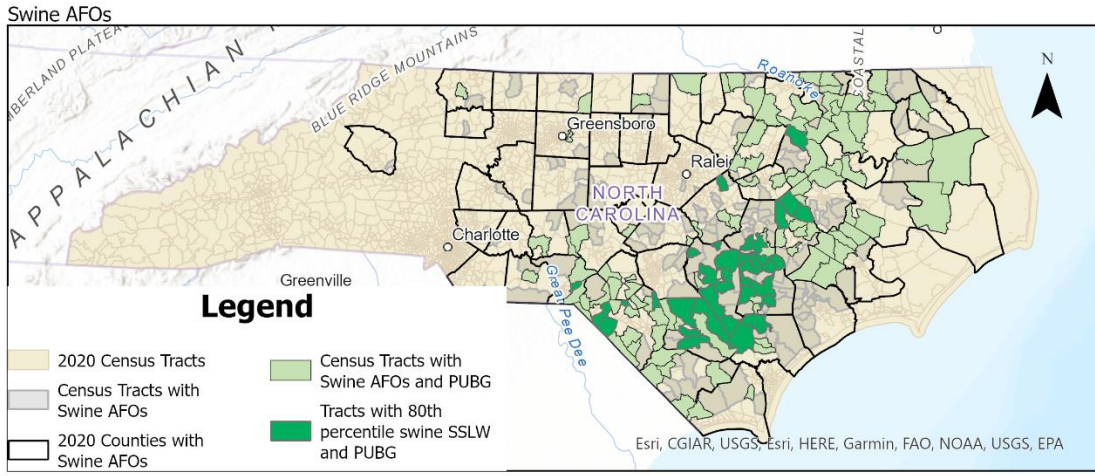
Compiled June, 2023 by NC DEQ

Figure 1. Steady State Live Weight per Square Mile for all AFO types by census tract



Produced 8/2022 by NC Department of Environmental Quality

Figure 2. Distribution of Animal Feeding Operation Steady State Live Weight per Square Mile Across NC Census Tracts by Animal Type (top: swine, middle: cattle; bottom: wet poultry). The darkest green census tracts indicate the 80th percentile of swine census tracts and darkest blue indicates the 80th percentile of cattle census tracts.



Produced 8/2022 by NC Department of Environmental Quality

Figure 3. NC Census Tracts containing Animal Feeding Operations and NCDEQ's Potentially Underserved Block Groups (PUBG) by animal type. The darkest shade of green for swine and blue for cattle indicates census tracts in the 80th percentile of SSLW

2.3 Sociodemographic Indicators

The Environmental Justice Program examined the following sociodemographic indicators:

- Race & Ethnicity
- Age & Sex
- Disability
- Limited English Proficiency (LEP)
- Educational Attainment
- Poverty

Sociodemographic data are available through the U.S. Census Bureau. See Appendix A for descriptions of all U.S. Census source data used in this report.

Race & 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 & 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.⁶

Disability

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

To analyze any 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

⁶ *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>

Spanish-, French-, German-, Chinese-, Vietnamese-, and Arabic-speaking populations are the top 6 non-English languages spoken in North Carolina.⁷ In North Carolina, the largest limited English proficiency (LEP) population is Spanish-speaking, making up approximately 3.5% of the state population and approximately 75% of the entire LEP population in North Carolina (American Community Survey 2011-2015). The next largest language groups are Chinese-speaking (approximately 3.5% of the LEP population), Vietnamese-speaking (approximately 3.3% of the LEP population), and other Asian Language-speaking (approximately 2% of the LEP population).

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

For this EJ report, populations that speak English “Less than very well,” as categorized in the U.S. Census Bureau, are considered populations with LEP.

Educational Attainment

To analyze any 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.

Poverty & Low-Income

To analyze any potential EJ concerns based on income levels, populations below the poverty level and the ratio of people 200% below the poverty level were examined. The poverty level for 2019 was defined as having a household income less than \$12,490 for a household with one individual, with an additional \$4,420 per individual added to a household. The US Census Bureau considers a household to be all individuals that occupy a housing unit as their usual place of residence.⁸ Analyzed poverty data from the US 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.

⁷ Tippet, R. (2016, April 21). Hola, xin chào, bonjour: Many languages heard in NC homes. *UNC Chapel Hill Carolina Population Center*. <https://carolinademography.cpc.unc.edu/2016/04/21/hola-xin-chao-bonjour-many-languages-heard-in-nc-homes/>

⁸ Household Definition. (n.d.). In *US Census Bureau Glossary*. <https://www.census.gov/glossary/?term=Household>

3. Sociodemographic Analysis

Using NC DEQ criteria for Potentially Underserved Block Groups (on the basis of Race/Ethnicity and Poverty on a block group level) and standard EJ guidelines established by the U.S. EPA and NEPA documentation, the following conditions are highlighted as communities with the potential for environmental justice concerns:

1. A 10% or more difference when compared to the state for race and ethnicity, age and sex, disability, and educational attainment (up to high school or equivalent level);
2. A 50% or more minority (non-White) population or a minority population percentage of the affected area that is meaningfully greater than the minority population percentage in the overall state of North Carolina⁹;
3. Share of population experiencing poverty is 20% or more;
4. Percentage increase of 5% or more compared to the state for poverty;
5. At least 5% of the population or 1,000 people (whichever is smaller) speaks English less than very well.

Average values for sociodemographic indicators among all census tracts in the state of North Carolina are compared average values among a subset of census tracts which contain a type of AFO. Any populations that meet the criteria for being a potential EJ concern is noted with a * in figures and in ***bold** in tables.

3.1 Race & Ethnicity

Potential for EJ Concerns

- **The total minority population is 49.48%** for 80th percentile swine census tracts (Figure 6; Table 5) and is **≥10% higher** compared to the state minority population.
- The following minority **races or ethnicities** in both types of swine census tracts (80th percentile swine or all swine) or census tracts with wet poultry facilities AFOs were **≥10% higher** compared to the state (Figures 4, 5; Table 4):
 - Black or African American (80th percentile swine census tracts, all swine, all wet poultry)
 - Hispanic or Latino (80th percentile swine census tracts, all swine)
 - American Indian or Alaskan Native (80th percentile swine census tracts, all swine)
 - Native Hawaiian or Pacific Islander (all wet poultry)
 - Two or more races (all wet poultry)
- Some census tracts with 80th percentile swine census tracts, 80th percentile cattle census tracts, and with wet poultry AFOs, are in counties with state-recognized Tribes or Urban Indian Organizations (Tables 1, 2, 3).

Results

Swine

Census tracts within or above the 80th percentile for swine SSLW/mile² had populations **≥10% higher** than the state for three minority race/ethnicity population categories (Figure 5; Table 4):

⁹ Council on Environmental Quality (CEQ). (1997). *Environmental Justice Guidance Under the National Environmental Policy Act* [Guidance]. US EPA. https://www.epa.gov/sites/default/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf

- Black or African American
- Hispanic or Latino
- American Indian or Alaskan Native

Census tracts with any swine AFO also had populations $\geq 10\%$ higher than the state for Black or African American and American Indian or Alaska Native populations.

The total non-White population (minority population) among 80th percentile swine census tracts is 49.48% (Figure 7; Table 5). NEPA guidelines identify Minority populations where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.¹⁰ The minority percentage for the 80th percentile swine census tracts (49.07%) $\geq 10\%$ higher is greater than the state minority percentage (37.39%) warranting it to be identified as potential EJ concern. Census tracts with any swine AFO have a total non-White population of 41.62% which is $\geq 10\%$ higher than the state average (37.39%).

Of the 14 counties with 80th percentile swine census tracts, there are 4 counties within which a state or federally recognized tribe resides (Table 1).

Table 1. 80th Percentile Swine Census Tracts in Counties with Tribes or Urban Indian Organizations

80 th PERCENTILE SWINE CENSUS TRACTS	
COUNTY	STATE OR FEDERALLY RECOGNIZED TRIBE OR URBAN INDIAN ORGANIZATION
Bladen	Waccamaw Siouan
Robeson	Lumbee
Sampson	Coharie
Scotland	Lumbee

Cattle

Census tracts within or above the 80th percentile for cattle SSLW density had no populations $\geq 10\%$ higher than the state for one minority race/ethnicity population category (Figure 5, Table 4).

Of the 6 counties with 80th percentile cattle census tracts, there are 3 counties within which an Urban Indian Organization resides (Table 2).

¹⁰ Council on Environmental Quality (CEQ). (1997). *Environmental Justice Guidance Under the National Environmental Policy Act* [Guidance]. US EPA. https://www.epa.gov/sites/default/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf

Table 2. 80th Percentile Cattle Census Tracts with Tribes or Urban Indian Organizations

80 th PERCENTILE CATTLE CENSUS TRACTS	
COUNTY	STATE OR FEDERALLY RECOGNIZED TRIBE OR URBAN INDIAN ORGANIZATION
Iredell	Metrolina Native American Association
Gaston	Metrolina Native American Association
Lincoln	Metrolina Native American Association

Wet Poultry

Census tracts with wet poultry facilities had populations $\geq 10\%$ higher than the state for the three race/ethnicity categories (Figure 5; Table 4):

- Black or African American
- Native Hawaiian or Pacific Islander
- Two or more races

Of the 5 counties with wet poultry facilities, there are 2 counties within which a state or federally recognized tribe resides (Table 3).

Table 3. Wet Poultry Counties with Tribes or Urban Indian Organizations

WET POULTRY AFOs	
COUNTY	STATE OR FEDERALLY RECOGNIZED TRIBE OR URBAN INDIAN ORGANIZATION
Halifax	Haliwa-Saponi
Union	Metrolina Native American Association

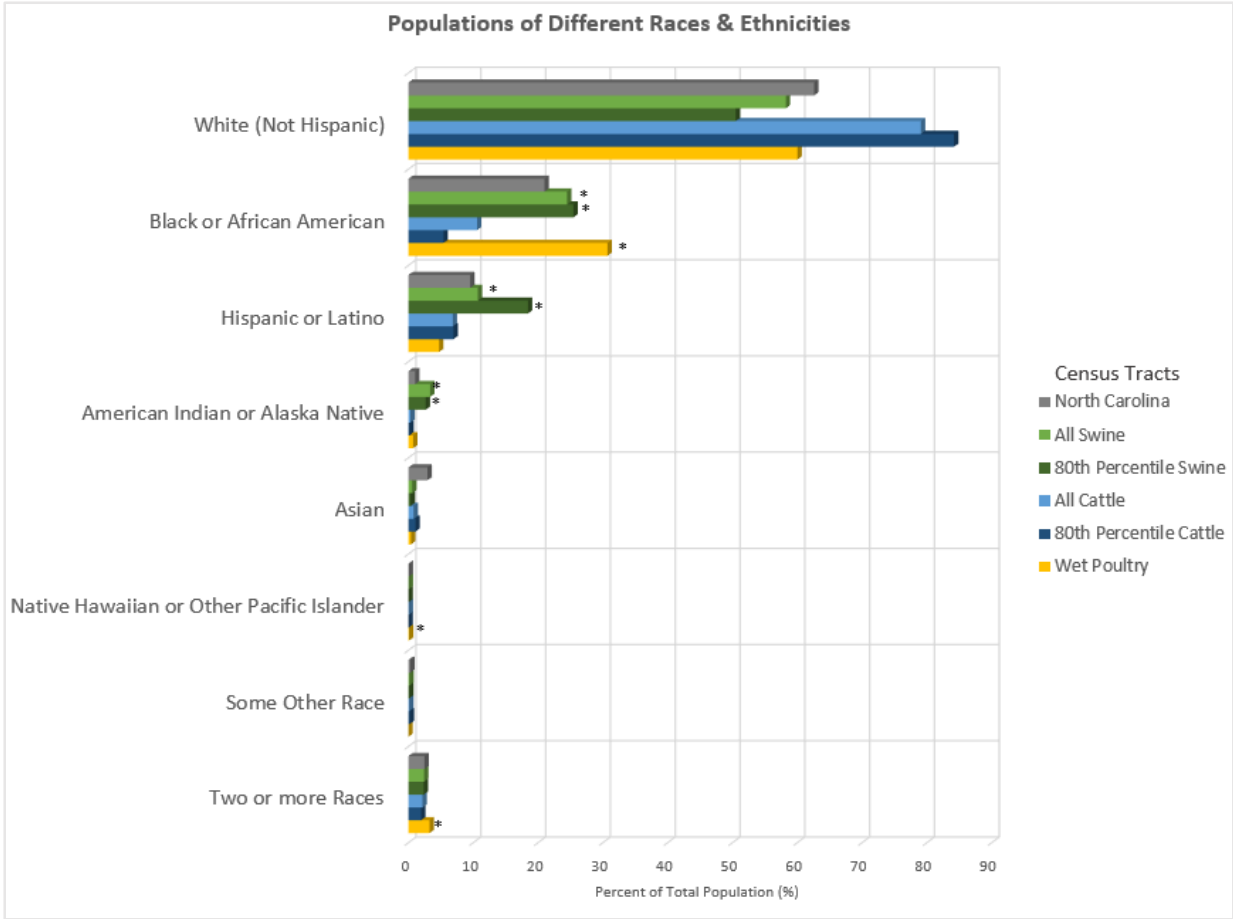


Figure 4. Population Percentages of Different Races & Ethnicities in NC and AFO Census Tracts.

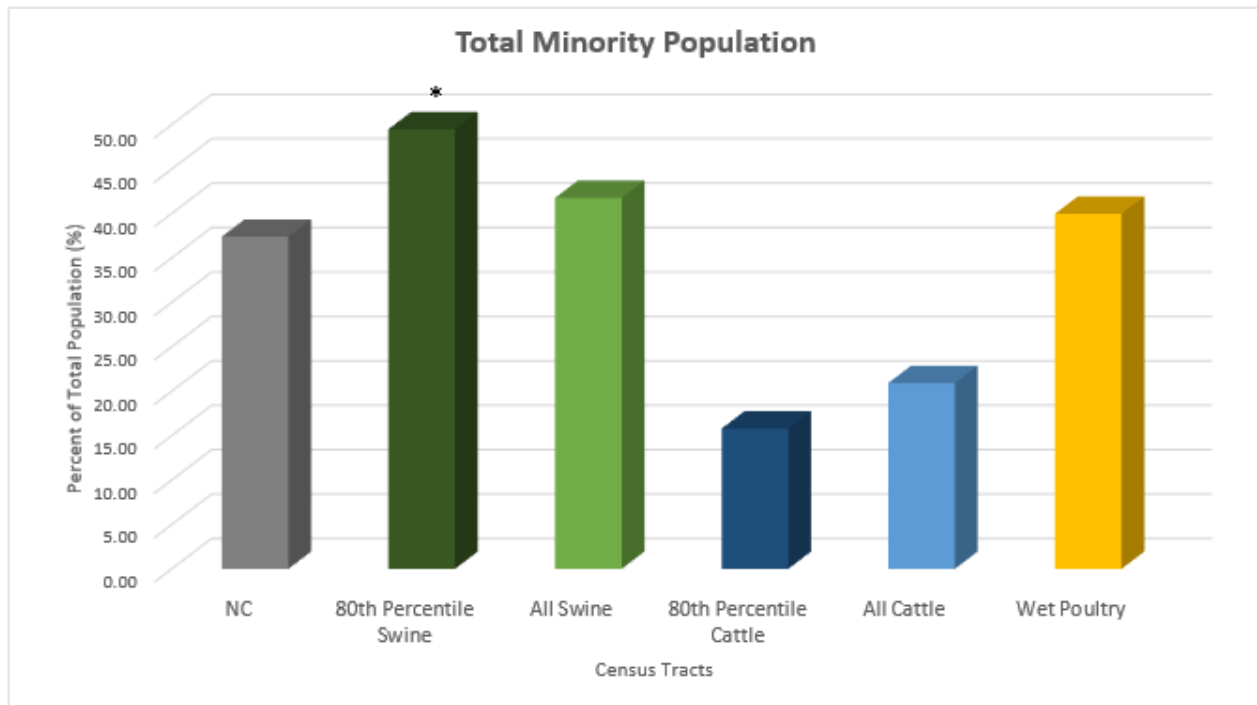


Figure 5. Minority Population Percentage in NC & AFO Census Tracts; * indicates a 10% difference when compared to the State

Table 4. Population Percentages of Different Races & Ethnicities in NC and AFO Census Tracts

RACE & ETHNICITY (%)				
	NORTH CAROLINA (n=2672)	80th PERCENTILE SWINE CENSUS TRACTS (n=55)	80th PERCENTILE CATTLE CENSUS TRACTS (n=8)	WET POULTRY CENSUS TRACTS (n=6)
White (Not Hispanic)	62.61	50.52	84.21*	60.04
Black or African American	21.01	25.48*	5.42	30.73*
Hispanic or Latino	9.54	18.45*	6.96	4.74
American Indian or Alaska Native	1.04	2.68*	0.15	0.72
Asian	2.95	0.35	1.10	0.40
Native Hawaiian or Other Pacific Islander	0.06	0.02	0.01	0.10*

Some other Race¹¹	0.29	0.13	0.20	0.00
Two or More Races	2.49	2.37	1.96	3.26*
Total Population	10,386,227	190,736	29,286	25,498

Source: US Census Bureau, 2020 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.

Table 5. Minority Population Percentage in AFO Census Tracts

MINORITY POPULATION (%)			
NORTH CAROLINA (n=2672)	80th PERCENTILE SWINE CENSUS TRACTS (n=55)	80th PERCENTILE CATTLE CENSUS TRACTS (n=8)	WET POULTRY CENSUS TRACTS (n=6)
37.39	49.48*	15.79	39.96

Source: US Census Bureau, 2020 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.

3.2 Age & Sex

Potential for EJ Concerns

- The population of those who are **age 65 or older** was **≥10% higher** for all cattle census tracts and for wet poultry census tracts when compared to the state (Table 7).

Swine

In census tracts within or above the 80th percentile for swine SSLW per square mile or with any swine AFO, no notable differences were observed in the population of those who are age 5 or younger, nor in the population of those age 65 or older (Table 7).

No notable differences between the male and female populations were observed (Table 6).

Cattle

In census tracts within or above the 80th percentile for cattle per square mile or with any cattle AFO, the population of those who are age 65 and older was **≥10% higher** when compared to the state (Appendix C). No notable differences in the population of those who are age 5 or younger were observed.

¹¹ Includes all other responses not included in the White (Not Hispanic), Black or African American, Hispanic or Latino, American Indian or Alaska Native, Asian, and Native Hawaiian and Other Pacific Islander U.S. census categories.

Wet Poultry

In census tracts with wet poultry facilities, the population of those who are age 65 and older was $\geq 10\%$ higher when compared to the state (Table 7). No notable differences in the population of those who are age 5 or younger were observed.

No notable differences between the male and female populations were observed (Table 6).

Table 6. Median Age & Sex Distribution in NC and AFO Census Tracts

MEDIAN AGE & SEX												
	NORTH CAROLINA CENSUS TRACTS (n=2672)			80th PERCENTILE SWINE CENSUS TRACTS (n=55)			80th PERCENTILE CATTLE CENSUS TRACTS (n=8)			WET POULTRY CENSUS TRACTS (n=6)		
	Male	Female	Both	Male	Female	Both	Male	Female	Both	Male	Female	Both
Median Age	39.3	41.8	40.6	39.0	41.2	40.0	41.1	44.1	42.2	43.9	47.1	45.2
Total (%)	48.65	51.35		49.85	50.15		52.22	47.78		52.18	47.82	

Source: US Census Bureau, 2020 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.

Table 7. Age Distribution for Ages 5 and Below and Ages 65 and Above in NC and AFO Census Tracts

AGE (%)				
	NORTH CAROLINA CENSUS TRACTS (n=2672)	80th PERCENTILE SWINE CENSUS TRACTS (n=55)	80th PERCENTILE CATTLE CENSUS TRACTS (n=8)	WET POULTRY CENSUS TRACTS (n=6)
Below 5 Years Old	5.83	6.24	6.06	4.94
Above 65 Years Old	16.26	16.80	16.90	19.74*

Source: US Census Bureau, 2020 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.

3.3 Disability

Potential for EJ Concerns

- The **total population with a disability** in 80th percentile swine census tracts, 80th percentile cattle census tracts, and with wet poultry facilities were $\geq 10\%$ **higher** when compared to the state (Table 8).
- All six U.S. Census-identified **types of difficulties** were $\geq 10\%$ **higher** in 80th percentile swine census tracts and 80th percentile cattle census tracts when compared to the state (Table 8):
 - Hearing

- Vision
- Cognitive
- Ambulatory
- Self-care
- Independent Living

Results

Swine

In census tracts within or above the 80th percentile for swine SSLW density, the total population with a disability was ≥10% higher when compared to the state (Table 8).

All six types of difficulties included in this analysis (hearing, vision, cognitive, ambulatory, self-care, and independent living) were also ≥10% higher when compared to the state for 80th percentile swine census tracts (Table 8).

Cattle

In census tracts within or above the 80th percentile for cattle SSLW density, the total population with a disability was ≥10% higher when compared to the state (Table 8).

All six types of difficulties included in this analysis (hearing, vision, cognitive, ambulatory, self-care, and independent living) were also ≥10% higher when compared to the state for 80th percentile cattle census tracts (Table 8).

Wet Poultry

In census tracts with wet poultry facilities, the total population with a disability was ≥10% higher when compared to the state (Table 8).

Five of six types of difficulties were also ≥10% higher when compared to the state (Table 8):

- Hearing
- Cognitive
- Ambulatory
- Self-care
- Independent living

Table 8. Population Percentage of Civilians with a Disability and the Types of Difficulties Experienced in NC and AFO Census Tracts

DISABILITY (%)				
	NORTH CAROLINA CENSUS TRACTS (n=2672)	80th PERCENTILE SWINE CENSUS TRACTS (n=55)	80th PERCENTILE CATTLE CENSUS TRACTS (n=8)	WET POULTRY CENSUS TRACTS (n=6)
Population with a Disability	13.39	17.74*	18.18*	17.66*

Type of Difficulty				
Hearing	3.73	4.93*	5.73*	5.31*
Vision	2.59	3.83*	3.57*	1.86
Cognitive	5.07	6.85*	7.32*	6.07*
Ambulatory	7.00	9.55*	9.44*	10.80*
Self-care	2.55	3.14*	3.41*	4.49*
Independent Living	4.63	5.89*	5.20*	7.33*
<p>Source: US Census Bureau, 2020 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.</p>				

3.4 Limited English Proficiency

Potential for EJ Concerns

- Populations that speak Spanish with **Limited English Proficiency** were **≥5% higher** in 80th percentile swine census tracts and with any swine AFO when compared to the state (Figure 5; Table 9). 80th percentile swine census tracts have populations that speak Spanish with Limited English Proficiency **≥5% higher** compared to all census tracts with swine AFOs.
- Populations that speak French with **Limited English Proficiency** were **≥5% higher** in census tracts with 80th percentile swine census tracts when compared to the state (Table 9).
- Populations that speak Arabic with **Limited English Proficiency** were **≥5% higher** in census tracts with wet poultry facilities when compared to the state (Table 9).

Results

Swine

In census tracts within or above the 80th percentile for swine SSLW density, the population that speaks Spanish with Limited English Proficiency (LEP) was 8.14% of the population and was **≥5% higher** when compared to the state (Table 9).

Additionally, populations that speak French with Limited English Proficiency (0.28%) were **≥5% higher** in 80th percentile swine census tracts when compared to the state (Table 9).

Cattle

No notable LEP differences nor non-English speaking populations **≥5%** were observed for census tracts within or above the 80th percentile for cattle SSLW/mile².

Wet Poultry

In census tracts with wet poultry facilities, populations that speak Arabic with Limited English Proficiency (0.18%) were **≥5% higher** when compared to the state (Table 9).

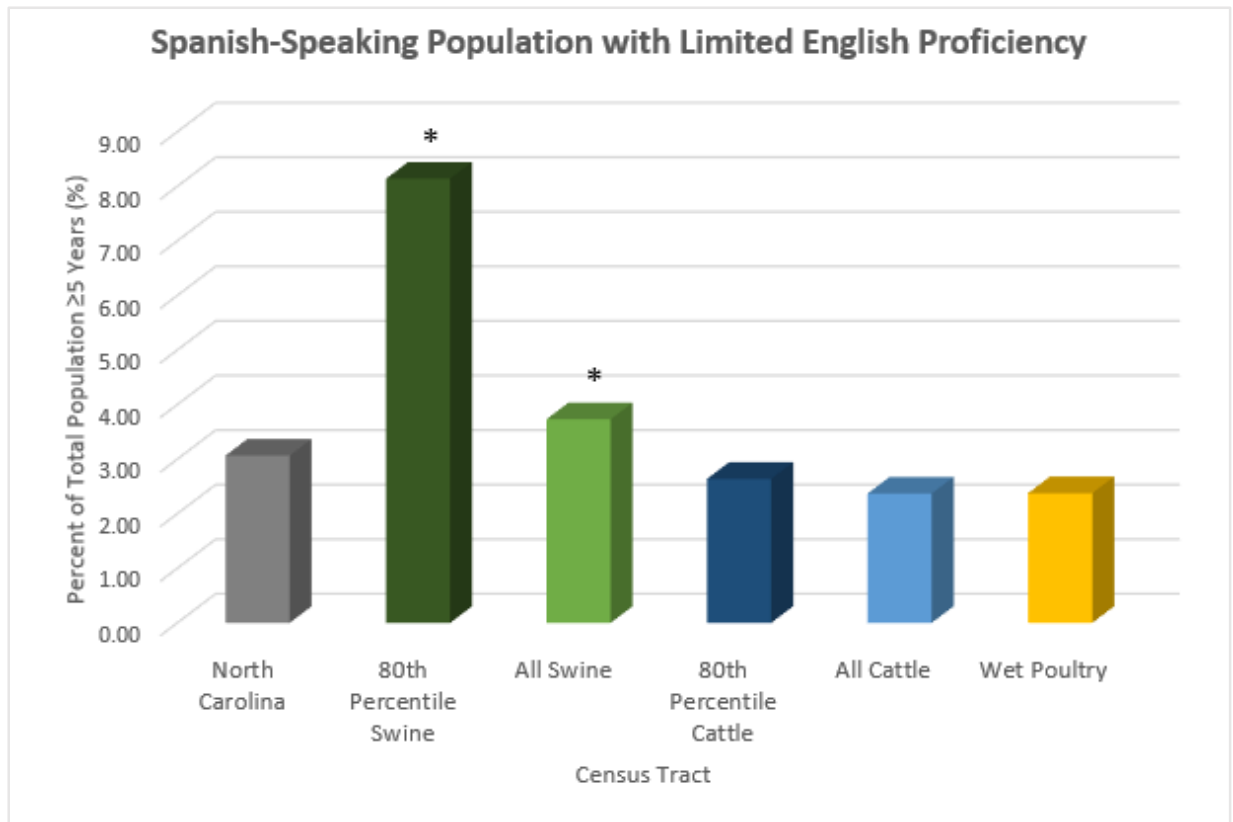


Figure 6. Spanish-Speaking Population Percentage with Limited English Proficiency in NC and AFO Census Tracts; * indicates a 10% difference when compared to the State

Table 9. Population Percentages of Limited English-Speaking Proficiency for Six Most-Spoken Non-English Languages in the State for NC and AFO census tracts

LIMITED ENGLISH PROFICIENCY (Speaks English “Less than Very Well”)				
	NORTH CAROLINA CENSUS TRACTS (n=2672)	80th PERCENTILE SWINE CENSUS TRACTS (n=55)	80th PERCENTILE CATTLE CENSUS TRACTS (n=8)	WET POULTRY CENSUS TRACTS (n=6)
Non Limited-English Speaking Proficiency	88.18	82.60	92.96	93.74
Spanish or Spanish Creole	3.07	8.14*	2.64	2.38
French (Includes Haitian, Patois, Cajun)	0.10	0.28*	0.00	0.03
German	0.030	0.00	0.00	0.00
Chinese (Includes Mandarin and Cantonese)	0.16	0.01	0.07	0.00
Vietnamese	0.15	0.01	0.11	0.00
Arabic	0.10	0.04	0.00	0.18*

Total Population Above 5 Years	9,780,928	178,837	27,512	24,239
Source: US Census Bureau, 2020 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.				

3.5 Educational Attainment

Potential for EJ Concerns

- The population **age 18-24** and populations **age 25 and older** that have not received a **high school graduate degree (or equivalent)** or higher are **≥10% higher** for census tracts with all AFO types analyzed: 80th percentile swine census tracts, swine AFOs, 80th percentile cattle census tracts, cattle AFOs, and wet poultry AFOs when compared to the state (Figure 7, 8; Table 10).

Results

Swine

In census tracts within or above the 80th percentile for swine SSLW/mile², the population of ages 18 – 24 that did not receive a high school graduate degree (or equivalent) or higher was **≥10% higher** when compared to the state (Figure 7; Table 10). Furthermore, when compared to census tracts with a swine AFO, 80th percentile swine census tracts have **≥10% higher** population of ages 18-24 that did not receive a high school graduate degree.

The categories of highest level of educational attainment were **≥10% higher** when compared to the state for census tracts with swine AFOs and with 80th percentile swine census tracts (Figure 8; Table 10):

- High school graduate (or equivalent)
- 9th – 12th grade (no high school diploma)
- Less than 9th grade

Cattle

In census tracts with a cattle AFO, the population of ages 18 – 24 that did not receive a high school graduate degree (or equivalent) or higher was **≥10% higher** when compared to the state (Figure 7; Table 10).

The three other categories of highest level of educational attainment were **≥10% higher** when compared to the state for census tracts with 80th percentile cattle census tracts and a cattle AFO (Figure 8; Table 10):

- High school graduate (or equivalent)
- 9th – 12th grade (no high school diploma)
- Less than 9th grade

Wet Poultry

In census tracts with wet poultry facilities, the population of ages 18 – 24 that did not receive a high school graduate degree (or equivalent) or higher was **≥10% higher** when compared to the state (Figure 7; Table 10).

The three other categories of highest level of educational attainment were $\geq 10\%$ higher when compared to the state (Figure 8; Table 10):

- High school graduate (or equivalent)
- 9th – 12th grade (no high school diploma)
- Less than 9th grade

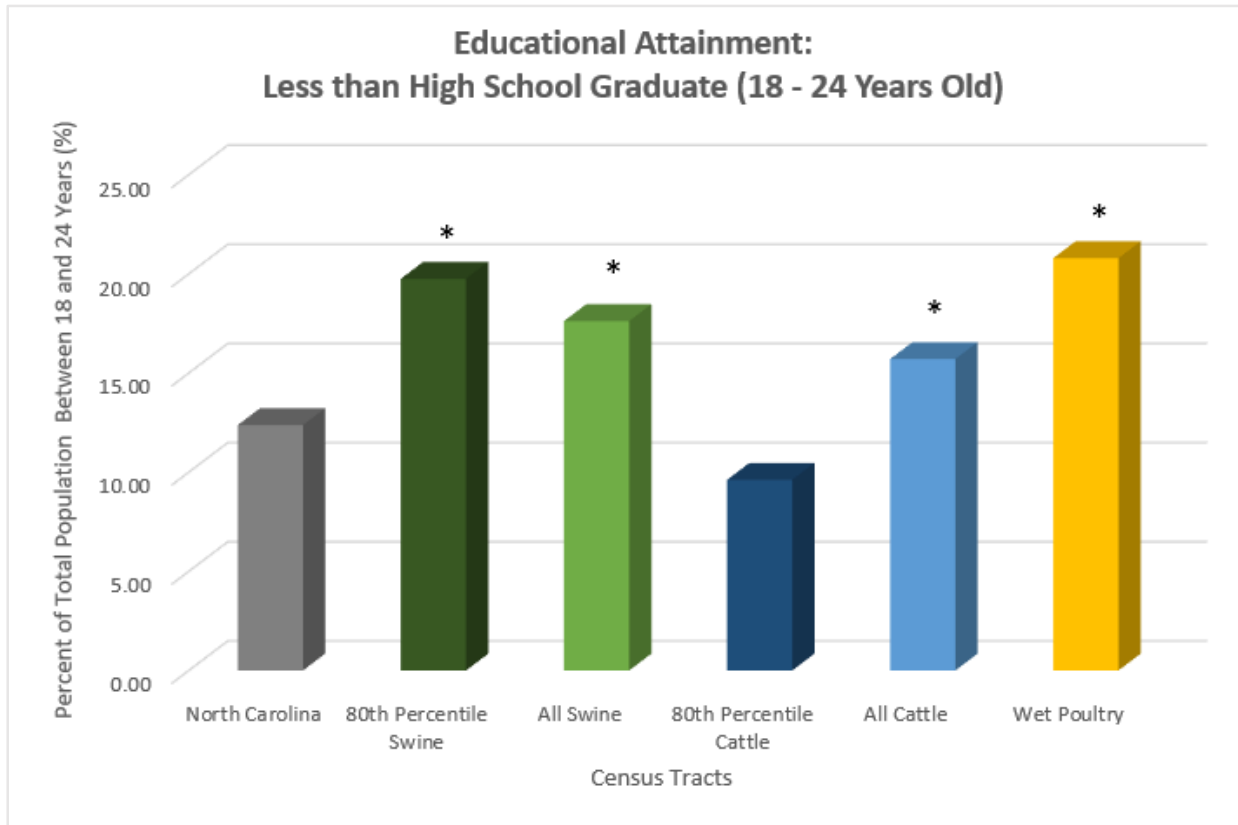


Figure 7. Population Percentage of those 18 - 24 Years with Less than a High School Graduate Degree in NC and AFO Census Tracts; * indicates a 10% difference when compared to the State

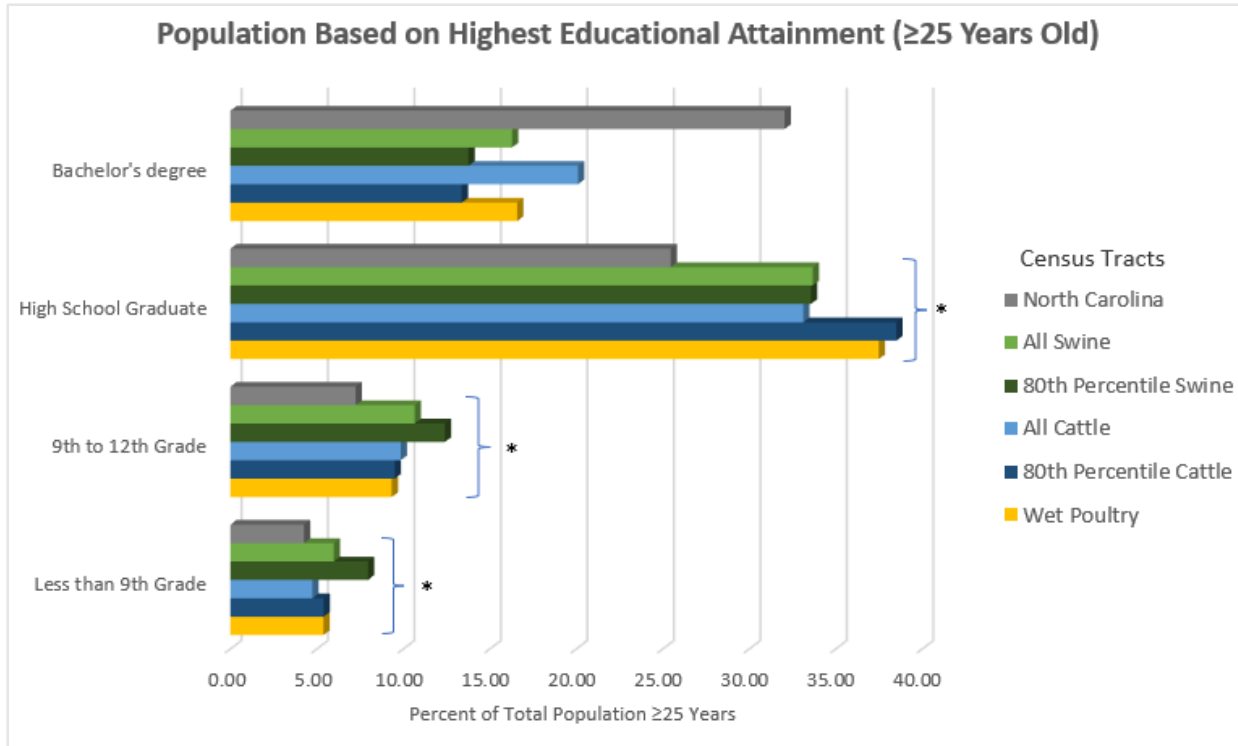


Figure 8. Population Percentage of Ages 25 Years and Above Based on the Highest Level of Education Attained in NC and AFO Census Tracts * indicates a 10% difference when compared to the State

Table 10. Population Percentage Based on the Highest Level of Education Attained in NC and AFO Census Tracts

EDUCATIONAL ATTAINMENT (%)				
	NORTH CAROLINA CENSUS TRACTS (n=2672)	80th PERCENTILE SWINE CENSUS TRACTS (n=55)	80th PERCENTILE CATTLE CENSUS TRACTS (n=8)	WET POULTRY CENSUS TRACTS (n=6)
Less than High School Graduate	12.37	19.75*	9.61	20.79*
Population age 18-24 years	987858	15993	2091	1621
Less than 9th grade	4.25	7.95*	5.39*	5.37*
9th to 12th grade, no diploma	7.23	12.40*	9.50*	9.33
High school graduate (includes equivalency)	25.45	33.56*	38.50*	37.49*
Bachelor's degree	32.04	13.76	13.37	16.58
Population age 25 years and over	7,096,773	128,974	21,092	18,849

Source: US Census Bureau, 2020 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.

3.6 Poverty & Low-Income

Potential for EJ Concerns

- The population which is **below the poverty level** in 80th percentile swine census tracts, or with any swine AFO, is **≥10% higher** when compared to the state (Table 11).
- The population ratio of those **below 200% of the poverty level** in 80th percentile swine census tracts, with any swine AFO, or with wet poultry AFO is **≥10% higher** when compared to the state (Table 11).
- Furthermore, 80th percentile swine census tracts had a larger proportion of the population in poverty (>20%) and living below 200% of the poverty level compared to all census tracts with a swine AFO.

Results

Swine

In census tracts within or above the 80th percentile for swine SSLW/mile², or with any swine AFO, the populations below the poverty level and the population of those below 200% of the poverty level were all **≥10% higher** when compared to the state (Table 11). 80th percentile swine census tracts were **≥10% higher** when compared to census tracts with any swine AFO.

Swine census tracts above the 80th percentile had >20% of the population living below the poverty level.

Cattle

In census tracts within or above the 80th percentile for cattle SSLW/mile², there were no notable differences for those experiencing poverty when compared to the state.

Wet Poultry

In census tracts with wet poultry facilities, the population of those below 200% of the poverty level was **≥10% higher** when compared to the state (Table 11).

Table 11. Population Percentage Experiencing Poverty in NC and AFO Census Tracts

POVERTY (%)				
	NORTH CAROLINA CENSUS TRACTS (n=2672)	80th PERCENTILE SWINE CENSUS TRACTS (n=55)	80th PERCENTILE CATTLE CENSUS TRACTS (n=8)	WET POULTRY CENSUS TRACTS (n=6)
Below Poverty Level	13.98	20.78*	14.38	12.99
200% Below the Poverty Level	32.99	44.89*	34.38	37.27*
Total Population for whom Poverty Status is Determined	10,098,330	195,812	74,792	32,113
<p>Source: US Census Bureau, 2020 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.</p>				

4. Health

4.1 County Health Outcome Ranks

For this report, the Environmental Justice Program examined how sensitive populations (specifically the census tracts identified in Section 5 Cumulative Impacts) 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 (www.countyhealthrankings.org). This 2023 County Health Rankings National Data¹² is based on health outcomes (such as lifespan and self-reported health status) and health factors (such as environmental, social, and economic conditions). Figures 9 and 10 display rankings for all 100 counties in North Carolina.

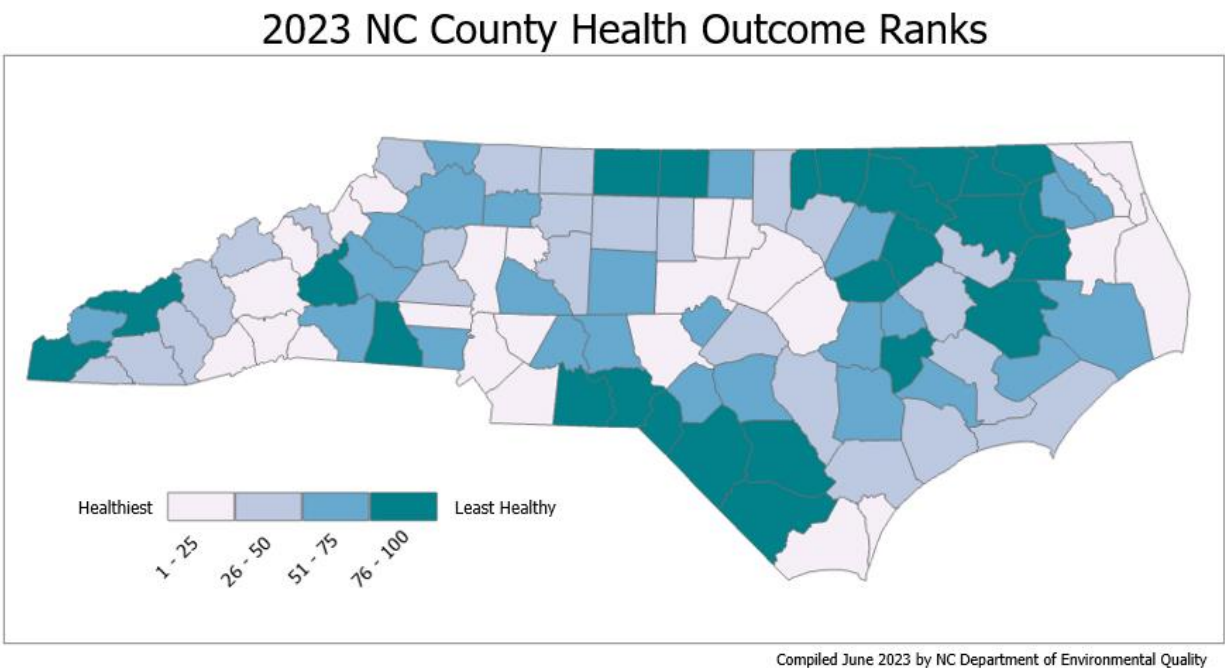
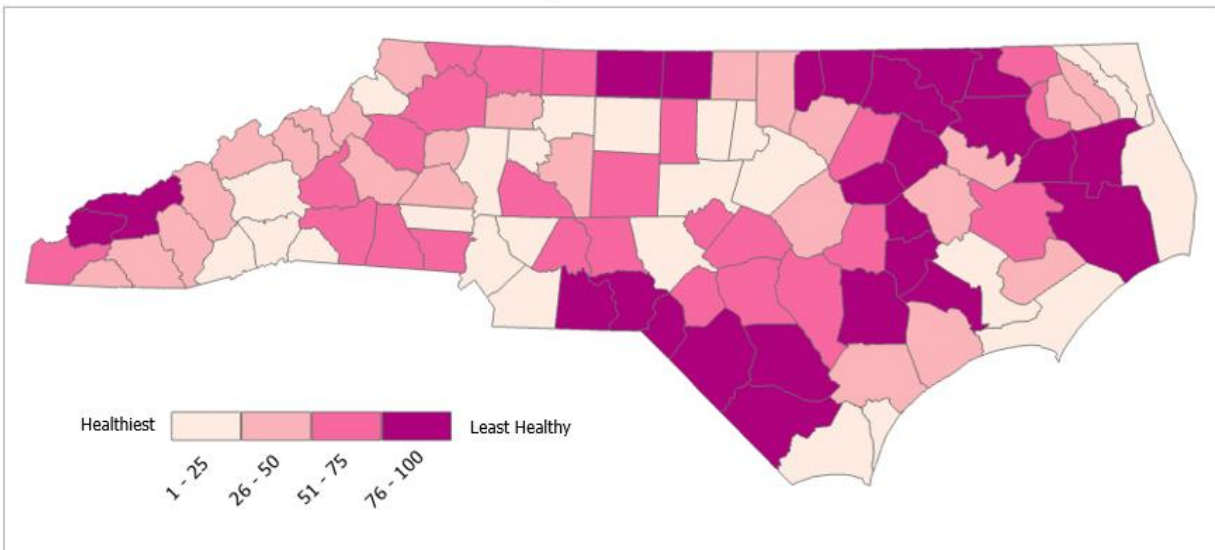


Figure 9. 2023 NC County Health Outcome Ranks

¹² University of Wisconsin Population Health Institute. 2022 Environmental Justice Index. <https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation>.

2023 NC County Health Factors Ranks



Compiled June 2023 by NC Department of Environmental Quality

Figure 10. 2023 NC County Health Factors Ranks

4.2 Sensitive Receptors

NC DEQ identified lists of sensitive receptors (i.e., schools and childcare centers, places of worship, hospitals and healthcare facilities, parks, prisons, and public housing buildings) which were within 5,000 feet of any swine AFO. Places of worship were not included in this analysis due to unavailable GIS data.

A total of 120 sensitive receptors were found within 5,000 ft. of swine AFOs and consisted of the following categories:

- 61 daycare centers
- 11 non-public schools
- 35 public schools
- 0 hospitals
- 13 nursing homes

For a detailed list of these sensitive receptors and GIS data sources, see Appendix G.

5. Cumulative Impacts

Cumulative impacts are the combined, environmental burdens, pre-existing health conditions, and social factors which may harm human health.¹³ 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 in North Carolina living near AFOs.

To identify communities at risk of potentially greater cumulative impacts from swine AFOs, the Environmental Justice Program analyzed 2019 census tracts with respect to two variables:

- Environmental justice index (EJI) scores
- Swine SSLW per square mile

EJI scores were sourced from the Centers for Disease Control and Prevention (CDC) and the Agency for Toxic Substances and Disease Registry (ATSDR).¹⁴ 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 EJI delivers a single score for each census tract to identify areas most at risk for the health impacts of environmental burden (See Appendix E for more information on the CDC's EJI Model). More information on the indicators can be found in the CDC's EJI Technical Documentation.¹⁵

For EJI scores in this analysis, the Environmental Justice Program used the variable representing the sum score of the health variables model, environmental burden index, and social vulnerabilities model (SPL_EJI in the CDC's EJI Technical Documentation).

Only swine SSLW per square mile was evaluated with EJI scores because swine census tracts had a greater number of sociodemographic indicators with potential EJ concerns compared to cattle and wet poultry AFOs.

Overall, among all census tracts with a swine AFO, 42 census tracts had both high EJI scores and a total swine SSLW per square mile $\geq 92,675.28$, which is the upper threshold value based on terciles for this analysis (See dark purple census tracts in Figure 11; see Appendix F for a comprehensive list of census tract and counties marked dark purple). These census tracts reside within 16 different counties. The upper threshold value for swine SSLW per square mile does not correspond to the 80th percentile value

¹³ *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>

¹⁴ *2022 Environmental Justice Index*. Centers for Disease Control and Prevention (CDC) and Agency for Toxic Substances Disease Registry (ATSDR). Accessed July 12, 2023. <https://www.atsdr.cdc.gov/placeandhealth/eji/index.html>.

¹⁵ *EJI Technical Documentation*. Centers for Disease Control and Prevention and Agency for Toxic Substances Disease Registry. Accessed July 12, 2023. https://www.atsdr.cdc.gov/placeandhealth/eji/technical_documentation.html

identified for use in Section 3 of this report since this data is based on 2019 census tracts to match the EJ's 2019 dataset.

Among the 16 counties with high EJ scores that were also above the 80th percentile for total swine SSLW per square mile $\geq 92,675.28$, Duplin County had the largest total swine SSLW per square mile (See Appendix F for all selected tracts and counties' total swine SSLW per square mile). Duplin County also contained the census tract (Census Tract 908.01) with the largest swine SSLW per square mile and the census tract with the highest EJ score (Census Tract 907.02).

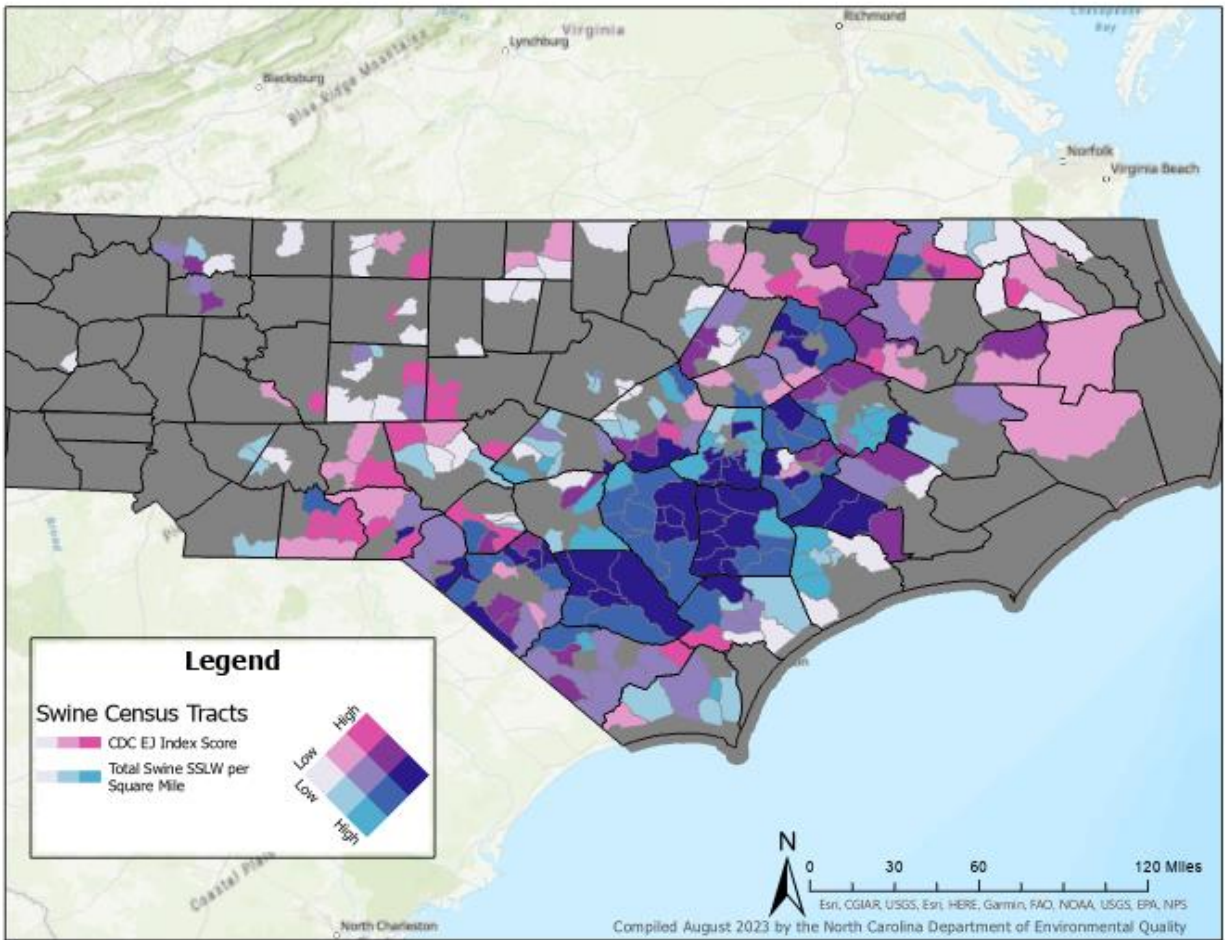


Figure 11. Bivariate Analysis of CDC Environmental Justice Index Scores with Total Swine Steady State Live Weights in 2019 NC Census Tracts (County Boundaries)

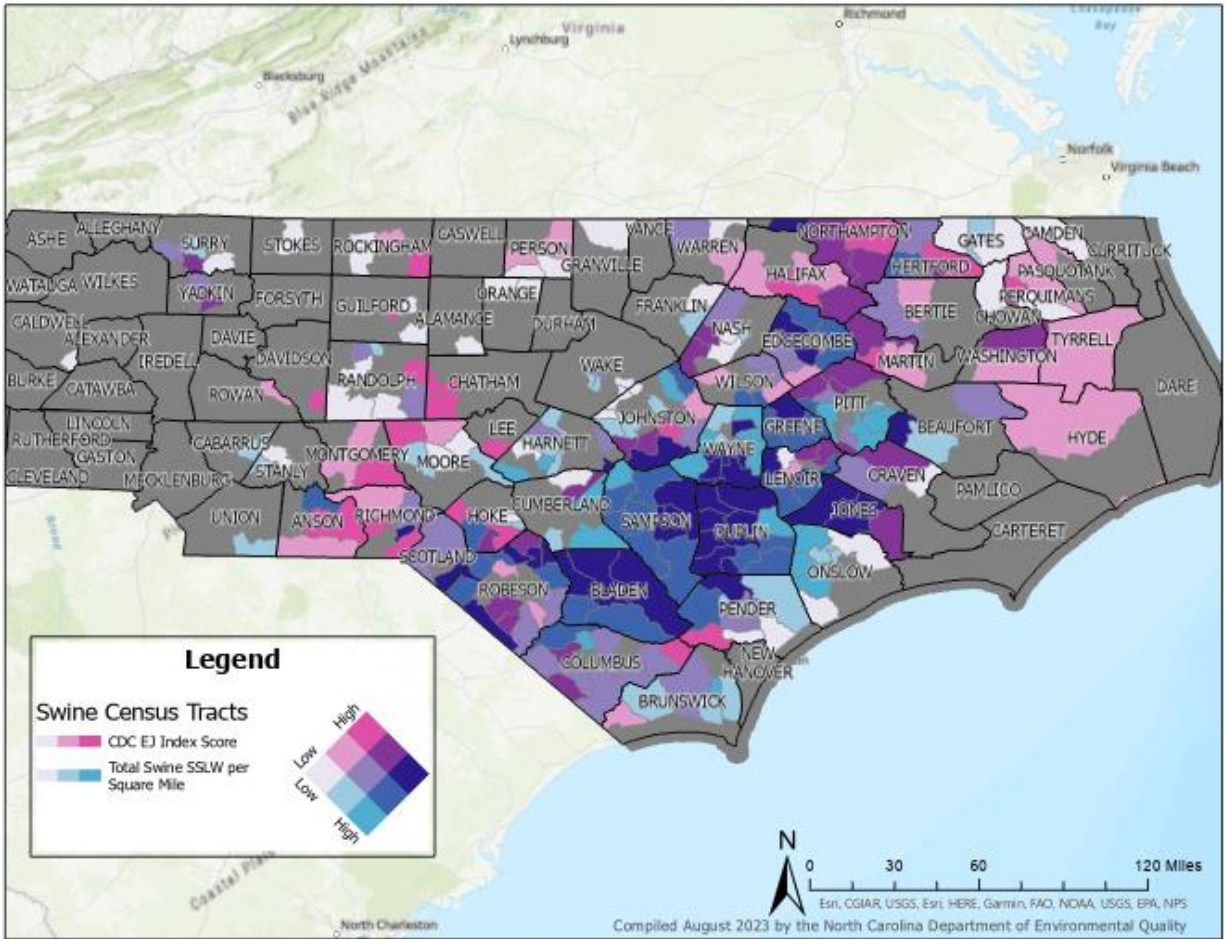


Figure 12. Bivariate Analysis of CDC Environmental Justice Index Scores with Total Swine Steady State Live Weights in 2019 NC Census Tracts (County Boundaries and Labels)

In summary, the five counties with the highest total swine SSLW per square mile were as follows: Duplin, Wayne, Sampson, Robeson, Bladen.

The five counties with the highest quantity of census tracts with both high EJI scores and swine SSLW per square mile $\geq 92,675.28$ were: Duplin, Wayne, Sampson, Robeson, and Bladen Counties.

6. 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 2020 at a census tract level was utilized. Since not all data from the 2020 census has been published, all data utilized was collected before 2020 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. Due to data availability, 95% confidence intervals were calculated by the Environmental Justice Program for this report. Larger values indicate a wider 95% confidence interval which may indicate potential sampling errors. Lower values indicate a narrow 95% confidence interval and indicates higher accuracy compared to larger values. 95% confidence intervals for each type of permitted facility and sociodemographic indicator is available in Appendix C.

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, but no formal ranking or index score was generated to quantify cumulative impacts experienced by the counties identified in Section 5 of this report.

This analysis does not establish or imply any direct causal link between the environmental source exposures used in this analysis and health outcomes.

Additionally, NC census tracts from 2019 were used for this analysis since the CDC EJI data uses 2019 U.S. Census Bureau census tracts. Therefore, Section 6 of this report uses 2019 NC census tracts, while Section 3 uses 2020 NC census tracts.

Permitted Facilities

Based on the dataset pulled on June 2023, the analysis does not include general permits designated as expired by the Department. There is a total of 25 permits designated as expired.

This analysis only uses data for swine, cattle, and wet poultry facilities that are permitted under NC DEQ. Other animal feeding operations in North Carolina that are not required to obtain a permit are not included in this analysis.

Additionally, some facilities with open permits do not currently have livestock and therefore have an attributed value of 0 lbs. for total combined SSLW. These values were outliers that would skew the average SSLW for swine and cattle facilities and therefore may affect the threshold values to determine “80th percentile swine/cattle AFO census tracts.” To avoid this, these facilities with open permits were not included in the analysis.

However, it is important to note that these facilities are still under a permit until all waste structures (e.g., lagoons) are closed following appropriate procedures. The waste structures are still present at these facilities, and they must still manage the waste through permitted land application.

7. 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. In North Carolina, the Spanish-speaking population is >5% in areas with any swine AFO and 80th percentile swine census tracts when compared to the state.

Potential Cumulative Impacts

In North Carolina, 16 counties had tracts with high EJI scores and total swine SSLW per square mile $\geq 92,675.28$. Of the 16 counties, around 87% had a ranking of less or least healthy, based on the 2023 County Health Rankings National Data, compared to the rest of the state. Therefore, these counties and corresponding communities may be at higher risk of potential cumulative impacts.

Overall, 184-identified sensitive receptors within proximity of a swine AFO were documented to assist with planning for community outreach.

Key Findings

Based on this report's analysis and using NC DEQ 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 key findings are as follows:

- **Census tracts with swine animal feeding operations, and census tracts within or above the 80th percentile for swine SSLW/mile², have $\geq 5\%$ higher or $\geq 10\%$ higher differences when compared to the state for the following: households which speak Spanish with limited English proficiency ($\geq 5\%$), minority race & ethnic populations ($\geq 10\%$), and populations below the poverty level ($\geq 10\%$).**
- **Census tracts with swine and wet poultry animal feeding operations have a $\geq 10\%$ higher difference for population of individuals living below 200% of the poverty level when compared to the state.**
- **Census tracts with cattle, swine, and wet poultry animal feeding operations have a $\geq 10\%$ higher difference in the population of those who live with a disability and who have lower educational attainment when compared to the state. These census tracts also have a $\geq 10\%$ higher difference in the population whose highest level of education is a high school degree when compared to the state.**
- **Census tracts with wet poultry animal feeding operations have a $\geq 10\%$ higher difference in populations ≥ 65 years of age when compared to the state.**

The following potential environmental justice concerns have been identified:

- **Race and Ethnicity:**

- Total minority populations – census tracts with swine AFOs have a $\geq 10\%$ higher difference in total minority populations when compared to the state.
- Specific minority populations – Black or African American, Hispanic or Latino, American Indian or Alaskan Native, Native Hawaiian or Pacific Islander, and those who are two or more races.
- **Tribal Communities**
 - Up to five state or federally recognized tribes or urban Indian organizations residing within counties with census tracts within or above the 80th percentile for swine steady-state live weight per square mile, census tracts within or above the 80th percentile for cattle steady-state live weight per square mile, or with wet poultry facilities.
- **Age and Sex:** Populations of age 65 and older.
- **Limited English Proficiency:** Spanish-speaking populations.
- **Disability:** Populations with hearing, vision, cognitive, ambulatory, self-care, and independent living difficulties.
- **Education:** Populations whose highest level of educational attainment is less than a bachelor's degree.
- **Poverty:** Populations experiencing poverty below the poverty level and 200% below the poverty level.

Recommendations

DEQ has committed to a full public engagement process for the general permits, including four public hearings (one virtual) with 60-days of notice, a 90-day comment period, translation and interpretation services for Spanish-speaking residents and enhanced outreach as outlined in the DEQ public Participation Plan.

In addition, the Environmental Justice Program recommends the following outreach for the Animal Feeding Operations General Permits public hearing:

- Generate a one-page flyer in Spanish and English.
- Conduct outreach and media releases through Spanish radio and news outlets as well as non-profits leaders and community leaders with connections to the Spanish-speaking community.
- Arrange an English and Spanish voice mail line to receive public comments by phone.
- Engagement with the following state or federally recognized tribes:
 - Coharie
 - Haliwa Saponi
 - Metrolina Native American Association
 - Lumbee
 - Waccamaw Siouan
- Prioritize outreach to documented identified sensitive receptors by email.
- Ensure the selected site for public hearing(s) has wheelchair accessibility.
- Ensure the selected site for public hearing(s) has enough space for public commenters.
- Consult known community leaders for additional outreach options.

References

1. *2022 Environmental Justice Index*. Centers for Disease Control and Prevention (CDC) and Agency for Toxic Substances Disease Registry (ATSDR). Accessed July 12, 2023. <https://www.atsdr.cdc.gov/placeandhealth/eji/index.html>.
2. Council on Environmental Quality (CEQ). (1997). *Environmental Justice Guidance Under the National Environmental Policy Act* [Guidance]. US EPA. https://www.epa.gov/sites/default/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf
3. *EJI Technical Documentation*. Centers for Disease Control and Prevention and Agency for Toxic Substances Disease Registry. Accessed July 12, 2023. https://www.atsdr.cdc.gov/placeandhealth/eji/technical_documentation.html
4. *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>
5. Household Definition. (n.d.). In *US Census Bureau Glossary*. <https://www.census.gov/glossary/?term=Household>
6. NC Gen Stat § 143-215.10B (2022)
7. *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>
8. Sensitive Receptors. (2023). In *Environmental Issues of Concern for Urban Communities: Resources*. US EPA. <https://www.epa.gov/newenglandhc/environmental-issues-concern-urban-communities-resources#SensitiveReceptors>
9. Tippet, R. (2016, April 21). Hola, xin chào, bonjour: Many languages heard in NC homes. *UNC Chapel Hill Carolina Population Center*. <https://carolinademography.cpc.unc.edu/2016/04/21/hola-xin-chao-bonjour-many-languages-heard-in-nc-homes/>
10. University of Wisconsin Population Health Institute. 2022 Environmental Justice Index. <https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation>
11. *What are Hazardous Air Pollutants?* (2022). US EPA. <https://www.epa.gov/haps/what-are-hazardous-air-pollutants>

Appendix

List of Appendices:

Appendix A: Census data tables for sociodemographic Reports

Appendix B: Additional Data Sources

Appendix C: Sociodemographic Indicators

Appendix D: Swine, Cattle, and Wet Poultry Counties and Census Tracts

Appendix E: CDC Environmental Justice Index Model

Appendix F: Cumulative Impact Analysis Census Tracts

Appendix G: Sensitive Receptors for Outreach

Appendix H: AFO Location Data

Appendix A: Census Data Tables for Sociodemographic Indicators

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 2020 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"

The following table displays data for the [2022 Biogas Digester General Permit Development Environmental Justice Report](#).

Dataset ID	Name	Year Used	Period of Record
P2	"Hispanic or Latino, and Not Hispanic or Latino by Race"	2020	10-year estimate
C16002	"Household Language by Household Limited English Speaking Status"	2019	5-year
S1701	"Poverty Status in the Last 12 Months"	2019	5-Year

Appendix B: Additional Data Sources

DATA SOURCES			
Organization	Source	Date Accessed	Year Published
University of Wisconsin Population Health Institute	2023 County Health Rankings National Data	6/13/23	2023
North Carolina Department of Environmental Quality	List of Permitted Animal Facilities	5/1/23	2023
Centers for Disease Control & Prevention	Environmental Justice Index	7/10/23	2022

Appendix C: Sociodemographic Indicators

The tables below display calculations performed from census data for each sociodemographic indicator. Calculations are displayed as averages. Tables also display the totals from which percentages were generated to be used for the sociodemographic analysis.

Tables for the **All Swine and All Cattle Census Tracts** section include tables comparing the percentage differences for each sociodemographic indicator analyzed in this report. **Bolded** items indicate a 10% increase in the calculated percentage for the indicator’s category when compared to the State.

80th percentiles of Swine, 80th percentile of Cattle, and Wet Poultry

RACE & ETHNICITY																
	NORTH CAROLINA (n=2672)				80th PERCENTILE SWINE CENSUS TRACTS (n=55)				80th PERCENTILE CATTLE SSLW CENSUS TRACTS (n=8)				WET POULTRY CENSUS TRACTS (n=6)			
	Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)	
			Lower	Upper			Lower	Upper			Lower	Upper			Lower	Upper
White	6503292	2433.87	2380.36	2487.37	96357	1751.95	1510.36	1993.53	24661	3082.63	3072.25	3093.00	15310	2551.67	2527.75	2575.59
Black or African American	2182623	816.85	783.05	850.65	48598	883.60	729.28	1037.92	1588	198.50	196.46	200.54	7836	1306.00	1296.00	1316.00
Hispanic or Latino	991051	370.90	354.73	387.07	35194	639.89	502.34	777.44	2039	254.88	252.61	257.14	1208	201.33	199.52	203.15
American Indian and Alaska Native	108223	40.50	31.40	49.60	5111	92.93	15.12	170.74	44	5.50	5.40	5.60	184	30.67	30.22	31.12
Asian	306140	114.57	104.67	124.47	663	12.05	5.00	19.11	321	40.13	39.46	40.79	102	17.00	16.71	17.29
Native Hawaiian and other Pacific Islander	6249	2.34	1.84	2.84	47	0.85	-0.19	1.90	2	0.25	0.24	0.26	26	4.33	4.25	4.42
Some Other Race	30335	11.35	9.25	13.45	240	4.36	0.95	7.78	58	7.25	7.05	7.45	0	0.00		
Two or More Races	258314	96.67	92.75	100.60	4526	82.29	57.93	106.65	573	71.63	70.80	72.45	832	138.67	137.52	139.82
Total Population	10386227				190736				29286				25498			

LIMITED ENGLISH PROFICIENCY (Speaks English "Less than Very Well")																
	NORTH CAROLINA (n=2672)				HIGH SWINE CENSUS TRACTS (n=55)				HIGH CATTLE CENSUS TRACTS (n=8)				WET POULTRY CENSUS TRACTS (n=6)			
	Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)	
			Lower	Upper			Lower	Upper			Lower	Upper			Lower	Upper
Only English	8625292	3228.03	3175.41	3280.64	147716	2685.75	2426.86	2944.63	25575	3196.88	3186.90	3206.85	22721	4039.83	4019.54	4060.13
Spanish or Spanish Creole	299813	112.21	105.17	119.24	14557	264.67	201.98	327.37	726	90.75	89.37	92.13	576	3786.83	3767.75	3805.92
French (includes Haitian, Patois, Cajun)	9926	3.71	2.75	4.68	496	9.02	-7.01	25.05	0	0.00			8	96.00	94.67	97.33
German	2920	1.09	0.79	1.39	6	0.11	-0.10	0.32	0	0.00			1	1.33	1.29	1.37
Chinese (Includes Mandarin and Cantonese)	15639	5.85	4.94	6.77	9	0.16	-0.16	0.48	18	2.25	2.17	2.33	0	0.17	0.16	0.17
Vietnamese	14929	5.59	4.35	6.82	9	0.16	-0.07	0.40	30	3.75	3.62	3.88	0	0.00		
Arabic	10254	3.84	3.10	4.57	72	1.31	-0.23	2.85	30	0.00			44	0.00		
Total Population Above 5 Years	9780928				178837				27512				24239			

AGE																
	NORTH CAROLINA (n=2672)				HIGH SWINE CENSUS TRACTS (n=58)				HIGH CATTLE CENSUS TRACTS (n=18)				WET POULTRY CENSUS TRACTS (n=9)			
	Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)	
			Lower	Upper			Lower	Upper			Lower	Upper			Lower	Upper
≤5 Years	605299	226.53	220.28	232.79	11899	216.35	186.60	246.09	1774	221.75	216.62	226.88	1259	209.83	207.58	212.08
≤18 Years	2301596	861.38	842.05	880.70	45769	832.16	733.45	930.88	6103	762.88	750.83	774.92	5028	838.00	830.90	845.10
≥65 Years	1688354	631.87	618.07	645.66	32046	582.65	524.91	640.40	4950	618.75	608.31	629.19	5033	838.83	835.42	842.25

SEX																
	NORTH CAROLINA (n=2672)				HIGH SWINE CENSUS TRACTS (n=58)				HIGH CATTLE CENSUS TRACTS (n=18)				WET POULTRY CENSUS TRACTS (n=9)			
	Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)	
			Lower	Upper			Lower	Upper			Lower	Upper			Lower	Upper
Male	5052667	1890.97	1858.65	1923.28	95085	1728.82	1556.94	1900.70	15293	1911.63	1882.33	1940.92	13305	2217.50	2208.10	2226.90
Female	5333560	1996.09	1962.93	2029.25	95651	1739.11	1578.81	1899.41	329	41.11	0.00	0.00	263	43.90	0.00	0.00

POVERTY																
	NORTH CAROLINA (n=2672)				HIGH SWINE CENSUS TRACTS (n=58)				HIGH CATTLE CENSUS TRACTS (n=18)				WET POULTRY CENSUS TRACTS (n=9)			
	Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)	
			Lower	Upper			Lower	Upper			Lower	Upper			Lower	Upper
Below Poverty Level	1411939	528.42	512.50	544.34	38927	707.76	602.18	813.34	3972	496.50	492.26	500.74	2931	488.50	485.99	491.01
200% Below the Poverty Level	3331937	1246.98	1217.40	1276.56	83654	1520.98	1357.90	1684.07	9719	1214.88	1209.18	1220.57	8583	1430.50	1421.93	1439.07
Total Population for whom Poverty Status is Determined	10098330				186292				29240				23466			

EDUCATIONAL ATTAINMENT																
	NORTH CAROLINA (n=2672)				HIGH SWINE CENSUS TRACTS (n=58)				HIGH CATTLE CENSUS TRACTS (n=18)				WET POULTRY CENSUS TRACTS (n=9)			
	Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)	
			Lower	Upper			Lower	Upper			Lower	Upper			Lower	Upper
Less than High School Graduate	122236	45.75	43.79	47.70	3159	57.44	42.98	71.89	201	25.13	24.27	25.98	337	270.17	53.43	58.90
Population age 18-24 years	987858				15993				2091				1621			
Less than 9th grade	301823	112.96	108.49	117.43	10253	186.42	148.22	224.62	1137	142.13	138.97	145.28	1013	168.83	163.88	173.79
9th to 12th grade, no diploma	513393	192.14	186.34	197.93	15996	290.84	247.37	334.30	2003	250.38	244.10	256.65	1758	293.00	287.24	298.76
High school graduate (includes equivalency)	1806403	676.05	661.13	690.97	43288	787.05	712.02	862.09	8121	1015.13	1001.21	1029.04	7066	1177.67	1154.62	1200.71
Bachelor's degree	2273890	851.01	824.49	877.52	17748	322.69	277.12	368.26	2821	352.63	347.07	358.18	3125	520.83	500.78	540.89
Population age 25 years and over	7096773				128974				21092				18849			

DISABILITY																
	NORTH CAROLINA (n=2672)				HIGH SWINE CENSUS TRACTS (n=58)				HIGH CATTLE CENSUS TRACTS (n=18)				WET POULTRY CENSUS TRACTS (n=9)			
	Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)	
			Lower	Upper			Lower	Upper			Lower	Upper			Lower	Upper
Population with a Disability	1363146	510.16	499.55	520.77	33061	601.11	536.16	666.05	5312	664.00	661.15	666.85	4138	689.67	686.50	692.83
Type of Difficulty																
Hearing	379973	142.21	138.40	146.01	9195	167.18	143.14	191.22	1673	209.13	207.89	210.36	1245.00	207.50	205.91	209.09
Vision	263954	98.79	95.61	101.96	7144	129.89	109.34	150.44	1044	130.50	129.76	131.24	436.00	72.67	72.06	73.27
Cognitive	515673	192.99	187.94	198.04	12759	231.98	199.41	264.55	2138	267.25	266.15	268.35	1423.00	237.17	235.88	238.45
Ambulatory	711995	266.47	260.15	272.78	17792	323.49	289.08	357.91	2758	344.75	343.32	346.18	2530.00	421.67	419.32	424.02
Self-care	259404	97.08	94.15	100.01	5852	106.40	87.73	125.07	995	124.38	123.72	125.03	1051.00	175.17	174.20	176.13
Independent Living	471622	176.51	171.95	181.06	10974	199.53	176.57	222.48	1518	189.75	189.24	190.26	1717.00	286.17	285.08	287.25

All Swine AFO and All Cattle AFO Census Tracts

RACE & ETHNICITY (%)			
	NORTH CAROLINA (n=2672)	ALL SWINE TRACTS (n=275)	ALL CATTLE TRACTS (n=81)
White (Not Hispanic)	62.61	58.25	79.09
Black or African American	21.01	24.49	10.60
Hispanic or Latino	9.54	10.72	6.84
American Indian or Alaska Native	1.04	3.35	0.32
Asian	2.95	0.59	0.80
Native Hawaiian or Other Pacific Islander	0.06	0.03	0.04
Some other Race	0.29	0.16	0.13
Two or More Races	2.49	2.42	2.18
Total Population	10,386,227	1,056,486	382,309

MINORITY (%)			
	NORTH CAROLINA (n=2672)	ALL SWINE TRACTS (n=275)	ALL CATTLE TRACTS (n=81)
Minority	37.39	41.75	20.91
Total Population	10,386,227	1,056,486	382,309

RACE & ETHNICITY												
	NORTH CAROLINA (n=2672)				ALL SWINE TRACTS (n=275)				ALL CATTLE TRACTS (n=81)			
	Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)	
			Lower	Upper			Lower	Upper			Lower	Upper
White	6503292	2433.87	2380.36	2487.37	647522	2256.17	2119.84	2392.51	302352	3475.31	3223.64	3726.98
Black or African American	2182623	816.85	783.05	850.65	275212	958.93	869.22	1048.63	40511	465.64	346.43	584.85
Hispanic or Latino	991051	370.90	354.73	387.07	115270	401.64	354.27	449.00	26162	300.71	243.72	357.71
American Indian and Alaska Native	108223	40.50	31.40	49.60	35540	123.83	75.65	172.01	1229	14.13	8.05	20.20
Asian	306140	114.57	104.67	124.47	6928	24.14	17.56	30.72	3075	35.34	21.59	49.10
Native Hawaiian and other Pacific Islander	6249	2.34	1.84	2.84	373	1.30	0.61	1.99	158	1.82	0.14	3.50
Some Other Race	30335	11.35	9.25	13.45	1760	6.13	3.81	8.46	494	5.68	1.99	9.36
Two or More Races	258314	96.67	92.75	100.60	26493	92.31	79.99	104.63	8328	95.72	72.16	119.29
Total Population	10386227				1056486				382309			

LIMITED ENGLISH PROFICIENCY			
	NORTH CAROLINA (n=2672)	ALL SWINE TRACTS (n=275)	ALL CATTLE TRACTS (n=81)
Only English	88.18	90.08	92.48
Spanish or Spanish Creole	3.07	3.73	2.37
French (includes Haitian, Patois, Cajun)	0.10	0.08	0.03
German	0.030	0.02	0.09
Chinese (Includes Mandarin and Cantonese)	0.16	0.07	0.02
Vietnamese	0.15	0.02	0.04
Arabic	0.10	0.07	0.09
Total Population Above 5 Years	9780928	991660	363184

LIMITED ENGLISH PROFICIENCY (Speaks English "Less than Very Well")												
	NORTH CAROLINA (n=2672)				ALL SWINE TRACTS (n=275)				ALL CATTLE TRACTS (n=81)			
	Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)	
			Lower	Upper			Lower	Upper			Lower	Upper
Only English	8625292	3228.03	3175.41	3280.64	893282	3248.30	3105.81	3390.78	335855	3860.40	3599.30	4121.51
Spanish or Spanish Creole	299813	112.21	105.17	119.24	37008	134.57	113.68	155.47	8602	98.87	73.51	124.24
French (includes Haitian, Patois, Cajun)	9926	3.71	2.75	4.68	819	2.98	-0.48	6.43	107	1.23	0.01	2.45
German	2920	1.09	0.79	1.39	211	0.77	0.34	1.19	344	3.95	-3.44	11.35
Chinese (Includes Mandarin and Cantonese)	15639	5.85	4.94	6.77	652	2.37	0.23	4.51	82	0.94	0.11	1.78
Vietnamese	14929	5.59	4.35	6.82	219	0.80	0.12	1.48	134	1.54	-0.40	3.48
Arabic	10254	3.84	3.10	4.57	674	2.45	0.66	4.25	331	3.80	-1.39	9.00
Total Population Above 5 Years	9780928				991660				363184			

MEDIAN AGE & SEX									
	NORTH CAROLINA (n=2672)			ALL SWINE TRACTS (n=287)			ALL CATTLE TRACTS (n=87)		
	Male	Female	Both	Male	Female	Both	Male	Female	Both
Median Age	39.3	41.8	40.6	40.0	43.5	41.7	42.3	45.3	43.7
Total (%)	48.65	51.35		49.58	50.42		50.67	49.33	

SEX												
	NORTH CAROLINA (n=2672)				ALL SWINE TRACTS (n=287)				ALL CATTLE TRACTS (n=87)			
	Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)	
			Lower	Upper			Lower	Upper			Lower	Upper
Male	5052667	1890.97	1858.65	1923.28	523767	1904.61	1817.14	1992.07	193701	2226.45	2055.33	2397.57
Female	5333560	1996.09	1962.93	2029.25	532719	1937.16	1850.35	2023.97	188608	2167.91	2024.13	2311.69

AGE (%)			
	NORTH CAROLINA (n=2672)	ALL SWINE TRACTS (n=287)	ALL CATTLE TRACTS (n=87)
Below 5 Years Old	5.83	6.14	5.00
Above 65 Years Old	16.26	17.61	18.43

AGE												
	NORTH CAROLINA (n=2672)				ALL SWINE TRACTS (n=287)				ALL CATTLE TRACTS (n=87)			
	Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)	
			Lower	Upper			Lower	Upper			Lower	Upper
≤5 Years	605299	226.53	220.28	232.79	64826	235.73	215.13	256.33	19125	219.83	194.99	244.66
≤18 Years	2301596	861.38	842.05	880.70	241206	877.11	821.12	933.11	77988	896.41	829.35	963.48
≥65 Years	1688354	631.87	618.07	645.66	186028	676.47	643.84	709.09	70465	809.94	746.06	873.82

POVERTY (%)			
	NORTH CAROLINA (n=2672)	ALL SWINE TRACTS (n=287)	ALL CATTLE TRACTS (n=87)
Below Poverty Level	13.98	17.65	12.77
200% Below the Poverty Level	32.99	40.24	32.79
Total Population for whom Poverty Status is Determined	10098330	1036830	371786

POVERTY												
	NORTH CAROLINA (n=2672)				ALL SWINE TRACTS (n=287)				ALL CATTLE TRACTS (n=87)			
	Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)	
			Lower	Upper			Lower	Upper			Lower	Upper
Below Poverty Level	1411939	528.42	512.50	544.34	182997	665.44	620.58	710.30	47460	545.52	481.81	609.22
200% Below the Poverty Level	3331937	1246.98	1217.40	1276.56	417201	1517.09	1439.08	1595.11	121906	1401.22	1280.60	1521.84
Total Population for whom Poverty Status is Determined	10098330				1036830				371786			

EDUCATIONAL ATTAINMENT (%)			
	NORTH CAROLINA (n=2672)	ALL SWINE TRACTS (n=287)	ALL CATTLE TRACTS (n=87)
Less than High School Graduate	12.37	17.62	15.70
Population age 18-24 years	987858	84181	28695
Less than 9th grade	4.25	5.98	4.73
9th to 12th grade, no diploma	7.23	10.66	9.84
High school graduate (includes equivalency)	25.45	33.67	33.11
Bachelor's degree	32.04	16.29	20.09
Population age 25 years and over	7096773	731099	275626

EDUCATIONAL ATTAINMENT												
	NORTH CAROLINA (n=2672)				ALL SWINE TRACTS (n=287)				ALL CATTLE TRACTS (n=87)			
	Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)	
			Lower	Upper			Lower	Upper			Lower	Upper
Less than High School Graduate	122236	45.75	43.79	47.70	14831	54.93	48.86	61.01	4506	51.79	38.64	64.95
Population age 18-24 years	987858				84181				28695			
Less than 9th grade	301823	112.96	108.49	117.43	43711	158.95	145.32	172.57	13040	149.89	130.23	169.54
9th to 12th grade, no diploma	513393	192.14	186.34	197.93	77904	283.29	266.37	300.20	27129	311.83	274.80	348.86
High school graduate (includes equivalency)	1806403	676.05	661.13	690.97	246161	895.13	857.17	933.10	91270	1049.08	958.10	1140.06
Bachelor's degree	2273890	851.01	824.49	877.52	119069	432.98	396.88	469.07	55384	636.60	535.15	738.04
Population age 25 years and over	7096773				731099				275626			

DISABILITY (%)			
	NORTH CAROLINA (n=2672)	ALL SWINE TRACTS (n=287)	ALL CATTLE TRACTS (n=87)
Population with a Disability	13.39	17.26	16.14
Type of Difficulty			
Hearing	3.73	4.79	4.63
Vision	2.59	3.46	3.11
Cognitive	5.07	6.35	5.76
Ambulatory	7.00	9.64	8.44
Self-care	2.55	3.27	3.03
Independent Living	4.63	5.87	5.26

DISABILITY												
	NORTH CAROLINA (n=2672)				ALL SWINE TRACTS (n=287)				ALL CATTLE TRACTS (n=87)			
	Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)		Total	Average	95% CI (+/-)	
			Lower	Upper			Lower	Upper			Lower	Upper
Population with a Disability	1363146	510.16	499.55	520.77	178263	648.23	618.08	678.38	60262	692.67	641.41	743.92
Type of Difficulty												
Hearing	379973	142.21	138.40	146.01	49453	179.83	169.13	190.53	17282	198.64	179.76	217.53
Vision	263954	98.79	95.61	101.96	35764	130.05	119.95	140.16	11626	133.63	116.91	150.35
Cognitive	515673	192.99	187.94	198.04	65629	238.65	223.97	253.33	21516	247.31	223.10	271.53
Ambulatory	711995	266.47	260.15	272.78	99535	361.95	343.86	380.03	31508	362.16	330.45	393.87
Self-care	259404	97.08	94.15	100.01	33823	122.99	113.86	132.12	11314	130.05	115.03	145.06
Independent Living	471622	176.51	171.95	181.06	60667	220.61	207.87	233.34	19645	225.80	204.49	247.12

Appendix D: Swine, Cattle, and Wet Poultry Counties and Census Tracts

The tables below display the full list of 2020 NC census tracts and counties which contain a swine, cattle, or wet poultry AFO. Tables identify area of the census tract, combined steady state live weight (SSLW) per census tract, SSLW per square mile, and number of DEQ's Potentially Underserved Block Groups for each census tract. All tables are sorted from largest to smallest SSLW per square mile.

Census tracts with swine AFOs					
County	Census Tract GEOID	Area (mi ²)	Total SSLW	SSLW per mi ²	Number of Potentially Underserved Block Groups
Duplin	37061090504	35.2995402155999	26844675	760482.284926093	
Duplin	37061090201	47.2151100995999	35537625	752674.83068521	1
Duplin	37061090302	23.1330932209999	16487848	712738.5794232	
Sampson	37163971001	79.6107285244	48584726	610278.625764732	
Duplin	37061090801	58.7462640911999	29911108	509157.619854171	2
Sampson	37163971002	49.7170541484999	24763876	498096.205097605	
Duplin	37061090102	61.7913119545999	30165893	488189.877278602	1
Duplin	37061090402	36.5779436288	17557489	480002.079345322	
Sampson	37163971003	66.1227142296	31158999	471229.884662713	1
Sampson	37163970102	112.043945562	51723483	461635.680005383	3
Duplin	37061090101	38.4102149941999	16841244	438457.426040001	1
Bladen	37017950601	83.1012813387	34928755	420315.480547636	2
Sampson	37163970201	13.3084733898	5581875	419422.636729928	1
Duplin	37061090202	25.7667409091999	9470358	367541.942280275	2
Duplin	37061090401	86.0747995594999	31113306	361468.236455115	1
Sampson	37163970900	108.076676082999	38784398	358860.018698341	3
Wayne	37191000902	33.0673949779	11554760	349430.610053268	1
Sampson	37163970802	48.7947186329	15833744	324497.085824449	2
Bladen	37017950101	171.714013128	55063200	320668.063118148	1
Duplin	37061090506	25.395699976	8138435	320465.079036654	
Duplin	37061090803	54.4907490059	17053678	312964.646497215	
Lenoir	37107011201	44.1784781016	13448288	304408.132146882	
Duplin	37061090301	25.4255499076999	7654290	301047.176080228	1
Wayne	37191000603	45.2682861317999	13622365	300925.132450079	2
Sampson	37163970101	48.4786547635	14512483	299358.203539232	
Wayne	37191001000	75.6844426145	22069515	291599.095370384	
Sampson	37163970202	103.71936868	29106546	280627.874720303	
Pender	37141920300	91.3984110013	24879979	272214.568365374	1
Duplin	37061090704	39.1060935786	10614470	271427.520078572	1
Robeson	37155962002	66.9801498599999	17766361	265248.152432246	1
Greene	37079950102	62.2594305136	16072468	258153.14832488	1
Duplin	37061090103	29.2940340315999	7280330	248526.030663669	1
Richmond	37153971000	19.0420587461	4586746	240874.480073716	2
Johnston	37101040205	31.7449898363999	7281600	229377.92821879	1
Pitt	37147001100	60.760481777	13672985	225030.88520894	
Duplin	37061090600	98.9845029427	22056075	222823.516250496	
Duplin	37061090505	29.5755278723	6577970	222412.598294173	
Robeson	37155960101	26.1876681512999	5652163	215833.000759917	2
Greene	37079950200	68.7725056145999	14524094	211190.414980556	1
Wayne	37191000901	22.2772270952999	4698021	210888.948606677	
Sampson	37163970502	69.7995689810999	14672925	210215.123305031	1
Onslow	37133000207	32.2658680754	6673320	206822.887405525	
Bladen	37017950402	42.0643858669999	8486190	201742.871673719	2
Lenoir	37107011202	44.0183847683	8755895	198914.500068289	
Greene	37079950101	80.8167316348999	15556130	192486.502303468	2
Scotland	37165010400	55.8698177046999	10290412	184185.530269491	2
Duplin	37061090503	45.3509555894	8241330	181723.403462886	

Sampson	37163970303	23.1972320992	4141740	178544.577313723	1
Bladen	37017950200	142.366927524	25358650	178121.776180953	1
Sampson	37163970702	31.3758678300999	5495599	175153.689126898	1
Sampson	37163970401	27.9777347071	4897800	175060.634868235	
Robeson	37155960301	9.99003326395999	1700391	170208.74256088	3
Edgecombe	37065020700	85.2235241865	14379600	168728.061145796	1
Pender	37141920501	147.120398357999	24035856	163375.414070804	1
Wayne	37191001104	16.4609425515999	2673135	162392.584241184	
Northampton	37131920201	29.0517256828	4605995	158544.626583988	1
Wayne	37191000302	26.4636098452	3923305	148252.828051408	
Wayne	37191000303	24.7959229515	3663760	147756.548815149	
Wayne	37191000304	27.1873958822	3968000	145949.984220368	
Johnston	37101041302	51.4870040178999	7388010	143492.715121499	
Bladen	37017950502	44.2820530519	6334400	143046.664809688	
Jones	37103920200	150.362664806999	21357545	142040.213422752	1
Beaufort	37013931001	39.8359576332999	5650485	141843.834959714	1
Sampson	37163970402	29.8221999458	4174110	139966.535251798	1
Lenoir	37107011302	23.3733463487999	3233340	138334.492278038	1
Wayne	37191000604	36.4792555714999	4836630	132585.764819682	2
Jones	37103920300	174.966577303	22459462	128364.298748929	1
Harnett	37085070100	12.4346956062	1564200	125793.187830032	1
Onslow	37133000306	59.5681327774999	7479351	125559.601270985	
Johnston	37101041301	66.7358631246	8319881	124668.8153934	
Lenoir	37107011100	45.8809682294999	5613440	122347.89754046	1
Hoke	37093970202	60.5377735101999	7389798	122069.20690195	2
Edgecombe	37065020600	55.2396876577	6736461	121949.657676259	
Greene	37079950302	17.630200721	2142345	121515.632969973	1
Greene	37079950301	37.7301515337999	4328002	114709.372320511	2
Bladen	37017950501	40.306069637	4591620	113918.822682353	
Onslow	37133000206	26.3447247922999	2976645	112988.274634397	
Bladen	37017950302	66.624103198	7381521	110793.551367781	1
Harnett	37085071402	49.0012249015	5364940	109485.834502797	
Johnston	37101041203	25.0867152866999	2700720	107655.38529597	
Sampson	37163970302	73.0214353442	7660269	104904.388196314	
Nash	37127011501	20.7679682769	2177965	104871.356261773	
Duplin	37061090703	12.9581074465	1336500	103140.061580596	
Wayne	37191000402	15.3646507104999	1525663	99296.9530350196	1
Columbus	37047930500	106.679460203999	10403628	97522.3157307456	1
Robeson	37155961900	80.8949458615	7876294	97364.4758163875	4
Robeson	37155960403	33.6897303977999	3214791	95423.4706553167	2
Craven	37049960201	63.5987164207	6051420	95150.0335316577	1
Scotland	37165010602	120.561337148999	11400840	94564.6446000334	
Anson	37007920200	68.7567067069	6428640	93498.369946722	
Onslow	37133000303	24.2141533383	2263740	93488.2986975802	
Onslow	37133000203	28.0765494058	2530440	90126.4597521113	
Edgecombe	37065020800	135.456504816	12174980	89881.1025468147	1
Robeson	37155960202	30.6148901319	2739591	89485.5734643127	2
Harnett	37085071204	20.9235612053	1786050	85360.7080781061	
Lenoir	37107011400	86.025338735	7304870	84915.3296856239	
Columbus	37047931301	78.9030989255	6639900	84152.5883066946	1
Duplin	37061090804	21.8442700730999	1798670	82340.5860658609	1
Robeson	37155960203	22.7297648941999	1838560	80887.770223666	
Pitt	37147001601	34.3246342099999	2760460	80422.1243294641	
Pitt	37147001402	25.4014498069999	2033755	80064.5244839351	
Wilson	37195000900	34.9324587584	2763217	79101.7036364652	
Cumberland	37051002900	117.367175149	9147407	77938.375771481	
Columbus	37047930600	81.6276018197	6228600	76305.0715829898	1
Wayne	37191000401	34.8775940502999	2581130	74005.3914349002	
Onslow	37133000305	16.4507907716999	1194480	72609.27554041	
Columbus	37047931202	25.9131816756999	1841490	71063.8324172616	
Brunswick	37019020203	24.5718374588999	1728000	70324.4111430548	1
Cumberland	37051002701	47.3213773391999	3315750	70068.7551047527	
Pender	37141920402	25.1822017862999	1720078	68305.3060489644	

Pitt	37147001900	61.9004668509999	4212787	68057.4350132214	1
Robeson	37155960102	32.1534232038	2160000	67177.9171477058	1
Sampson	37163970600	12.6120461544	843360	66869.4032415806	3
Randolph	37151031305	16.3981998183	1069200	65202.2790213105	
Robeson	37155961802	66.5098953847	4246800	63852.1527576622	3
Yadkin	37197050503	18.3304939956999	1166400	63631.6730074822	
Columbus	37047930400	98.9929415879999	6270140	63339.2633799667	
Hertford	37091950300	76.9993284196	4876879	63336.6433201072	1
Johnston	37101041402	20.3666167923	1287450	63213.7390873257	1
Wayne	37191000200	48.5092838489999	3037600	62618.9413444127	
Northampton	37131920302	60.0365609903999	3641396	60652.9744530548	1
Franklin	37069060702	29.4598030641999	1738317	59006.4025958282	1
Pitt	37147001200	70.0735458018999	3977610	56763.3613296067	
Onslow	37133000304	35.1105015875	1926600	54872.4715651998	
Onslow	37133000205	24.0719959872999	1244005	51678.5147628105	
Warren	37185950202	34.3214801426999	1771250	51607.6227667219	2
Bladen	37017950602	112.578875983	5757220	51139.4340166388	
Craven	37049960302	95.2553919883	4770430	50080.4196006661	1
Johnston	37101041505	29.0412538243999	1424340	49045.4030880475	
Brunswick	37019020206	60.9558671496999	2973100	48774.6321891941	
Johnston	37101040904	11.5095268741	559003	48568.7210356083	
Sampson	37163970304	36.3570237863999	1707050	46952.413102597	
Washington	37187950100	174.032300039	7965000	45767.3661625748	1
Hertford	37091950402	23.5595038837	1039200	44109.5875842693	4
Wilson	37195001501	16.7024640244999	723455	43314.2678193349	
Halifax	37083931102	123.800242964999	5179301	41835.9518200966	5
Columbus	37047930700	41.9678480116999	1744200	41560.3868826856	2
Pender	37141920601	40.0800760281999	1657440	41353.2149697979	1
Beaufort	37013930101	168.144257665999	6950312	41335.4110124059	
Randolph	37151030900	84.7194043187	3498255	41292.2520894995	
Pitt	37147002002	118.062030949	4866918	41223.3972334627	2
Columbus	37047930200	99.9695248207	3916800	39179.9401570124	1
Robeson	37155961400	62.170389987	2432700	39129.5599160417	1
Cabarrus	37025041602	22.3746958424	866000	38704.4367485403	
Moore	37125950304	87.5941750223999	3356528	38319.0777142618	1
Johnston	37101040103	20.3893149567	777600	38137.6226543833	
Surry	37171931002	33.6336842175999	1269600	37747.8717997726	1
Johnston	37101040903	16.9814559243	640770	37733.5137138079	
Harnett	37085071102	51.5490282152999	1925160	37346.1938401508	
Wayne	37191000800	9.02770607541999	334800	37085.8330126154	
Duplin	37061090705	8.64044769993	315300	36491.1646884402	
Warren	37185950201	66.7664300478	2434526	36463.3244320095	1
Union	37179020901	79.2513247053999	2861400	36105.3901702797	
Wayne	37191001102	9.47900873406	330480	34864.4050524521	
Wayne	37191000104	23.5655081559	777600	32997.3788324745	
Wake	37183053009	11.3399871693	372671	32863.4410635761	
Chowan	37041930202	51.4375401045	1678320	32628.3099189879	
Stanly	37167930801	23.5807912313999	747300	31691.0485601051	
Robeson	37155961700	34.8084887421	1069200	30716.6452390916	4
Wilson	37195001200	45.9555677691	1398480	30431.1331115861	2
Harnett	37085071101	43.4255185835	1302118	29985.0880881536	
Pitt	37147001800	22.18130237	649500	29281.4186095061	2
Pitt	37147001002	12.3803525219	356385	28786.3370101601	
Columbus	37047930800	27.8478206505	793800	28504.923597522	
Northampton	37131920202	91.4721198035999	2607231	28503.012782452	2
Pender	37141920401	29.2393542663	826200	28256.4379662871	1
Edgecombe	37065021300	66.3249181636	1874100	28256.3484718859	
Johnston	37101041204	14.4844505061	396900	27401.7989037864	
Robeson	37155961602	89.6312491743999	2362500	26357.9948038341	
Beaufort	37013930900	143.308333003	3680500	25682.3865219543	1
Northampton	37131920303	55.5517785374999	1416776	25503.7019029662	
Bladen	37017950301	22.4218995147	552015	24619.4574031559	1
Randolph	37151030803	55.0169662634	1353375	24599.2298724826	

Edgecombe	37065021400	42.3315387211999	1013175	23934.282348508	
Pender	37141920204	236.317734521999	5582265	23621.8623680158	
Bertie	37015960300	204.517204299	4804147	23490.1851727663	1
Johnston	37101040204	28.216890533	641950	22750.5578351814	
Caldwell	37027031302	16.2418817904	368420	22683.3321873922	
Rowan	37159050901	37.1995153389	823716	22143.1917189154	
Harnett	37085071301	36.3449330023	793800	21840.7336161485	
Lenoir	37107010100	45.9367452966	991440	21582.7219276978	2
Anson	37007920600	163.341992032999	3523214	21569.55450432	
Nash	37127010900	108.140494496	2313978	21397.8862477422	2
Hoke	37093970201	52.6556494433	1124900	21363.3297071247	1
Columbus	37047931100	53.8313018479	1125000	20898.6214596607	
Craven	37049960202	103.492002865	2149564	20770.3391614132	1
Scotland	37165010501	29.0957625464	583200	20044.1558824915	1
Johnston	37101040501	39.227906443	777600	19822.622987283	1
Brunswick	37019020601	149.133121829	2914720	19544.417526122	
Gates	37073970300	106.425077286999	2078400	19529.2317655087	1
Pender	37141920403	41.5467562902	810480	19507.6601008	
Sampson	37163970501	8.65451146528	167400	19342.5129392423	
Warren	37185950101	44.4011566384999	850200	19148.1498313671	
Surry	37171931102	54.4547110174	1032750	18965.3012697102	
Columbus	37047931302	133.952611657	2380000	17767.4773978595	
Bertie	37015960200	128.406365693999	2277560	17737.1268759958	3
Moore	37125950202	84.0106743292	1451280	17274.9476371667	
Brunswick	37019020602	182.740151494999	3075570	16830.2913992284	
Richmond	37153971100	62.6138161647999	1039200	16596.9759336312	2
Johnston	37101040600	37.0420490436	595350	16072.2750326054	2
Onslow	37133001201	7.86994139043	115200	14637.9743234283	
Bladen	37017950102	150.727987183	2178080	14450.401950605	1
Pender	37141920203	82.3819937761	1156680	14040.4467891813	
Gates	37073970200	73.9053614328	1018710	13783.9796768504	
Wake	37183052809	6.84883326121	89970	13136.5440752611	
Richmond	37153970100	95.9239461341999	1231875	12842.2052015726	2
Edgecombe	37065021600	46.4171839843999	594000	12796.9848450873	1
Richmond	37153970200	179.779358424	2240630	12463.2216937586	
Halifax	37083931000	130.550717899999	1609140	12325.7843839095	1
Cumberland	37051002600	56.7559322194999	692800	12206.6535233821	
Robeson	37155960402	30.733321901	372600	12123.6487614401	1
Franklin	37069060200	72.2877075667999	777515	10755.8397709805	
Hoke	37093970401	44.5788936749	475200	10659.7530989774	2
Chatham	37037020300	56.12783693	594000	10582.9839967075	
Person	37145920500	68.4233809891999	717600	10487.6431071604	
Scotland	37165010601	49.8849285953	519600	10415.9716096888	3
Onslow	37133000103	146.244239098	1517090	10373.673584389	
Guilford	37081012803	12.8133639843	130500	10184.6790709995	1
Halifax	37083930800	136.603299571	1388740	10166.2258844501	3
Hoke	37093970107	10.6758230031	106560	9981.4318735949	2
Duplin	37061090706	16.1362454415	157200	9742.04318903734	1
Randolph	37151031304	26.3793940491999	256500	9723.49855806406	
Halifax	37083930902	73.8852084528	708500	9589.19944649828	3
Orange	37135010802	57.3859881349999	540000	9409.96256315487	
Edgecombe	37065021500	24.4265488206999	228150	9340.24702690119	1
Johnston	37101041504	8.88065874262	81000	9120.94500504397	
Northampton	37131920103	68.8882396891	626118	9088.89532996833	
Wayne	37191000103	30.0926396863	261000	8673.21719599171	
Halifax	37083931101	23.4610880283	192000	8183.76367576812	
Randolph	37151031002	36.4381357084999	297000	8150.80119290291	
Moore	37125950404	48.8852510576	396900	8119.0132281891	
Rockingham	37157041300	60.8587806434999	493560	8109.92259097643	1
Chatham	37037020500	82.4481963694999	661500	8023.21978076294	
Warren	37185950103	107.432296554999	850200	7913.82132992698	1
Nash	37127011300	54.8478192242999	423270	7717.17100125783	1
Anson	37007920400	41.06091063	316800	7715.3671250666	2

Chowan	37041930201	85.2601343781	649800	7621.38137289762	
Wilson	37195001502	35.4372153083999	255060	7197.51813962483	1
Person	37145920100	103.41387165	736800	7124.7695134524	
Montgomery	37123960501	30.6511582370999	213120	6953.08145784979	1
Tyrrell	37177960100	597.175610083	4131686	6918.71190021599	1
Columbus	37047930100	60.6808656141	396900	6540.77683275129	
Hertford	37091950201	96.3781283415	599400	6219.25337537293	1
Robeson	37155961500	75.1167900485999	432000	5751.04446982491	1
Martin	37117970600	42.3766373652999	242400	5720.13295699787	1
Stokes	37169070200	75.2859776284	417600	5546.84966782538	
Harnett	37085070402	33.5732519186	182400	5432.89641534391	
Perquimans	37143920202	95.1106740088	490023	5152.13465898329	
Craven	37049960102	67.0382389059	323600	4827.09577819055	
Rockingham	37157041100	51.1782258932	243000	4748.11300624407	
Moore	37125950100	91.406298679	420998	4605.78763262757	
Nash	37127011502	46.8399811184999	208706	4455.72340159567	1
Guilford	37081017000	48.0561591750999	198450	4129.54350506699	
Lenoir	37107010900	30.6844776814	124800	4067.20301045404	1
Lee	37105030504	26.6787366132	106560	3994.19213679243	1
Montgomery	37123960201	53.6038700092	213120	3975.83234127353	
Gates	37073970100	165.413754361	642000	3881.17664386538	
Onslow	37133000401	84.4598958979999	324645	3843.77693754282	
Montgomery	37123960402	72.1919392127999	261000	3615.36208676499	1
Davidson	37057062002	32.2735530495999	106245	3292.01435728864	
Perquimans	37143920101	105.334043769	243000	2306.94646578749	2
Brunswick	37019020505	71.8271098886	155870	2170.07199985835	3
Craven	37049960301	75.2404006039	160000	2126.51712000197	1
Martin	37117970500	101.972299988	212400	2082.91859676593	1
Northampton	37131920102	40.5655749688	81000	1996.76696465658	1
Person	37145920602	47.5930730695	91350	1919.39696490289	
Scotland	37165010502	33.8405723409999	63750	1883.83338667008	1
Person	37145920601	54.5236383326	94218	1728.0211460809	1
Alamance	37001021902	47.8996029222	81000	1691.03698273997	
Washington	37187950300	197.032045984	283400	1438.34470471373	
Northampton	37131920101	61.2728854631999	81000	1321.95504402429	1
Granville	37077970101	132.052774757999	169560	1284.0320872525	1
Pasquotank	37139960503	80.3434431701	102600	1277.01771235742	
Jones	37103920100	148.367248743999	75000	505.502397833153	
Hyde	37095920102	444.591525951999	121500	273.284561013242	1

Census tracts with cattle AFOs					
County	Census Tract GEOID	Area (mi ²)	Total SSLW	SSLW per mi ²	Number of Potentially Underserved Block Groups
Iredell	37097060901	61.0735753637	32844000	537777.587187425	
Iredell	37097060702	28.6042060515999	26735750	934678.975244779	
Iredell	37097060802	42.6130526391999	17073400	400661.274951564	
Lincoln	37109070400	19.7407469947	11000000	557223.088009449	
Lincoln	37109070500	46.106408168	10725600	232627.099489481	
Iredell	37097061101	19.9972789551	10376000	518870.593509111	1
Randolph	37151031308	10.3933364942	9570000	920782.272886145	
Davidson	37057061803	15.2567019967	9285000	608585.00100535	
Iredell	37097060902	51.5682819637999	7566000	146718.093213017	
Randolph	37151031200	35.2549921529	7000000	198553.440875583	2
Randolph	37151031305	16.3981998183	6080000	370772.405957321	

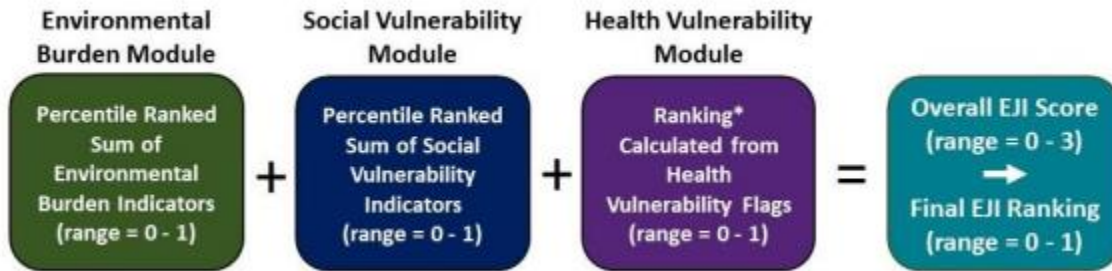
Yadkin	37197050101	57.0542504549	5814000	101903.012547607	
Gaston	37071030601	7.81435505769	4725000	604656.425913254	
Iredell	37097060801	52.0290074417	4482000	86144.2533767765	
Anson	37007920600	163.34199203299 9	4161000	25474.1597565392	
Randolph	37151030503	42.300517356	4113900	97254.1296688532	
Wilkes	37193961202	48.0495908078	4100000	85328.5102135445	
Catawba	37035011802	52.8357297327	4039000	76444.4821796464	
Greene	37079950101	80.816731634899 9	3200000	39595.7611161066	2
Randolph	37151031304	26.379394049199 9	2630600	99721.7750754126	
Lincoln	37109070800	22.685756216	2250000	99181.1768837179	3
Yadkin	37197050401	39.9355943432	2240000	56090.3133367643	1
Cleveland	37045950302	22.6083612979	2182500	96535.0814790244	
Alleghany	37005950300	113.382562354	2166600	19108.7584811807	1
Sampson	37163970202	103.71936868	1971200	19005.1291777685	
Surry	37171930700	28.0461678116	1880000	67032.3308563541	
Rowan	37159051901	64.206034017199 9	1852000	28844.6409803768	
Gaston	37071030403	7.044779254	1620400	230014.304434016	
Alamance	37001021902	47.8996029222	1520000	31733.0396761081	
Alexander	37003040400	20.0200238378	1190000	59440.4886648111	3
Alexander	37003040500	43.439373853799 9	1120000	25783.0604043576	2
Randolph	37151030805	24.2156467808	1120000	46251.0875773105	
Alamance	37001021803	37.1687480288	980000	26366.2364748108	
Chatham	37037020300	56.12783693	921250	16413.4242541528	
Haywood	37087920101	54.6306959229	910000	16657.301991618	
Rowan	37159051903	37.9924985763	700000	18424.6897738035	
Alexander	37003040600	28.8740774499	700000	24243.1988074626	
Randolph	37151030803	55.0169662634	688000	12505.233325773	
Wilkes	37193961201	89.474724968	620000	6929.3311627584	
Guilford	37081015201	21.7764879365	616000	28287.3896744162	
Haywood	37087920202	21.8687400596	616000	28168.0608174583	
Haywood	37087920102	104.036631782	602000	5786.42339422752	
Stanly	37167931102	28.7613487934	585200	20346.7509192158	1
Alleghany	37005950100	92.6800897178	560000	6042.29022333852	
Yadkin	37197050502	45.445255597399 9	525000	11552.3610352416	1
Lincoln	37109070902	32.7697292549	495000	15105.4040193506	
Wilkes	37193961001	72.560884770399 9	480000	6615.13433193152	
Buncombe	37021003202	16.1152789446	420000	26062.2233995357	
Randolph	37151030900	84.7194043187	420000	4957.54193950693	
Alamance	37001021204	12.989595609	420000	32333.5700850454	1
Granville	37077970102	93.282597255499 9	420000	4502.44753423432	
Davidson	37057061902	41.8004241459	406000	9712.82010399941	
Rockingham	37157041602	45.3035615689	369600	8158.29897695555	
Buncombe	37021003204	33.2881225415	364000	10934.8311712745	
Randolph	37151031307	31.261579707599 9	350000	11195.8513700736	
Chatham	37037020201	59.598673831799 9	350000	5872.61389385565	
Alexander	37003040300	28.308351533	350000	12363.8425074661	

Guilford	37081015602	22.418067838399 9	336000	14987.9107522577	
Durham	37063002100	71.688997728299 9	320000	4463.7253991581	
Cleveland	37045950101	81.1153965899	315000	3883.35646797813	
Rowan	37159051101	26.3841156905	308000	11673.6904739581	
Anson	37007920301	89.1282883848	300000	3365.93471541592	
Surry	37171931002	33.633684217599 9	280000	8324.98747947095	1
Rowan	37159051801	20.153203159	280000	13893.5730360539	
Buncombe	37021002303	7.17374041082	280000	39031.2422760213	
Chatham	37037020500	82.448196369499 9	280000	3396.0718648732	
Guilford	37081015301	19.4009463466	280000	14432.2856729651	
Person	37145920602	47.5930730695	280000	5883.20908782496	
Wake	37183053009	11.3399871693	268800	23703.7305234087	
Chatham	37037020107	19.752124262399 9	247800	12545.4860807913	
Davie	37059080102	46.4846970079	240000	5162.98944487499	
Wayne	37191001102	9.47900873406	224000	23631.1629501007	
Chatham	37037020203	52.6300620777	210000	3990.11499720384	
Wilkes	37193960101	19.1231532935	190400	9956.51695501062	
Guilford	37081015100	39.7345201437	180000	4530.06603197998	
Davie	37059080101	41.5005993405	175000	4216.80657101304	
Greene	37079950102	62.2594305136	175000	2810.81915713592	1
Wayne	37191001000	75.6844426145	160000	2114.04080512243	
Washington	37187950300	197.032045984	96000	487.23038691785	
Chowan	37041930202	51.4375401045	96000	1866.3411937073	
Duplin	37061090504	35.299540215599 9	28000	793.211464766498	

Census tracts with wet poultry AFOs					
County	Census tract GEOID	Area (mi ²)	Total SSLW	SSLW per mi ²	Number of Potentially Underserved Block Groups
Wayne	37191000302	26.4636098452	13520	510.89024056377	
Halifax	37083931000	130.550717899999	240000	1838.36599185794	1
Union	37179020100	86.3653428588999	7000000	81051.0300576968	
Hyde	37095920102	444.591525951999	35000000	78723.9476169834	1
Nash	37127010900	108.140494496	2068000	19123.2711634816	2
Nash	37127011104	29.8305362741	442400	14830.4407247317	1

Appendix E: CDC Environmental Justice Index Model

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: Cumulative Impact Analysis Census Tracts

The following table displays 2019 NC census tracts and corresponding counties that had both high EJI scores (based on the SPL_EJI variable from the CDC EJI dataset) and had $\geq 92,675.28$ SSLW per square mile for swine AFOs.

Cumulative Impact Analysis Summary Table						
County	Census Tracts	CDC EJI Score	Total SSLW per mile ²		Health Outcome Ranking	Health Factors Ranking
			Census	County		
Beaufort	9310	2.1839	157024.4	157024.3788	76	58
Bladen	9501	1.9438	260877.4	886620.6348	85	88
	9504	2.1712	268988.9			
	9503	2.1865	153935.2			
	9502	2.0496	202819.1			
Duplin	908.01	1.9405	1294103	4941940.502	62	76
	907.02	2.5823	138533			
	902	1.9776	1006134			
	904	2.2217	653982.3			
	903	2.1586	748462.9			
	901	1.9352	672484.6			
	908.02	2.0303	428240.7			
Edgecombe	213	1.9376	121539.7	246595.4149	99	96
	206	2.379	125055.7			
Greene	9501.01	1.9221	225112.2	225112.1732	59	86
Harnett	701	2.5106	125679.5	125679.472	37	55
Johnston	413	1.9453	196677.1	196677.1148	18	30
Jones	9203	2.1339	222300.8	373375.6261	71	78
	9202	1.9674	151074.8			
Lenoir	111	2.161	181638.8	325094.663	88	83
	113	1.9494	143455.8			
Northampton	9204.01	1.9167	110681.3	110681.3019	86	89
Pender	9203	2.0161	303222.3	303222.3053	32	26
Richmond	9710	1.9292	240874.4	240874.441	93	97
Robeson	9619	1.9116	121140.5	1325838.729	100	100
	9601.02	2.3918	210854.8			
	9602.02	2.0855	160039.5			
	9601.01	2.2476	249511.2			
	9620.01	2.0263	584292.8			
Sampson	9707	2.103	454427.3	1710760.638	49	73
	9701	2.0625	537581.1			
	9708	2.235	476273			
	9706	2.1754	242479.3			
Scotland	104	2.1919	201196.5	201196.5054	98	99
Wayne	9.01	2.1098	421274	2411991.438	60	60
	6.01	2.5704	121202.1			
	8	2.0869	211090.2			
	6.02	2.1956	315156.2			
	7	2.4457	163449.5			
	3.04	1.9213	243353.9			
	4.02	2.1909	365088.9			
	9.02	2.4228	571376.7			

Appendix G: Sensitive Receptors for Outreach

Metadata for GIS Sensitive Receptors

Name of Data File	Referenced Receptor	Affiliation	Author	Last Update	Link
Public Schools	Schools	State of North Carolina	NC One Map	03/22/2023	https://www.nconemap.gov/datasets/dea6ff0e8b4743a0ba361e13a85a4c70_3/explore
NC Non-public Schools	Schools	North Carolina Department of Administration	Jason Brown	05/30/2023	https://www.nconemap.gov/datasets/91c068363523484fa2221d0e27998f7c_0/explore
Nursing Homes	Nursing Homes	State of North Carolina	NC One Map	03/22/2023	https://www.nconemap.gov/datasets/nursing-homes/explore
Hospitals	Hospitals	State of North Carolina	NC One Map	03/22/2023	https://www.nconemap.gov/datasets/hospitals/explore
Child Care Centers	Daycare Facilities	Homeland Infrastructure Foundation-Level Data (HIFLD) database	GeoPlatform ArcGIS Online	12/08/2022	https://hifld-geoplatform.opendata.arcgis.com/datasets/child-care-centers/explore

*This is intended to be used as a contact list by NC DEQ for outreach to community members that may be at risk for high exposure to odorous emissions from AFOs based on the analysis performed in Section 4.2.

Public Schools

SCHOOL NAME	PHONE	ADDRESS	CITY	ZIP	COUNTY
B F Grady Elementary	2525683487	2627 N NC 11 & 903	Albertson	28508	Duplin
Brogden Primary	9197056020	2253 Old Mt Olive Hwy	Dudley	28333	Wayne
Charity Middle	9102893323	PO Box 70	Rose Hill	28458	Duplin
Chicod Elementary	2527466742	7557 NC 43 South	Greenville	27834	Pitt
Duplin Early College High	9102961136	212 James Sprunt Dr		0	Duplin
E E Smith Middle	9102960309	PO Box 369	Kenansville	28349	Duplin
East Duplin High	9102984535	394 North NC Highway 111	Beulaville	28518	Duplin
Eastern Wayne Elementary	9197517130	1271 New Hope Road	Goldsboro	27534	Wayne
Eastern Wayne High	9197517120	1135 New Hope Road	Goldsboro	27534	Wayne
Gates County Senior High	2523570720	088 Hwy 158 West	Gatesville	27938	Gates
Gatesville Elementary	2523570613	709 Main Street	Gatesville	27938	Gates
Greene Central High	2527473814	140 School Drive	Snow Hill	28580	Greene
Greene County Intermediate	252747182			0	Greene
Greene County Middle	2527478191	485 Middle School Road	Snow Hill	28580	Greene
Greene Early College High	2527479044	818 Highway 91	Snow Hill	28580	Greene
Hargrove Elementary	9105333444	7725 Faison Hwy	Faison	28341	Sampson
Hobbton Elementary	9105940392	12361 Hobbton Hwy	Newton Grove	28366	Sampson
James W Smith Elementary	2525146466	150 Koonce Town Road	Cove City	28523	Craven

Kenansville Elementary	9102961647	PO Box 98	Kenansville	28349	Duplin
Northeast Elementary	9197056030	4665 NC Hwy 111 N	Pikeville	27863	Wayne
Richlands Elementary	9103244142	110 E Foy Street	Richlands	28574	Onslow
Snow Hill Primary	2527478113	502 SE 2nd Street	Snow Hill	28580	Greene
Southwest Elementary	9103470900	2601 Burgaw Hwy	Jacksonville	28540	Onslow
Southwest High	9104554888	1420 Burgaw Hwy	Jacksonville	28540	Onslow
Spring Creek High	9197517160	4340 Indian Springs Road	Seven Springs	28578	Wayne
Spring Hill Middle	9103690590	22801 Airbase Road	Laurinburg	28352	Scotland
Summersill Elementary	9104552672	250 Summersill School Road	Jacksonville	28540	Onslow
Union Elementary	9105322104	10400 Taylors Bridge Hwy	Clinton	28328	Sampson
Union Intermediate	9105922287	1190 Edmond Matthis Road		0	Sampson
Union Middle	9105924547	455 River Road	Clinton	28328	Sampson
WallaceRose Hill High	9102857501	602 High School Road	Teachey	28464	Duplin
West Johnston High	9199347333	5935 Raleigh Road	Benson	27504	Johnston
Western Harnett High	9194995113	10637 NC Hwy 27 West	Lillington	27546	Harnett
Woodington Middle	2525279570	4939 Hwy 258 South	Kinston	28504	Lenoir

Non-public Schools

COUNTY	SCHOOL NAME	ADDRESS	CITY	ZIP	WEBSITE
Wayne	Asperger Connection School	503 Glendale Drive	Pikeville	27863	www.theaspergerconnectionschoool.org
Duplin	Cedar Fork Mennonite School	1362 Fountaintown Road	Beulaville	28518	
Greene	Covenant of Faith Christian Academy	3035 Hwy. 123 North	Hookerton	28538	

Randolph	Faith Christian School	5449 Brookhaven Road	Ramseur	27316	www.faithramseur.org
Sampson	Mintz Christian Academy	2741 Mintz Road	Roseboro	28382	www.mcanc.com
Greene	Mount Calvary Christian Acad.	P.O. Box 250	Hookerton	28538	www.mtcalvaryfwbchurch.com
Craven	Strait Path Academy	145 Jonestown Road	Dover	28526	
Craven	Swift Creek Mennonite School	1283 Honolulu Road	Grifton	28530	
Sampson	The Point Christian Academy	460 Reeda Branch Road	Roseboro	28382	
Person	Zion Christian Academy	2850 Virgilina Road	Roxboro	27574	www.zionchristiancenter.net

Daycare Facilities

DAYCARE ADDRESS	ADDRESS	CITY	ZIP
A GIFT FROM GOD DAYCARE	97 SURS LANE	MAXTON	28364
A TO Z CHILD CARE	2725 JOHN GREEN SMITH ROAD	DEEP RUN	28525
ABG PROVIDER SERVICES CHILDCARE CENTER	434 O'FERRELL STREET	GREENSBORO	27405
B F GRADY PREKINDERGARTEN CENTER	2631 NORTH NC 11 & 903 HWY	ALBERTSON	28508
BALTIMORE HEAD START CENTER	2100 ELWELL FERRY ROAD	COUNCIL	28434
BRIGHT BEGINNINGS PRESCHOOL AND DAY CARE	3171 SPEIGHT SEED FARM RD	WINTERVILLE	28590
BROGDEN PRIMARY SCHOOL	2253 OLD MOUNT OLIVE HIGHWAY	DUDLEY	28333
CHICOD AFTER SCHOOL	7557 NC 43 SOUTH	GREENVILLE	27858
CHICOD ELEMENTARY PRE-K	7557 NC HWY 43 SOUTH	GREENVILLE	27858
COVENANT CARE CHILD DEVELOPMENT CENTER	3035 HWY 123 NORTH	HOOKERTON	28538
CRAVEN COUNTY FAMILY LITERACY PROGRAM - JWS	148 KOONCETOWN ROAD	COVE CITY	28523
CREATIVE ANGELS ACADEMY	1048 BOWDEN RD	KENANSVILLE	28349

DAY CARE AT PINHOOK	1650 DEEP BOTTOM ROAD	WALLACE	28466
DEEP RUN CHILD CARE CENTER	2397 JOHN GREEN SMITH RD	DEEP RUN	28525
DISCOVERY LAND, INC. CHILD CARE CENTER	1308 B SOUTHEAST SECOND STREET	SNOW HILL	28580
EARLY BIRD DAY CARE	7300 OLD FAYETTEVILLE ROAD	GARLAND	28441
EAST COAST MIGRANT HEAD START PROJECT LONG CREEK	23280 HWY 210	ROCKY POINT	28457
EASTERN WAYNE ELEMENTARY SCHOOL	1271 NEW HOPE ROAD	GOLDSBORO	27534
EIC GATES COUNTY HEAD START CENTER	GATESVILLE ELEM SCH HWY 37	GATESVILLE	27938
FAITH CHRISTIAN SCHOOL DAY CARE	1382 GREENFIELD STREET	RAMSEUR	27316
GATESVILLE ELEMENTARY PRESCHOOL	709 MAIN STREET	GATESVILLE	27938
GREENE COUNTY SCHOOLS PRE-K CENTER	201 DOBBS STREET	SNOW HILL	28580
HARGROVE ELEMENTARY	7725 FAISON HWY	FAISON	28341
HARGROVE HEAD START	7725 FAISON HWY	FAISON	28341
HOBBTON HEAD START	12361 HOBBTON HWY	NEWTON GROVE	28366
JAMES W. SMITH	148 KOONCE TOWN RD	COVE CITY	28523
JOLLY BEE CHILD CARE CENTER	361 RHODESTOWN ROAD	JACKSONVILLE	28540
KENANSVILLE PREKINDERGARTEN	204 JAMES SPRUNT DRIVE	KENANSVILLE	28349
LITTLE BLESSINGS LEARNING CENTER	4228 ITA ROAD	ENFIELD	27823
LITTLE HANDS DAYCARE, INC.	1695 BUTLER MILL ROAD	BLADENBORO	28320
LITTLE MARK CHILD CARE CENTER	1360 NC HWY 111 SOUTH	PINETOPS	27864
LITTLE SPROUTS PRESCHOOL	515 MICROWAVE TOWER RD	ROSEBORO	28382
LOU ANNA'S CHILD CARE CENTER, INC	486 SUMMERLIN CROSSROAD RD	KENANSVILLE	28349
LOU'S DAY CARE	393 CENTRAL DRIVE	SNOW HILL	28580

M & M DAY CARE HOME	1039 THOMAS BRIDGE ROAD	COFIELD	27922
MARK'S LITTLE ANGELS DAYCARE	8 MANDELA COURT	GREENSBORO	27401
MOUNT CALVARY CHRISTIAN DAY CARE	532 EAST MAIN STREET	HOOKERTON	28538
MT. CALVARY CHRISTIAN DAY CARE	3289 BARLOWE RD	PARKTON	28371
NANNY'S	1123 SE 2ND STREET	SNOW HILL	28580
NEW BEGINNINGS CHILD CARE CENTER	174 KINSTON HWY	RICHLANDS	28574
NEW BEGINNINGS DAY CARE CENTER	709 MAIN ST	GATESVILLE	27938
NORTHEAST ELEMENTARY SCHOOL	4665 NC HIGHWAY 111 NORTH	PIKEVILLE	27863
ONCE UPON A TIME 2	687 BETHEL CHURCH ROAD	MOUNT OLIVE	28365
PLAINVIEW PRESCHOOL	3105 PLAIN VIEW HWY	DUNN	28334
PRECIOUS RESOURCES	117 WEST HARGETT STREET	RICHLANDS	28574
RAINBOW CHILD CARE CENTER, INC.	1517 HIGHWAY 58 W	TRENTON	28585
RAINBOW WORLD CHILD CARE	204 WAGON FORD ROAD	BEULAVILLE	28518
SANDCASTLES CHILD CARE	284 NORTH NC 11 903 HWY	KENANSVILLE	28349
SANDY PLAINS FREEWILL BAPTIST CHURCH DAY CARE	949 NC 241 HIGHWAY	PINK HILL	28572
SHINING AND SOARING STARS EDUCATIONAL CENTER	821 COLE STREET	GREENSBORO	27401
SOUTHWEST ELEMENTARY	2601 BURGAW HWY	JACKSONVILLE	28540
SOUTHWEST PRE-K	2601 BURGAW HIGHWAY	JACKSONVILLE	28540
SPRING CREEK CHRISTIAN PRESCHOOL	3177 INDIAN SPRINGS ROAD	SEVEN SPRINGS	28578
SUMMERSILL ELEMENTARY	250 SUMMERSILL SCHOOL RD	JACKSONVILLE	28540
SUMMERSILL PRE-K	250 SUMMERSILL ROAD	JACKSONVILLE	28540
TAILORED LEARNING CENTER II	800 HALLSVILLE RD	BEULAVILLE	28518

TELAMON NORTH CAROLINA HEAD START AT UNION ELEMENT	10400 TAYLORS BRIDGE HWY	CLINTON	28328
TWO BY TWO DAY CARE DEVELOPMENT CENTER	2027 BENSON HARDEE ROAD	BENSON	27504
UNION ELEMENTARY	10400 TAYLORS BRIDGE HWY	CLINTON	28328
WOODLAND PRESCHOOL AND CHILD CARE	2695 TRAM ROAD	ALBERTSON	28508

Nursing Home Facilities

FACILITY NAME	PHONE	ADDRESS	CITY	ZIP	COUNTY	WEBSITE
BRITTHAVEN OF SNOW HILL	252-747-8126	1304 SOUTHEAST SECOND STREET	SNOW HILL	28580	GREENE	HTTP://WWW.BRITTHAVEN.COM/INDEX.JSP?SEC=NC&CITY=SNOW%20HILL,%20NC
CENTURY CARE OF LAURINBURG	910-276-8400	8900 HASTY ROAD	LAURINBURG	28352	SCOTLAND	HTTP://WWW.CENTURY-CARE.COM/LAURINBURG.HTM
CLINTON HOUSE	910-592-0154	205 MARTHA LANE	CLINTON	28328	SAMPSON	HTTP://AMERICASLIVINGCENTERS.COM
GLENCARE OF PINK HILL	252-568-6167	2773 PINEWOOD HOME DRIVE	PINK HILL	28572	LENOIR	
GLENCARE OF SNOW HILL	252-747-8100	1328 SOUTHEAST 2ND STREET	SNOW HILL	28580	GREENE	
LIBERTY COMMONS NURSING AND REHABILITATION CENTER OF JOHNSTON COUNTY	919-207-1717	2315 NC HIGHWAY 242 NORTH	BENSON	27504	JOHNSTON	HTTP://WWW.LIBERTYHCS.COM/LOCATIONS_JOHNSTON.SHTML
PANTEGO REST HOME	252-944-0075	143 SWAMP ROAD	PANTEGO	27860	BEAUFORT	
PEN-DU REST HOME	910-259-4469	685 NC HIGHWAY 50	WALLACE	28466	PENDER	
PROGRESSIVE CARE	919-936-1461	160 HAVEN LANE	PRINCETON	27569	JOHNSTON	
SUTTON'S RETIREMENT CENTER INCORPORATED	919-759-9695	4258 UNITED STATES HIGHWAY 13 NORTH	GOLDSBORO	27534	WAYNE	
THE HERITAGE OF RICHLANDS	910-324-1121	148 COX AVENUE	RICHLANDS	28574	ONSLow	

WOODARD CARE INCORPORATED

919-734-2889

2052 UNITED STATES
HIGHWAY 70 WEST

GOLDSBORO

27530

WAYNE

Appendix H: AFO Location Data

This dataset was used throughout the report as the list of animal feeding operations with general permits. Data was obtained from a query in June 2023.

Permit Number	Regulated Operation	Sum of Total SSLW (lbs)	Location Latitude	Location Longitude
ADS310015	Swine	25402200	34.8875	-78.1314
ADS310017	Swine	4276800	34.8672	-78.1514
ADS310035	Swine	1415420	34.881703	-78.151154
ADS660030	Swine	5667890	36.53905	-77.617575
ADS820005	Swine	2118185	34.883219	-78.163722
ADS820466	Swine	2833920	35.000136	-78.222075
AWC010006	Cattle	420000	36.0442	-79.3261
AWC010010	Cattle	1520000	35.9042	-79.3
AWC010036	Cattle	980000	35.8483	-79.4597
AWC020002	Cattle	840000	35.933134	-81.209042
AWC020003	Cattle	700000	35.873786	-81.141283
AWC020004	Cattle	560000	35.847885	-81.054686
AWC020006	Cattle	560000	35.885466	-81.035494
AWC020007	Cattle	350000	35.89547	-81.231917
AWC020013	Cattle	350000	35.944308	-81.211292
AWC030001	Cattle	160000	36.5556	-81.1761
AWC030002	Cattle	560000	36.5036	-80.9711
AWC030003	Cattle	700000	36.525	-81.175
AWC030008	Cattle	385000	36.5086	-81.2258
AWC030021	Cattle	182000	36.5017	-81.1756
AWC030026	Cattle	366800	36.5383	-81.1883
AWC030033	Cattle	372800	36.5319	-81.1669
AWC040022	Cattle	300000	35.021592	-80.29248
AWC040036	Cattle	4161000	34.8156	-80.2464
AWC110006	Cattle	420000	35.4764	-82.4347
AWC110011	Cattle	280000	35.4558	-82.5947
AWC110026	Cattle	364000	35.5119	-82.3781
AWC130010	Cattle	308000	35.5047	-80.4986
AWC180023	Cattle	4039000	35.5833	-81.4733
AWC190005	Cattle	921250	35.6786	-79.4847
AWC190020	Cattle	247800	35.8719	-79.2378
AWC190029	Cattle	210000	35.7444	-79.245
AWC190037	Cattle	280000	35.5267	-79.4733
AWC190042	Cattle	350000	35.8378	-79.3589
AWC230002	Cattle	2182500	35.2925	-81.3997
AWC230009	Cattle	315000	35.4767	-81.6014
AWC290007	Cattle	5692500	35.7325	-80.3133
AWC290017	Cattle	406000	35.7353	-80.1339
AWC290021	Cattle	3592500	35.7583	-80.2892

AWC300003	Cattle	240000	35.895	-80.6653
AWC300022	Cattle	175000	35.9458	-80.6314
AWC320002	Cattle	320000	36.1781	-78.8061
AWC360004	Cattle	4725000	35.4042	-81.3542
AWC360006	Cattle	1620400	35.3333	-81.2417
AWC390015	Cattle	420000	36.3158	-78.6472
AWC400166	Cattle	175000	35.4564	-77.5213
AWC400167	Cattle	3200000	35.564439	-77.725403
AWC410009	Cattle	336000	36.239771	-79.753067
AWC410013	Cattle	180000	36.240822	-79.658204
AWC410014	Cattle	280000	36.1731	-79.5578
AWC410019	Cattle	336000	36.1708	-79.5736
AWC410021	Cattle	280000	36.137274	-79.611771
AWC440011	Cattle	420000	35.5847	-83.0217
AWC440013	Cattle	490000	35.595505	-83.019652
AWC440014	Cattle	231000	35.5981	-82.8347
AWC440036	Cattle	210000	35.6694	-82.975
AWC440052	Cattle	210000	35.6047	-82.9417
AWC440058	Cattle	182000	35.595	-82.975
AWC440064	Cattle	385000	35.5528	-82.8333
AWC490004	Cattle	11160000	36.0328	-80.925
AWC490006	Cattle	9369000	35.9192	-80.8136
AWC490008	Cattle	1260000	35.8389	-80.8292
AWC490009	Cattle	18410000	36.0542	-80.8375
AWC490017	Cattle	1755000	36.0244	-81
AWC490019	Cattle	539000	35.9486	-80.8833
AWC490020	Cattle	2604000	35.9097	-80.7125
AWC490026	Cattle	24350000	35.8917	-80.7667
AWC490030	Cattle	10376000	35.787689	-81.06013
AWC490038	Cattle	1519000	36.0194	-80.9328
AWC490041	Cattle	3640000	35.955	-80.9083
AWC490043	Cattle	1125750	35.8664	-80.7333
AWC490050	Cattle	1179000	35.9106	-80.8722
AWC490055	Cattle	1508000	35.9272	-80.9078
AWC490058	Cattle	490000	35.9139	-80.9475
AWC490067	Cattle	210000	35.8944	-80.9417
AWC490088	Cattle	5100400	35.9514	-80.8417
AWC490094	Cattle	1848000	36.0286	-80.7183
AWC550001	Cattle	495000	35.4833	-81.15
AWC550002	Cattle	11000000	35.4167	-81.32
AWC550007	Cattle	9660000	35.4258	-81.3817
AWC550018	Cattle	1065600	35.4556	-81.3511
AWC550021	Cattle	2250000	35.5458	-81.2839
AWC730013	Cattle	280000	36.2639	-79.1256

AWC760012	Cattle	2240000	35.8433	-79.8433
AWC760013	Swine	270000	35.5128	-79.745
AWC760013	Cattle	688000	35.5128	-79.745
AWC760022	Cattle	6080000	35.9	-79.8361
AWC760028	Cattle	390600	35.8619	-79.8386
AWC760031	Cattle	4113900	35.7456	-79.8617
AWC760038	Cattle	420000	35.6875	-79.6178
AWC760050	Cattle	350000	35.8247	-79.6539
AWC760051	Cattle	245000	35.7022	-79.6908
AWC760059	Cattle	9570000	35.8986	-79.7756
AWC760060	Cattle	7000000	35.8561	-79.6408
AWC760064	Cattle	875000	35.716	-79.692
AWC790005	Cattle	369600	36.257569	-79.711424
AWC800001	Cattle	210000	35.6917	-80.625
AWC800010	Cattle	1040000	35.7067	-80.71
AWC800013	Cattle	280000	35.5728	-80.6994
AWC800017	Cattle	420000	35.681883	-80.76645
AWC800026	Cattle	182000	35.704928	-80.702283
AWC800043	Cattle	700000	35.780038	-80.626053
AWC820556	Cattle	1971200	35.120688	-78.505225
AWC840012	Cattle	585200	35.1778	-80.1439
AWC860004	Cattle	280000	36.4022	-80.7706
AWC860010	Cattle	1880000	36.5014	-80.7208
AWC920016	Cattle	268800	35.7222	-78.6708
AWC940021	Cattle	96000	35.8564	-76.6569
AWC960212	Cattle	224000	35.386376	-78.029778
AWC960220	Cattle	160000	35.3081	-78.1633
AWC970003	Cattle	480000	36.0267	-81.3097
AWC970004	Cattle	4000000	36.2281	-80.8789
AWC970014	Cattle	100000	36.1883	-81.04
AWC970018	Cattle	190400	36.3211	-80.9278
AWC970022	Cattle	620000	36.1511	-80.9981
AWC990005	Cattle	2634000	36.0511	-80.7522
AWC990008	Cattle	525000	36.0681	-80.6483
AWC990012	Cattle	5814000	36.2331	-80.5258
AWC990034	Cattle	2240000	36.099809	-80.837931
AWP420001	Wet Poultry	240000	36.3014	-77.4514
AWP480024	Wet Poultry	35000000	35.6417	-76.525
AWP640001	Wet Poultry	808000	36.1164	-77.9444
AWP640002	Wet Poultry	700000	36.0228	-77.9778
AWP640003	Wet Poultry	560000	36.0044	-78.1236
AWP640004	Wet Poultry	442400	36.0033	-77.9889
AWP900001	Wet Poultry	7000000	35.127575	-80.419556
AWS010003	Swine	81000	35.87	-79.3033

AWS040005	Swine	211200	35.050361	-80.062561
AWS040007	Swine	106560	34.845508	-80.10178
AWS040008	Swine	106560	35.156219	-80.11625
AWS040009	Swine	106560	34.863761	-80.024744
AWS040010	Swine	105600	35.039052	-80.063219
AWS040014	Swine	118800	34.850075	-80.167827
AWS040030	Swine	6322080	35.134406	-80.135271
AWS040031	Swine	213120	34.908397	-80.047794
AWS040033	Swine	1072974	34.815238	-80.25553
AWS040034	Swine	952600	34.822255	-80.295013
AWS040035	Swine	952600	34.853097	-80.066391
AWS070001	Swine	1163038	35.5884	-76.6885
AWS070002	Swine	1166400	35.4926	-77.1323
AWS070003	Swine	1293600	35.6193	-76.7136
AWS070007	Swine	3512000	35.44314	-77.12842
AWS070008	Swine	1879220	35.3141	-76.9392
AWS070011	Swine	972085	35.384529	-77.112694
AWS070014	Swine	1801280	35.425	-77.0333
AWS070026	Swine	1688700	35.58	-76.6133
AWS070038	Swine	1080335	35.6401	-76.6392
AWS070065	Swine	1724639	35.6666	-76.6518
AWS080002	Swine	1801280	36.078623	-77.026692
AWS080004	Swine	415395	36.183408	-77.248554
AWS080010	Swine	2833552	36.2417	-77.175
AWS080012	Swine	476280	36.1433	-77.06
AWS080034	Swine	1555200	35.9903	-77.1403
AWS090003	Swine	1039140	34.547038	-78.418533
AWS090004	Swine	7927500	34.759775	-78.674275
AWS090006	Swine	1188000	34.490183	-78.853822
AWS090008	Swine	1472200	34.540152	-78.463441
AWS090011	Swine	972000	34.524486	-78.474922
AWS090014	Swine	923400	34.766825	-78.589936
AWS090016	Swine	2030400	34.504702	-78.560475
AWS090017	Swine	364800	34.5987	-78.804752
AWS090020	Swine	2073600	34.628554	-78.701378
AWS090022	Swine	712800	34.627591	-78.684031
AWS090023	Swine	694575	34.547022	-78.52475
AWS090027	Swine	1662287	34.813525	-78.783216
AWS090031	Swine	1296540	34.804352	-78.617444
AWS090032	Swine	604800	34.508394	-78.511397
AWS090034	Swine	595350	34.567438	-78.659222
AWS090035	Swine	595350	34.757525	-78.580908
AWS090036	Swine	5552000	34.47858	-78.717575
AWS090037	Swine	4987500	34.756975	-78.737366

AWS090038	Swine	495720	34.504788	-78.528377
AWS090039	Swine	991440	34.578625	-78.546091
AWS090040	Swine	495720	34.5243	-78.632269
AWS090041	Swine	213120	34.563122	-78.8039
AWS090042	Swine	106560	34.718408	-78.394941
AWS090045	Swine	831600	34.589905	-78.817327
AWS090048	Swine	4987500	34.498938	-78.541336
AWS090049	Swine	10252800	34.621263	-78.351747
AWS090050	Swine	1662287	34.487741	-78.537608
AWS090052	Swine	432000	34.519011	-78.836869
AWS090054	Swine	396900	34.421113	-78.381755
AWS090056	Swine	334800	34.724577	-78.402516
AWS090057	Swine	78000	34.590297	-78.681386
AWS090058	Swine	79200	34.585325	-78.674444
AWS090059	Swine	78000	34.559986	-78.578311
AWS090060	Swine	78000	34.752336	-78.42523
AWS090061	Swine	234000	34.565158	-78.692661
AWS090063	Swine	78000	34.684291	-78.642211
AWS090064	Swine	78000	34.689216	-78.645408
AWS090065	Swine	78000	34.741797	-78.600136
AWS090067	Swine	78000	34.589255	-78.674541
AWS090068	Swine	78000	34.589561	-78.666391
AWS090069	Swine	78000	34.739644	-78.718444
AWS090070	Swine	156000	34.674616	-78.661641
AWS090072	Swine	78000	34.805708	-78.466488
AWS090073	Swine	156000	34.80643	-78.483794
AWS090074	Swine	78000	34.708602	-78.820008
AWS090075	Swine	156000	34.542238	-78.58683
AWS090076	Swine	78000	34.599005	-78.689677
AWS090077	Swine	78000	34.776102	-78.497697
AWS090078	Swine	345600	34.686869	-78.499072
AWS090081	Swine	330480	34.50985	-78.518522
AWS090082	Swine	330480	34.481241	-78.781591
AWS090086	Swine	1039200	34.749941	-78.442336
AWS090088	Swine	3610354	34.751663	-78.846613
AWS090089	Swine	1732000	34.557777	-78.495
AWS090095	Swine	396900	34.59211	-78.723167
AWS090097	Swine	237600	34.540516	-78.578705
AWS090099	Swine	216000	34.764194	-78.588786
AWS090100	Swine	782864	34.531375	-78.4903
AWS090101	Swine	297620	34.686044	-78.562633
AWS090102	Swine	354240	34.451572	-78.437858
AWS090103	Swine	651232	34.482519	-78.603244
AWS090107	Swine	1039200	34.73215	-78.673569

AWS090111	Swine	552015	34.623241	-78.717411
AWS090112	Swine	325616	34.614791	-78.784527
AWS090117	Swine	216000	34.7657	-78.601772
AWS090122	Swine	648000	34.494388	-78.610302
AWS090124	Swine	495720	34.500308	-78.478605
AWS090125	Swine	495720	34.682527	-78.551375
AWS090126	Swine	694575	34.5528	-78.524133
AWS090128	Swine	5117400	34.836377	-78.507916
AWS090129	Swine	1732000	34.836594	-78.610177
AWS090130	Swine	182400	34.580919	-78.639463
AWS090131	Swine	181800	34.476322	-78.548255
AWS090132	Swine	495720	34.565355	-78.589105
AWS090134	Swine	78000	34.760661	-78.481497
AWS090137	Swine	1982880	34.797758	-78.543247
AWS090138	Swine	1909963	34.816858	-78.805961
AWS090139	Swine	325616	34.510091	-78.751577
AWS090140	Swine	652098	34.520541	-78.616397
AWS090141	Swine	1953696	34.688483	-78.792986
AWS090146	Swine	156000	34.761508	-78.433408
AWS090148	Swine	78000	34.580766	-78.709472
AWS090150	Swine	991440	34.559705	-78.587997
AWS090151	Swine	660960	34.497027	-78.528186
AWS090152	Swine	78000	34.594805	-78.684583
AWS090153	Swine	3891804	34.496205	-78.772841
AWS090155	Swine	1732000	34.469572	-78.593002
AWS090156	Swine	756000	34.637158	-78.689033
AWS090159	Swine	182400	34.551694	-78.714852
AWS090166	Swine	182400	34.547691	-78.720022
AWS090167	Swine	160000	34.847997	-78.786366
AWS090168	Swine	793800	34.592744	-78.56143
AWS090169	Swine	324000	34.582997	-78.614869
AWS090170	Swine	866000	34.5169	-78.591427
AWS090171	Swine	1039200	34.57973	-78.804083
AWS090173	Swine	1616900	34.846472	-78.646513
AWS090181	Swine	1080000	34.716725	-78.801905
AWS090182	Swine	106560	34.837275	-78.568391
AWS090183	Swine	1069200	34.591611	-78.798319
AWS090184	Swine	91200	34.679069	-78.366355
AWS090185	Swine	166500	34.539161	-78.82878
AWS090186	Swine	432000	34.81983	-78.488958
AWS090188	Swine	182400	34.471969	-78.550633
AWS090189	Swine	192000	34.719841	-78.462661
AWS090190	Swine	78000	34.756116	-78.480377
AWS090197	Swine	333855	34.647688	-78.792986

AWS090198	Swine	8657144	34.498733	-78.582388
AWS090199	Swine	252000	34.456047	-78.600058
AWS090201	Swine	78000	34.800433	-78.562763
AWS090202	Swine	252000	34.48728	-78.572236
AWS090203	Swine	31501050	34.819191	-78.544711
AWS090204	Swine	991440	34.838905	-78.531
AWS090208	Swine	213120	34.82	-78.501877
AWS090209	Swine	192000	34.791302	-78.592686
AWS090210	Swine	1587600	34.58393	-78.599241
AWS090211	Swine	237600	34.53188	-78.576869
AWS090213	Swine	1472200	34.8024	-78.721272
AWS090214	Swine	866000	34.809475	-78.800216
AWS100001	Swine	777600	34.1108	-78.5225
AWS100003	Swine	506250	34.0669	-78.2083
AWS100004	Swine	495720	34.0647	-78.2133
AWS100005	Swine	820800	34.100234	-78.145053
AWS100008	Swine	388800	34.1208	-78.1139
AWS100009	Swine	106560	34.1358	-78.5067
AWS100018	Swine	155870	33.9667	-78.4972
AWS100021	Swine	1732000	34.123956	-78.423885
AWS100029	Swine	106560	34.139614	-78.511167
AWS100032	Swine	1728000	34.112711	-78.099255
AWS100033	Swine	864000	34.097063	-78.151852
AWS100036	Swine	2973100	34.112864	-78.026376
AWS100037	Swine	192000	34.119927	-78.429807
AWS130001	Swine	866000	35.3519	-80.4444
AWS140003	Swine	368420	35.82	-81.3586
AWS190004	Swine	270000	35.628716	-79.507114
AWS190043	Swine	391500	35.6053	-79.5319
AWS190044	Swine	594000	35.6833	-79.4
AWS210002	Swine	189000	36.2278	-76.6164
AWS210004	Swine	69300	36.3261	-76.5708
AWS210006	Swine	135000	36.2153	-76.6756
AWS210010	Swine	1678320	36.1225	-76.6325
AWS210010	Cattle	96000	36.1225	-76.6325
AWS210015	Swine	256500	36.2603	-76.5833
AWS240001	Swine	4780440	34.416596	-78.696219
AWS240002	Swine	950400	34.36898	-78.784544
AWS240003	Swine	793800	34.365582	-78.73442
AWS240004	Swine	793800	34.355994	-78.776293
AWS240005	Swine	1641600	34.2611	-78.3811
AWS240006	Swine	660960	34.057864	-78.682148
AWS240007	Swine	594000	34.385092	-78.880683
AWS240008	Swine	1231200	34.2433	-78.3806

AWS240009	Swine	2598000	34.437778	-78.71234
AWS240010	Swine	213120	34.4567	-78.8928
AWS240012	Swine	105600	34.436037	-78.643074
AWS240013	Swine	4987500	34.03018	-78.675283
AWS240015	Swine	396900	34.3806	-78.2939
AWS240017	Swine	519570	34.122407	-78.806501
AWS240019	Swine	1044000	34.332374	-78.439226
AWS240022	Swine	976848	34.4306	-78.7678
AWS240024	Swine	396900	34.341902	-78.888122
AWS240027	Swine	135000	34.127358	-78.752668
AWS240029	Swine	81000	34.1903	-78.7958
AWS240043	Swine	708500	34.3578	-78.6147
AWS240047	Swine	156600	34.446793	-78.736636
AWS240064	Swine	950400	34.2931	-78.9658
AWS240066	Swine	712800	34.4217	-78.8656
AWS240069	Swine	192000	34.273561	-78.987051
AWS240071	Swine	1468800	34.336367	-78.9767
AWS240073	Swine	288000	34.454975	-78.911498
AWS240075	Swine	192000	34.272109	-79.020233
AWS240076	Swine	991440	34.0078	-78.7244
AWS240077	Swine	477000	34.183792	-78.786108
AWS240078	Swine	1044000	34.264575	-78.926411
AWS240092	Swine	106560	34.460273	-78.885885
AWS240093	Swine	594000	34.3633	-78.8433
AWS240094	Swine	1069200	34.408439	-78.935247
AWS240095	Swine	432000	34.3944	-78.8618
AWS240098	Swine	648000	34.167964	-78.52865
AWS240100	Swine	2381400	34.246179	-78.865575
AWS240103	Swine	1732000	34.150954	-78.652093
AWS240104	Swine	648000	34.454919	-78.757544
AWS240105	Swine	519600	34.3842	-78.5961
AWS240106	Swine	156000	34.4431	-78.6478
AWS240107	Swine	475200	34.416765	-78.845468
AWS240108	Swine	1321920	34.1111	-78.7492
AWS240109	Swine	192000	34.423411	-78.889387
AWS240112	Swine	432000	34.251502	-78.844781
AWS240113	Swine	950400	34.458129	-78.839341
AWS250004	Swine	156000	35.3577	-77.143749
AWS250006	Swine	330395	35.3701	-77.302442
AWS250007	Swine	583200	35.2854	-77.362753
AWS250008	Swine	495720	35.2695	-77.228089
AWS250009	Swine	424440	35.1843	-77.34356
AWS250010	Swine	475200	35.2722	-77.33245
AWS250011	Swine	4987500	35.3139	-77.233566

AWS250016	Swine	323600	35.2139	-77.003442
AWS250017	Swine	297000	35.2544	-77.1617
AWS250019	Swine	417555	35.3203	-77.360839
AWS250020	Swine	192915	35.2412	-77.283879
AWS250021	Swine	160000	35.1801	-77.211008
AWS250024	Swine	355060	35.2872	-77.3851
AWS250031	Swine	156000	35.3354	-77.110108
AWS250033	Swine	189000	35.2299	-77.331104
AWS250036	Swine	156000	35.2584	-77.212528
AWS250039	Swine	1039200	35.3325	-77.39316
AWS250041	Swine	115200	35.3595	-77.279012
AWS250042	Swine	230400	35.2285	-77.44883
AWS250047	Swine	202500	35.3179	-77.350714
AWS250048	Swine	115200	35.311	-77.270217
AWS250049	Swine	660960	35.3163	-77.422517
AWS250050	Swine	96000	35.3762	-77.292729
AWS250051	Swine	1295969	35.3661	-77.103803
AWS260002	Swine	1258731	34.882789	-78.547578
AWS260003	Swine	992250	35.169856	-78.690347
AWS260004	Swine	364800	34.940364	-78.713933
AWS260008	Swine	182400	34.896675	-78.543831
AWS260013	Swine	157200	34.865278	-78.555056
AWS260016	Swine	1732000	34.959472	-78.622078
AWS260019	Swine	692800	35.220389	-78.697892
AWS260021	Swine	198450	34.875289	-78.533667
AWS260025	Swine	666820	34.860658	-78.803694
AWS260059	Swine	950400	35.115792	-78.645961
AWS260062	Swine	182400	34.892247	-78.543367
AWS260063	Swine	182400	34.945008	-78.610889
AWS260064	Swine	182400	35.184375	-78.677114
AWS260067	Swine	1190700	35.126086	-78.652589
AWS260069	Swine	182400	34.886683	-78.554053
AWS260070	Swine	584550	34.85195	-78.550383
AWS260071	Swine	156000	34.8913	-78.606997
AWS260072	Swine	2505456	34.921656	-78.6553
AWS260073	Swine	793800	34.932667	-78.632761
AWS290034	Swine	106245	35.5978	-80.0692
AWS310005	Swine	1653125	35.0467	-78.09
AWS310006	Swine	2313360	34.7806	-78.1694
AWS310007	Swine	312000	34.7892	-78.0489
AWS310011	Swine	1265690	34.8522	-77.9697
AWS310012	Swine	1139400	34.8953	-77.75
AWS310014	Swine	3354210	34.8825	-78.1094
AWS310016	Swine	2138400	34.8483	-78.1597

AWS310022	Swine	1984500	35.1467	-78.13
AWS310023	Swine	991440	35.0542	-77.98
AWS310026	Swine	1425600	35.0183	-78.1333
AWS310029	Swine	384000	35.1461	-77.9944
AWS310031	Swine	192000	35.1492	-77.9631
AWS310033	Swine	1512000	34.945	-77.9053
AWS310034	Swine	787320	34.87	-77.7522
AWS310036	Swine	826200	34.7319	-77.7181
AWS310037	Swine	1487160	34.97497	-77.86583
AWS310041	Swine	803160	35.044596	-77.936535
AWS310042	Swine	753300	34.9542	-77.925
AWS310043	Swine	777515	35.145728	-77.853752
AWS310045	Swine	777600	35.0569	-77.8003
AWS310049	Swine	2594140	34.966137	-77.926392
AWS310050	Swine	993600	34.9478	-78.0367
AWS310051	Swine	777600	35.045	-78.0778
AWS310055	Swine	1166400	35.0611	-78.0533
AWS310056	Swine	1727990	35.0389	-77.9278
AWS310057	Swine	2654723	35.0222	-78.0361
AWS310058	Swine	772200	34.8833	-77.8194
AWS310059	Swine	769465	34.9508	-78.0481
AWS310060	Swine	336000	35.023444	-78.074718
AWS310062	Swine	168000	34.87525	-77.7326
AWS310063	Swine	719280	34.8783	-77.7444
AWS310064	Swine	741960	34.7842	-77.7725
AWS310065	Swine	156000	34.7708	-77.7867
AWS310066	Swine	712800	34.905	-77.7394
AWS310067	Swine	712800	35.0519	-77.9703
AWS310070	Swine	312000	34.9111	-78.0778
AWS310078	Swine	1321920	35.0567	-77.8733
AWS310084	Swine	660960	35.023619	-77.876417
AWS310086	Swine	642505	34.9017	-77.9094
AWS310087	Swine	4812600	35.0203	-78.0161
AWS310088	Swine	626400	34.8739	-77.8019
AWS310090	Swine	991440	34.85	-77.8936
AWS310091	Swine	793800	35.0886	-77.9839
AWS310092	Swine	595350	34.9528	-77.8378
AWS310095	Swine	585900	35.0042	-77.8861
AWS310096	Swine	1102735	35.0653	-77.9408
AWS310097	Swine	583200	34.9847	-77.9556
AWS310099	Swine	580500	35.0167	-77.9514
AWS310100	Swine	575100	35.131162	-77.789668
AWS310101	Swine	569700	34.916676	-77.987866
AWS310102	Swine	561600	34.943818	-77.954867

AWS310103	Swine	1801280	35.1069	-78.0708
AWS310105	Swine	556200	34.7333	-77.7542
AWS310106	Swine	550800	35.1069	-77.8236
AWS310109	Swine	731700	35.079673	-77.770538
AWS310111	Swine	115200	34.8686	-77.6956
AWS310112	Swine	115200	35.024122	-77.762322
AWS310113	Swine	660960	34.9519	-78.1025
AWS310119	Swine	1234440	34.827022	-78.093942
AWS310122	Swine	1487160	34.8483	-77.9492
AWS310123	Swine	495720	34.8428	-77.9214
AWS310124	Swine	991440	34.7733	-77.8403
AWS310127	Swine	495720	34.7825	-77.8408
AWS310128	Swine	826200	34.7556	-77.6833
AWS310130	Swine	660960	35.1039	-77.7789
AWS310131	Swine	330480	34.8369	-77.7056
AWS310132	Swine	495720	34.89281	-77.80337
AWS310133	Swine	495720	34.843313	-77.730379
AWS310134	Swine	495720	34.8694	-77.7267
AWS310135	Swine	495720	34.8633	-77.7033
AWS310136	Swine	495720	34.968013	-77.912723
AWS310138	Swine	1487160	35.069252	-77.799118
AWS310139	Swine	495720	35.152741	-77.855782
AWS310140	Swine	495720	34.9642	-77.8306
AWS310141	Swine	660960	34.7367	-77.7978
AWS310143	Swine	991440	34.8761	-78.0236
AWS310146	Swine	991440	34.8833	-77.7467
AWS310147	Swine	991440	35.045567	-77.798734
AWS310147	Cattle	28000	35.045567	-77.798734
AWS310148	Swine	495720	34.95	-77.9653
AWS310150	Swine	1487160	34.71793	-77.75193
AWS310153	Swine	495720	34.73276	-78.070045
AWS310159	Swine	991440	34.74519	-77.74051
AWS310160	Swine	1156680	34.8994	-77.9283
AWS310161	Swine	1942785	35.0964	-77.9492
AWS310162	Swine	826200	34.8911	-77.685
AWS310164	Swine	495720	35.1131	-77.9961
AWS310165	Swine	1487160	35.0736	-77.9569
AWS310166	Swine	495720	34.8564	-77.8656
AWS310172	Swine	108000	35.0575	-78.0403
AWS310173	Swine	9969600	34.915	-78.0933
AWS310175	Swine	486000	35.0361	-77.7758
AWS310176	Swine	486000	35.0317	-77.9036
AWS310177	Swine	15352200	35.0144	-77.7839
AWS310178	Swine	213120	34.995	-78.0217

AWS310179	Swine	106560	35.0358	-78.1342
AWS310180	Swine	106560	34.967978	-77.722747
AWS310181	Swine	106560	34.8725	-77.9361
AWS310182	Swine	106560	34.9469	-77.7864
AWS310183	Swine	712800	35.0658	-77.9581
AWS310185	Swine	950400	35.0653	-78.0678
AWS310189	Swine	594000	34.8817	-77.8053
AWS310191	Swine	423900	35.0203	-77.8072
AWS310192	Swine	475200	35.08	-77.8653
AWS310193	Swine	105600	34.918066	-77.910707
AWS310194	Swine	475200	34.8517	-77.7436
AWS310196	Swine	4987500	35.0361	-77.9944
AWS310197	Swine	4987500	35.068112	-78.011137
AWS310200	Swine	4987500	35.0683	-78.0167
AWS310204	Swine	1665318	35.0331	-77.9786
AWS310207	Swine	251100	34.8842	-77.7622
AWS310208	Swine	405000	35.0722	-78.1083
AWS310209	Swine	192000	35.0861	-77.8006
AWS310211	Swine	96000	35.1389	-77.8347
AWS310212	Swine	192000	34.9458	-78.0139
AWS310213	Swine	192000	34.9667	-78.1075
AWS310214	Swine	192000	35.0989	-77.8147
AWS310216	Swine	192000	35.1436	-77.9575
AWS310217	Swine	96000	34.8944	-77.7136
AWS310219	Swine	192000	35.1275	-77.9569
AWS310221	Swine	192000	35.10152	-78.01161
AWS310223	Swine	863995	35.134527	-77.824593
AWS310225	Swine	864000	35.0639	-78.125
AWS310226	Swine	972000	34.837027	-77.909363
AWS310229	Swine	88800	34.947151	-77.83011
AWS310230	Swine	88800	35.1033	-77.8022
AWS310231	Swine	396865	35.0264	-77.915
AWS310232	Swine	396900	34.7772	-77.7717
AWS310234	Swine	785700	35.0972	-78.0275
AWS310235	Swine	396900	34.9967	-77.9036
AWS310236	Swine	396900	35.0731	-77.9814
AWS310237	Swine	396900	34.9486	-77.8433
AWS310238	Swine	396900	35.1092	-78.0506
AWS310239	Swine	648000	34.9056	-77.9278
AWS310240	Swine	777600	34.8283	-77.7936
AWS310241	Swine	583200	34.8256	-77.7872
AWS310242	Swine	388800	34.74394	-78.13713
AWS310244	Swine	388800	34.9267	-77.685
AWS310245	Swine	388800	34.7544	-77.7767

AWS310246	Swine	777600	34.9681	-78.1542
AWS310247	Swine	388700	35.1172	-77.9214
AWS310248	Swine	388800	34.79	-78.1
AWS310249	Swine	388800	34.7917	-77.9414
AWS310250	Swine	388700	35.0839	-77.8186
AWS310251	Swine	388700	35.055	-77.7883
AWS310252	Swine	388700	35.0258	-77.8006
AWS310253	Swine	388800	34.9936	-77.8403
AWS310254	Swine	388800	34.8894	-77.9225
AWS310256	Swine	388800	35.1258	-77.8764
AWS310257	Swine	388800	34.8147	-77.715
AWS310259	Swine	639900	34.9164	-77.8144
AWS310260	Swine	777600	34.7311	-77.7328
AWS310261	Swine	386100	34.9108	-77.7397
AWS310263	Swine	84240	35.0233	-77.79
AWS310264	Swine	84240	35.0278	-77.7797
AWS310267	Swine	870480	35.1381	-77.8825
AWS310268	Swine	79200	34.76197	-77.73022
AWS310269	Swine	1425570	35.0303	-77.9153
AWS310270	Swine	777600	34.9886	-77.8789
AWS310271	Swine	621000	35.1053	-78.0428
AWS310272	Swine	356400	35.099165	-77.791506
AWS310273	Swine	79200	35.0494	-77.9878
AWS310274	Swine	356400	34.7614	-77.6989
AWS310275	Swine	79200	34.999999	-77.834099
AWS310276	Swine	712800	34.7914	-77.7847
AWS310278	Swine	79200	34.7803	-77.9886
AWS310280	Swine	234000	35.029846	-78.140266
AWS310281	Swine	78000	34.857872	-77.915526
AWS310282	Swine	312000	34.8008	-77.7519
AWS310283	Swine	78000	35.0139	-78.0294
AWS310284	Swine	78000	35.0333	-77.8861
AWS310285	Swine	78000	35.026488	-77.888242
AWS310286	Swine	78000	35.042344	-77.956433
AWS310287	Swine	156000	35.103093	-77.90218
AWS310288	Swine	78000	34.9278	-77.8161
AWS310290	Swine	156000	34.97974	-77.744164
AWS310291	Swine	156000	34.85	-77.8228
AWS310292	Swine	78000	34.859811	-77.817853
AWS310293	Swine	78000	34.8603	-77.8128
AWS310294	Swine	234000	34.9689	-78.0367
AWS310296	Swine	157200	35.011817	-77.968579
AWS310297	Swine	234000	35.0236	-78.1183
AWS310298	Swine	78000	34.970655	-78.025769

AWS310299	Swine	156000	35.0314	-78.0158
AWS310302	Swine	1236446	35.035624	-77.963323
AWS310304	Swine	78000	34.7517	-77.7914
AWS310305	Swine	156000	35.0156	-77.9967
AWS310306	Swine	78000	34.7636	-77.7408
AWS310307	Swine	78000	34.741541	-77.698713
AWS310308	Swine	78000	34.730108	-77.772947
AWS310310	Swine	78000	34.76063	-77.72547
AWS310312	Swine	78000	34.782226	-77.983596
AWS310314	Swine	330480	34.9433	-77.92
AWS310317	Swine	330480	34.739664	-77.781349
AWS310318	Swine	334800	34.8972	-77.8133
AWS310320	Swine	533250	35.0986	-77.7833
AWS310321	Swine	334800	34.8806	-77.9064
AWS310322	Swine	830925	35.1439	-78.0472
AWS310324	Swine	334800	35.1264	-77.9328
AWS310325	Swine	495720	35.1181	-77.8772
AWS310327	Swine	330480	34.9817	-77.7736
AWS310328	Swine	1633920	34.9667	-78.0908
AWS310330	Swine	330480	34.9292	-77.7458
AWS310332	Swine	330480	34.835	-77.8875
AWS310333	Swine	495720	35.11	-77.7789
AWS310334	Swine	586980	35.0969	-77.82
AWS310335	Swine	495720	35.0656	-77.7753
AWS310337	Swine	495720	35.0583	-78.1378
AWS310338	Swine	330480	34.9858	-77.7153
AWS310339	Swine	495720	35.108403	-77.998395
AWS310340	Swine	330480	34.976261	-77.784362
AWS310341	Swine	330480	34.9656	-77.8456
AWS310342	Swine	330480	34.840352	-77.762375
AWS310347	Swine	330480	35.1158	-77.9789
AWS310348	Swine	330480	34.75979	-77.75074
AWS310349	Swine	330480	34.9786	-77.7808
AWS310350	Swine	330480	34.7369	-78.125
AWS310351	Swine	492480	34.7389	-78.1214
AWS310352	Swine	654480	34.7778	-78.0789
AWS310353	Swine	330480	35.15443	-77.82186
AWS310354	Swine	660960	35.0869	-77.8628
AWS310355	Swine	330480	34.822327	-78.159799
AWS310358	Swine	573480	34.860436	-77.939721
AWS310362	Swine	495720	35.0369	-78.0964
AWS310363	Swine	492480	34.7439	-78.0792
AWS310364	Swine	330480	35.0867	-77.8697
AWS310365	Swine	330480	34.8389	-77.9186

AWS310368	Swine	332640	35.1119	-77.9747
AWS310369	Swine	495720	34.90819	-77.69062
AWS310370	Swine	1039200	34.871459	-77.923136
AWS310371	Swine	324000	34.8767	-77.9133
AWS310372	Swine	330480	34.8381	-77.9634
AWS310375	Swine	1558800	34.9664	-78.140862
AWS310376	Swine	3117600	35.0022	-77.8553
AWS310378	Swine	313145	34.82304	-77.73487
AWS310379	Swine	313200	34.7497	-77.7317
AWS310382	Swine	297675	35.0014	-77.8992
AWS310383	Swine	291600	35.1903	-78.0369
AWS310384	Swine	496125	34.8108	-78.1525
AWS310385	Swine	172260	35.006263	-77.774766
AWS310386	Swine	615600	34.8781	-77.8758
AWS310387	Swine	291600	34.929369	-78.029713
AWS310388	Swine	291600	34.94	-77.8175
AWS310390	Swine	291525	35.0219	-77.8706
AWS310391	Swine	291600	35.0672	-77.825
AWS310392	Swine	291600	35.057561	-77.858721
AWS310394	Swine	584550	35.1094	-77.9797
AWS310395	Swine	278100	35.0175	-77.9622
AWS310397	Swine	1518098	34.741886	-78.100073
AWS310399	Swine	1043963	35.0569	-77.9242
AWS310400	Swine	866000	35.0953	-78.1378
AWS310401	Swine	1043963	34.935712	-78.030448
AWS310402	Swine	1780000	35.028783	-77.93834
AWS310403	Swine	270000	34.9919	-77.7742
AWS310404	Swine	270000	35.005	-77.7706
AWS310407	Swine	866000	34.8917	-77.9167
AWS310410	Swine	266625	35.1161	-77.9536
AWS310413	Swine	445500	34.9619	-77.9172
AWS310414	Swine	251100	34.8624	-77.94868
AWS310417	Swine	251100	35.0236	-77.8944
AWS310418	Swine	243000	35.0647	-77.8028
AWS310419	Swine	251100	34.8619	-77.9489
AWS310422	Swine	106560	35.10447	-77.84805
AWS310424	Swine	243000	34.78	-78.1067
AWS310428	Swine	53280	35.0731	-77.8406
AWS310429	Swine	106560	34.810109	-77.68757
AWS310431	Swine	53280	34.9856	-77.9328
AWS310432	Swine	93600	34.9008	-78.0125
AWS310434	Swine	237600	34.99348	-77.76863
AWS310435	Swine	237600	34.9894	-77.905
AWS310436	Swine	475200	35.1297	-77.8661

AWS310437	Swine	237600	34.8542	-77.7008
AWS310438	Swine	410400	35.0122	-78.1286
AWS310439	Swine	251100	34.7844	-77.9417
AWS310440	Swine	229500	35.065522	-77.845355
AWS310442	Swine	538890	35.1014	-77.8856
AWS310443	Swine	216000	34.9664	-77.7311
AWS310444	Swine	96000	34.85763	-77.90724
AWS310445	Swine	96000	34.861078	-77.85754
AWS310447	Swine	167400	35.1478	-78.0372
AWS310449	Swine	202500	34.83128	-78.09838
AWS310450	Swine	396900	35.0903	-77.9903
AWS310451	Swine	198450	34.883435	-77.925133
AWS310452	Swine	365850	34.9439	-77.8142
AWS310453	Swine	194400	34.8125	-77.6786
AWS310455	Swine	194400	34.8739	-77.885
AWS310456	Swine	194400	34.7992	-77.95
AWS310457	Swine	388800	35.1253	-77.88
AWS310458	Swine	194400	35.1131	-77.7561
AWS310459	Swine	486000	34.970463	-77.822532
AWS310464	Swine	466800	35.1075	-77.8697
AWS310465	Swine	189000	34.8047	-77.9531
AWS310466	Swine	1248000	34.863862	-78.118362
AWS310467	Swine	950960	34.7797	-77.9619
AWS310468	Swine	704700	34.9875	-77.9097
AWS310469	Swine	820800	35.1164	-77.9736
AWS310470	Swine	151550	35.079083	-78.025564
AWS310475	Swine	499230	34.8531	-77.8597
AWS310476	Swine	170085	34.8764	-77.9092
AWS310477	Swine	167400	34.8703	-77.8078
AWS310478	Swine	167400	34.941904	-77.736264
AWS310479	Swine	167400	35.0008	-77.7731
AWS310480	Swine	332640	34.997581	-77.791054
AWS310482	Swine	266625	34.7808	-77.7367
AWS310484	Swine	167400	34.855	-77.9525
AWS310485	Swine	167400	34.938719	-77.839801
AWS310488	Swine	167400	34.9264	-77.7194
AWS310489	Swine	167400	34.9278	-77.7022
AWS310501	Swine	165240	34.9597	-77.8014
AWS310502	Swine	327240	35.0025	-77.7656
AWS310503	Swine	660960	34.8417	-77.8864
AWS310505	Swine	327240	34.9292	-77.7242
AWS310506	Swine	330480	35.11364	-77.8298
AWS310507	Swine	495720	35.1069	-77.7883
AWS310514	Swine	2043327	34.8031	-78.1731

AWS310516	Swine	269905	34.73192	-77.76105
AWS310517	Swine	654480	35.145012	-77.799354
AWS310519	Swine	162000	34.805	-77.9775
AWS310520	Swine	161460	34.7447	-78.1197
AWS310522	Swine	324000	34.7814	-78.1011
AWS310525	Swine	159275	34.8878	-77.7758
AWS310528	Swine	162000	34.82461	-78.06909
AWS310530	Swine	162000	35.0764	-77.8586
AWS310544	Swine	162000	35.106059	-77.919881
AWS310545	Swine	162000	35.0869	-77.8772
AWS310546	Swine	162000	35.05135	-78.13512
AWS310547	Swine	161460	35.0019	-77.7917
AWS310548	Swine	161460	34.9869	-77.8064
AWS310552	Swine	213120	35.05	-77.87
AWS310554	Swine	151200	35.0853	-77.9483
AWS310556	Swine	468939	35.15	-77.8819
AWS310557	Swine	521755	35.044787	-78.056092
AWS310562	Swine	202500	34.8313	-77.96244
AWS310563	Swine	881155	35.015748	-77.921301
AWS310564	Swine	78000	34.7662	-77.79864
AWS310565	Swine	1708800	35.041924	-77.766024
AWS310567	Swine	704700	34.9525	-78.1367
AWS310568	Swine	521910	34.9611	-78.1292
AWS310570	Swine	121440	34.9033	-77.7533
AWS310572	Swine	118800	34.8542	-77.7
AWS310573	Swine	294840	34.9292	-77.9917
AWS310574	Swine	83700	35.1717	-78.1372
AWS310575	Swine	162000	35.170546	-77.848908
AWS310576	Swine	606165	34.8178	-77.7239
AWS310578	Swine	21600	34.8975	-77.8836
AWS310580	Swine	194400	35.152551	-77.840518
AWS310581	Swine	583200	34.7508	-77.8147
AWS310582	Swine	486000	34.7422	-77.7864
AWS310585	Swine	519600	34.8367	-78.11
AWS310587	Swine	324750	34.984385	-77.70806
AWS310588	Swine	2040606	34.8267	-78.1208
AWS310589	Swine	651105	35.0819	-77.9722
AWS310591	Swine	83700	34.9125	-77.6997
AWS310593	Swine	159300	34.7275	-77.9606
AWS310594	Swine	167400	34.9981	-77.9128
AWS310599	Swine	78300	35.0061	-77.8997
AWS310600	Swine	323595	34.7511	-77.765
AWS310604	Swine	260935	35.10469	-77.76986
AWS310605	Swine	326600	34.90213	-77.78874

AWS310610	Swine	180000	35.0767	-77.85
AWS310612	Swine	519600	34.8383	-78.1375
AWS310613	Swine	208610	35.046212	-77.850863
AWS310624	Swine	142890	35.0833	-77.7544
AWS310639	Swine	234000	34.765759	-78.182206
AWS310650	Swine	346500	35.1122	-77.8833
AWS310653	Swine	639900	35.1472	-77.9014
AWS310654	Swine	520560	35.15912	-77.84137
AWS310656	Swine	495720	35.0264	-77.8272
AWS310667	Swine	1321920	35.0547	-78.1403
AWS310668	Swine	168000	34.7775	-78.1186
AWS310670	Swine	1321920	34.7533	-78.1117
AWS310672	Swine	991440	34.8475	-77.9361
AWS310675	Swine	192000	35.091511	-78.058803
AWS310678	Swine	971980	34.9361	-78.1274
AWS310679	Swine	192000	35.033111	-77.928084
AWS310680	Swine	78000	34.9619	-78.0717
AWS310681	Swine	237600	34.8094	-77.7039
AWS310683	Swine	2148120	35.0097	-77.9461
AWS310685	Swine	96000	35.0867	-77.8106
AWS310688	Swine	432000	35.094864	-77.974901
AWS310691	Swine	1425600	35.1278	-77.7989
AWS310692	Swine	106560	34.899097	-77.920786
AWS310711	Swine	78000	35.00796	-78.024422
AWS310713	Swine	475200	34.923048	-77.698666
AWS310717	Swine	388800	35.086466	-77.925455
AWS310725	Swine	1555200	34.8931	-77.8972
AWS310727	Swine	388800	34.8581	-77.7522
AWS310734	Swine	696600	34.793692	-77.927467
AWS310740	Swine	1416960	35.0425	-78.0333
AWS310742	Swine	950400	34.7625	-77.8294
AWS310750	Swine	2313360	34.8489	-78.1297
AWS310751	Swine	283500	34.7533	-78.17
AWS310754	Swine	96000	35.0625	-77.8969
AWS310756	Swine	595350	35.1553	-78.0622
AWS310757	Swine	432000	34.768857	-77.707797
AWS310760	Swine	496125	35.1092	-78.0211
AWS310761	Swine	864000	34.9544	-78.0214
AWS310763	Swine	6311088	35.155	-78.0694
AWS310764	Swine	156000	34.7869	-77.7422
AWS310765	Swine	1487160	34.7653	-78.1389
AWS310767	Swine	648000	34.800484	-78.126297
AWS310768	Swine	864000	34.806281	-78.097826
AWS310770	Swine	777515	35.0286	-77.7917

AWS310771	Swine	432000	34.9403	-77.9667
AWS310772	Swine	348300	34.9167	-78.0083
AWS310776	Swine	495720	35.1394	-78.0053
AWS310777	Swine	78000	34.7922	-78.1544
AWS310783	Swine	156000	34.9069	-77.9942
AWS310784	Swine	78000	34.8069	-77.7958
AWS310787	Swine	106560	34.978311	-77.977501
AWS310788	Swine	972000	35.0697	-78.0531
AWS310789	Swine	348300	34.75592	-77.81901
AWS310791	Swine	595350	35.0783	-77.9878
AWS310792	Swine	216000	34.897131	-77.825267
AWS310794	Swine	1321920	34.7931	-78.1197
AWS310797	Swine	156000	34.8061	-77.7167
AWS310800	Swine	78000	34.753908	-77.739906
AWS310801	Swine	388800	34.99547	-77.890355
AWS310802	Swine	78000	34.7453	-77.6931
AWS310805	Swine	736100	34.7847	-78.1331
AWS310806	Swine	864000	35.031011	-77.897516
AWS310808	Swine	660960	35.0897	-77.7903
AWS310809	Swine	78000	34.9744	-77.7789
AWS310810	Swine	156000	34.738185	-77.949058
AWS310811	Swine	78000	34.8617	-77.8931
AWS310812	Swine	988200	34.893061	-77.945623
AWS310813	Swine	1121903	34.8806	-78.0042
AWS310814	Swine	475200	35.1881	-78.0131
AWS310816	Swine	1321920	34.8144	-78.0889
AWS310821	Swine	1321920	34.7319	-77.7964
AWS310822	Swine	237600	34.860212	-77.698131
AWS310827	Swine	864000	34.959839	-78.017098
AWS310828	Swine	106560	34.9528	-77.8289
AWS310830	Swine	864000	35.1269	-77.8964
AWS310831	Swine	312000	34.7833	-78.1439
AWS310833	Swine	475200	35.0914	-77.9369
AWS310834	Swine	156000	34.815275	-78.133541
AWS310835	Swine	864000	35.12895	-77.89875
AWS310837	Swine	334800	35.1803	-78.0028
AWS310839	Swine	78000	34.8571	-77.8934
AWS310842	Swine	52800	35.0758	-77.8389
AWS310843	Swine	388800	34.86442	-77.79923
AWS310844	Swine	475200	35.10839	-77.82765
AWS310846	Swine	234000	34.9714	-78.07
AWS310847	Swine	216000	35.1428	-77.7883
AWS310848	Swine	2149120	35.087796	-78.047684
AWS310849	Swine	388800	34.7611	-77.6869

AWS310850	Swine	5126400	35.0214	-78.0322
AWS310851	Swine	78000	34.8083	-77.7417
AWS310852	Swine	78000	34.8553	-78.0986
AWS310853	Swine	468000	35.1267	-78.0708
AWS310855	Swine	78000	34.7494	-77.7956
AWS310856	Swine	1555200	35.078603	-78.063594
AWS310857	Swine	1749600	35.073254	-77.967379
AWS310861	Swine	78000	35.0097	-77.9175
AWS310862	Swine	322920	34.9075	-77.6858
AWS310863	Swine	891000	35.0575	-78.0778
AWS310868	Swine	216000	34.8556	-77.7897
AWS310870	Swine	991440	34.8833	-78.0856
AWS310871	Swine	3827400	35.1308	-78.0172
AWS310873	Swine	2027800	35.1056	-78.1058
AWS310874	Swine	198450	34.8939	-77.7608
AWS310877	Swine	432000	34.774303	-77.708316
AWS310879	Swine	162000	35.001101	-77.789228
AWS310889	Swine	475200	35.018747	-77.8019
AWS315002	Swine	149580	35.1189	-78.1014
AWS330002	Swine	5958861	35.9583	-77.6878
AWS330003	Swine	864270	35.813739	-77.612747
AWS330004	Swine	467400	35.8315	-77.5952
AWS330006	Swine	1166069	35.8828	-77.4025
AWS330007	Swine	6494961	35.8889	-77.3781
AWS330008	Swine	2505600	36.0456	-77.5508
AWS330009	Swine	648000	36.0256	-77.5864
AWS330011	Swine	518400	36.1158	-77.6611
AWS330012	Swine	594000	35.764725	-77.584966
AWS330017	Swine	171180	35.8957	-77.6913
AWS330020	Swine	930950	35.8597	-77.3694
AWS330024	Swine	162000	35.8535	-77.7723
AWS330026	Swine	228150	35.8114	-77.6417
AWS330027	Swine	213300	35.8464	-77.725
AWS330029	Swine	202500	35.8872	-77.7661
AWS330030	Swine	371250	35.9098	-77.6965
AWS330031	Swine	111375	35.865372	-77.780158
AWS330058	Swine	10189200	36.0519	-77.6367
AWS330061	Swine	3031000	35.9831	-77.3992
AWS330062	Swine	518400	36.0344	-77.5544
AWS330063	Swine	552000	35.8544	-77.4011
AWS330065	Swine	777600	36.0389	-77.7169
AWS330067	Swine	324000	35.8511	-77.7836
AWS330068	Swine	1036800	36.0244	-77.425
AWS350022	Swine	939177	36.0761	-78.1014

AWS350055	Swine	236250	36.0733	-78.135
AWS350057	Swine	777515	36.1558	-78.065
AWS350058	Swine	562890	36.0131	-78.135
AWS370003	Swine	210000	36.4375	-76.7072
AWS370004	Swine	479435	36.4919	-76.6808
AWS370006	Swine	432000	36.3661	-76.7014
AWS370012	Swine	118795	36.492385	-76.67016
AWS370015	Swine	420480	36.4175	-76.7622
AWS370059	Swine	2078400	36.475	-76.7856
AWS390002	Swine	169560	36.4458	-78.6836
AWS400004	Swine	467910	35.5464	-77.6622
AWS400005	Swine	1417490	35.52436	-77.63811
AWS400007	Swine	1215000	35.5158	-77.5989
AWS400009	Swine	1012460	35.5664	-77.7056
AWS400011	Swine	1156325	35.4411	-77.5306
AWS400012	Swine	809945	35.4225	-77.7681
AWS400013	Swine	796490	35.4364	-77.8153
AWS400014	Swine	777600	35.5083	-77.7028
AWS400015	Swine	745200	35.4714	-77.6356
AWS400016	Swine	518400	35.5456	-77.7278
AWS400017	Swine	674935	35.5333	-77.5619
AWS400018	Swine	664605	35.3758	-77.6625
AWS400019	Swine	660960	35.5353	-77.7239
AWS400020	Swine	660960	35.384717	-77.764829
AWS400022	Swine	583165	35.4778	-77.8028
AWS400023	Swine	566950	35.3856	-77.6311
AWS400024	Swine	539925	35.378939	-77.58842
AWS400025	Swine	546940	35.5542	-77.8181
AWS400026	Swine	539925	35.4358	-77.7206
AWS400027	Swine	135000	35.5219	-77.6206
AWS400028	Swine	539925	35.52964	-77.6839
AWS400029	Swine	539925	35.4194	-77.5819
AWS400030	Swine	907200	35.4783	-77.5806
AWS400031	Swine	518400	35.53002	-77.69411
AWS400032	Swine	985435	35.5169	-77.6903
AWS400033	Swine	495420	35.4372	-77.7131
AWS400037	Swine	660790	35.4347	-77.5011
AWS400038	Swine	495720	35.5456	-77.7292
AWS400039	Swine	216000	35.4425	-77.6542
AWS400040	Swine	405000	35.4972	-77.6389
AWS400042	Swine	490820	35.4911	-77.7408
AWS400043	Swine	540000	35.431413	-77.764125
AWS400044	Swine	539925	35.4256	-77.75
AWS400045	Swine	405000	35.4533	-77.5806

AWS400046	Swine	608850	35.514001	-77.687275
AWS400047	Swine	388700	35.4758	-77.7425
AWS400049	Swine	388700	35.4728	-77.7922
AWS400050	Swine	518400	35.4603	-77.5464
AWS400051	Swine	158400	35.3839	-77.5739
AWS400052	Swine	78000	35.4583	-77.7836
AWS400053	Swine	79200	35.393284	-77.570149
AWS400055	Swine	1125800	35.628242	-77.683522
AWS400056	Swine	2175800	35.4247	-77.5469
AWS400057	Swine	660960	35.525	-77.5881
AWS400058	Swine	330480	35.3903	-77.7906
AWS400060	Swine	240000	35.4056	-77.7494
AWS400061	Swine	237195	35.6431	-77.7047
AWS400062	Swine	270000	35.4311	-77.75
AWS400063	Swine	1148390	35.5353	-77.6347
AWS400066	Swine	472500	35.5081	-77.6897
AWS400068	Swine	939177	35.4367	-77.7481
AWS400069	Swine	939177	35.4744	-77.7517
AWS400070	Swine	939177	35.4011	-77.5817
AWS400077	Swine	202500	35.392053	-77.657731
AWS400080	Swine	44400	35.396999	-77.592801
AWS400084	Swine	276210	35.515032	-77.667362
AWS400088	Swine	269905	35.427917	-77.780034
AWS400089	Swine	626118	35.501307	-77.53364
AWS400091	Swine	97200	35.3833	-77.6633
AWS400093	Swine	189000	35.48	-77.7733
AWS400094	Swine	360000	35.4983	-77.7639
AWS400095	Swine	708345	35.5247	-77.5819
AWS400099	Swine	344250	35.3847	-77.7319
AWS400100	Swine	108000	35.5	-77.7833
AWS400102	Swine	124800	35.5703	-77.6808
AWS400110	Swine	156600	35.6467	-77.7044
AWS400120	Swine	495650	35.4756	-77.5228
AWS400121	Swine	78000	35.4631	-77.7631
AWS400126	Swine	124800	35.4425	-77.5067
AWS400128	Swine	124800	35.5344	-77.6228
AWS400131	Swine	495650	35.4692	-77.5092
AWS400133	Swine	405000	35.393577	-77.738728
AWS400134	Swine	539925	35.5175	-77.6431
AWS400136	Swine	1106990	35.5114	-77.8
AWS400140	Swine	495720	35.3847	-77.6747
AWS400141	Swine	1036725	35.4894	-77.6103
AWS400142	Swine	404915	35.4986	-77.6425
AWS400143	Swine	539925	35.5203	-77.6333

AWS400144	Swine	518400	35.4675	-77.7447
AWS400145	Swine	675000	35.4408	-77.7289
AWS400146	Swine	540000	35.515	-77.6044
AWS400150	Swine	991415	35.4731	-77.4992
AWS400151	Swine	972000	35.4125	-77.8058
AWS400152	Swine	259200	35.4633	-77.5578
AWS400153	Swine	1321920	35.5317	-77.7403
AWS400154	Swine	518400	35.4556	-77.5236
AWS400156	Swine	78000	35.5	-77.7717
AWS400157	Swine	78000	35.497062	-77.77155
AWS400158	Swine	660905	35.4386	-77.4831
AWS400160	Swine	540000	35.4842	-77.6583
AWS400161	Swine	495650	35.453608	-77.515213
AWS400162	Swine	404915	35.5486	-77.7917
AWS400163	Swine	216000	35.4215	-77.6995
AWS410012	Swine	130500	36.0667	-79.7267
AWS410016	Swine	198450	35.9161	-79.5625
AWS420002	Swine	1388740	36.1967	-77.9306
AWS420005	Swine	192000	36.1697	-77.4272
AWS420010	Swine	1043963	36.074517	-77.504862
AWS420011	Swine	1043963	36.0808	-77.4953
AWS420013	Swine	900640	36.2375	-77.4097
AWS420014	Swine	1700325	36.10079	-77.39445
AWS420023	Swine	708500	36.225807	-77.49977
AWS420024	Swine	708500	36.17819	-77.572891
AWS420032	Swine	354250	36.09983	-77.37991
AWS430001	Swine	885960	35.389799	-78.887181
AWS430003	Swine	793800	35.326079	-78.970495
AWS430004	Swine	793800	35.295981	-78.939447
AWS430007	Swine	4216540	35.209808	-79.129535
AWS430013	Swine	1148400	35.256525	-79.155624
AWS430019	Swine	1564200	35.256416	-78.60824
AWS430020	Swine	1302118	35.434735	-78.867717
AWS430024	Swine	182400	35.415255	-78.640425
AWS430029	Swine	992250	35.322333	-78.943123
AWS430032	Swine	1039200	35.360084	-78.87369
AWS460004	Swine	359640	36.263051	-76.728872
AWS460006	Swine	626118	36.359873	-77.073765
AWS460007	Swine	1039200	36.289694	-76.897024
AWS460009	Swine	1416776	36.305346	-77.149872
AWS460011	Swine	2833985	36.370496	-77.104805
AWS460015	Swine	239760	36.2917	-76.75
AWS470001	Swine	1188000	34.871336	-79.302844
AWS470003	Swine	106560	34.990383	-79.201902

AWS470006	Swine	388800	35.03112	-79.331069
AWS470007	Swine	1039200	34.941311	-79.321647
AWS470010	Swine	736100	34.9985	-79.389475
AWS470011	Swine	626118	34.848488	-79.2939
AWS470012	Swine	475200	34.959891	-79.178894
AWS470025	Swine	213120	34.911666	-79.304036
AWS470026	Swine	2138400	34.8878	-79.318627
AWS470028	Swine	106560	34.880166	-79.318877
AWS470029	Swine	2078400	34.914505	-79.3175
AWS480003	Swine	121500	35.658175	-76.58175
AWS510001	Swine	7281600	35.694323	-78.266475
AWS510004	Swine	5446320	35.2958	-78.4361
AWS510005	Swine	871196	35.328857	-78.30552
AWS510007	Swine	640770	35.5958	-78.368
AWS510009	Swine	1085940	35.497472	-78.548977
AWS510011	Swine	156000	35.5044	-78.5503
AWS510013	Swine	595350	35.4167	-78.595486
AWS510015	Swine	500250	35.7892	-78.2653
AWS510018	Swine	120000	35.2989	-78.3033
AWS510020	Swine	502200	35.2878	-78.32
AWS510022	Swine	96000	35.2986	-78.3936
AWS510025	Swine	396900	35.39191	-78.374855
AWS510028	Swine	388800	35.3775	-78.4156
AWS510029	Swine	388800	35.385694	-78.177169
AWS510030	Swine	388800	35.423767	-78.177866
AWS510032	Swine	388700	35.3214	-78.289
AWS510033	Swine	334800	35.364269	-78.385651
AWS510034	Swine	718200	35.3683	-78.3206
AWS510035	Swine	334800	35.291383	-78.315679
AWS510040	Swine	1780000	35.338583	-78.239703
AWS510041	Swine	559003	35.5444	-78.3379
AWS510043	Swine	106560	35.372244	-78.469808
AWS510045	Swine	237600	35.354057	-78.437511
AWS510046	Swine	692800	35.3526	-78.3416
AWS510048	Swine	334800	35.2925	-78.3153
AWS510050	Swine	660960	35.283841	-78.418873
AWS510052	Swine	884250	35.3497	-78.3811
AWS510063	Swine	326160	35.293	-78.3487
AWS510068	Swine	692100	35.4153	-78.5511
AWS510074	Swine	89970	35.670666	-78.514883
AWS510083	Swine	141700	35.7683	-78.2433
AWS510102	Swine	595350	35.348672	-78.290888
AWS510103	Swine	194400	35.286416	-78.367926
AWS510104	Swine	297675	35.292417	-78.310911

AWS510106	Swine	166080	35.2722	-78.3742
AWS510107	Swine	396900	35.4042	-78.4222
AWS510108	Swine	777600	35.5269	-78.1548
AWS510110	Swine	325650	35.337392	-78.493216
AWS510111	Swine	261000	35.3264	-78.4264
AWS510112	Swine	182400	35.4392	-78.5172
AWS510113	Swine	117000	35.3373	-78.2688
AWS510122	Swine	81000	35.518516	-78.536142
AWS510123	Swine	115200	35.3067	-78.3469
AWS510125	Swine	141750	35.4611	-78.2861
AWS510128	Swine	1125800	35.2814	-78.34
AWS510129	Swine	453600	35.4505	-78.2535
AWS510138	Swine	589410	35.348828	-78.381667
AWS520001	Swine	1610955	35.063799	-77.527289
AWS520002	Swine	3049200	35.0714	-77.2528
AWS520004	Swine	428490	35.014302	-77.597362
AWS520006	Swine	660960	35.2	-77.5
AWS520008	Swine	3432391	35.053766	-77.54173
AWS520009	Swine	230400	35.125	-77.5319
AWS520011	Swine	264960	35.0494	-77.2631
AWS520012	Swine	356400	35.0036	-77.7214
AWS520013	Swine	475200	35.0125	-77.6142
AWS520014	Swine	712800	35.032295	-77.644397
AWS520015	Swine	475200	35.005779	-77.469773
AWS520016	Swine	96000	34.9181	-77.3708
AWS520017	Swine	192000	35.1664	-77.4706
AWS520018	Swine	192000	34.9897	-77.6872
AWS520021	Swine	384000	35.0967	-77.5653
AWS520023	Swine	425250	35.011976	-77.554121
AWS520024	Swine	388800	35.0022	-77.7119
AWS520026	Swine	972000	35.1394	-77.4744
AWS520027	Swine	378000	34.993099	-77.56488
AWS520030	Swine	712800	35.1614	-77.5106
AWS520031	Swine	75000	34.942133	-77.319522
AWS520032	Swine	330480	35.038419	-77.630019
AWS520033	Swine	291600	35.080569	-77.575784
AWS520036	Swine	866000	34.9917	-77.2917
AWS520039	Swine	361800	35.0036	-77.6492
AWS520041	Swine	4842500	35.0386	-77.6156
AWS520046	Swine	519600	34.925958	-77.372446
AWS520057	Swine	92400	35.0081	-77.5878
AWS520060	Swine	475200	34.997188	-77.603148
AWS520063	Swine	1425600	35.0114	-77.3289
AWS520064	Swine	230400	35.1064	-77.4

AWS520065	Swine	330480	34.9814	-77.6769
AWS520070	Swine	6371970	34.9806	-77.2889
AWS520071	Swine	168000	35.0392	-77.2994
AWS520072	Swine	2510400	35.1417	-77.4417
AWS520074	Swine	793256	35.1278	-77.3411
AWS520075	Swine	388700	35.2011	-77.4767
AWS520077	Swine	8121015	35.05	-77.4383
AWS520078	Swine	259800	35.0686	-77.445
AWS530004	Swine	106560	35.3386	-79.2175
AWS540002	Swine	1870993	35.1028	-77.675322
AWS540003	Swine	1525500	35.1614	-77.68137
AWS540004	Swine	2701120	35.0437	-77.687272
AWS540005	Swine	874690	35.1715	-77.66937
AWS540006	Swine	288000	35.1952	-77.803781
AWS540007	Swine	864000	35.1068	-77.572836
AWS540008	Swine	972000	35.2065	-77.785869
AWS540009	Swine	1544335	35.2762	-77.823617
AWS540013	Swine	712800	35.1101	-77.74995
AWS540014	Swine	680400	35.18	-77.819277
AWS540016	Swine	991440	35.1817	-77.613714
AWS540017	Swine	991440	35.2459	-77.795681
AWS540018	Swine	669600	35.0317	-77.721622
AWS540021	Swine	648000	35.1072	-77.678492
AWS540023	Swine	433000	35.1938	-77.69627
AWS540025	Swine	769500	35.0781	-77.6528
AWS540028	Swine	115200	35.148547	-77.679818
AWS540029	Swine	634500	35.1552	-77.643475
AWS540031	Swine	991440	35.3602	-77.49934
AWS540032	Swine	486000	35.1193	-77.58134
AWS540033	Swine	810000	35.1793	-77.797182
AWS540034	Swine	475200	35.0774	-77.645961
AWS540036	Swine	475200	35.0743	-77.65997
AWS540037	Swine	475200	35.1334	-77.727481
AWS540038	Swine	469800	35.1736	-77.789983
AWS540042	Swine	388700	35.3133	-77.46897
AWS540043	Swine	777600	35.1982	-77.81812
AWS540046	Swine	388700	35.2836	-77.8228
AWS540049	Swine	302400	35.1541	-77.579589
AWS540050	Swine	388700	35.288	-77.82725
AWS540051	Swine	356400	35.2414	-77.76829
AWS540052	Swine	356400	35.1166	-77.630926
AWS540053	Swine	227310	35.0544	-77.6747
AWS540057	Swine	165240	35.3178	-77.450919
AWS540058	Swine	489240	35.0566	-77.715494

AWS540061	Swine	162000	35.2279	-77.657264
AWS540062	Swine	337500	35.1143	-77.665059
AWS540063	Swine	237600	35.1221	-77.65184
AWS540064	Swine	100800	35.1591	-77.72359
AWS540065	Swine	222750	35.1358	-77.664059
AWS540068	Swine	194400	35.0751	-77.708511
AWS540069	Swine	194400	35.0657	-77.723044
AWS540070	Swine	194400	35.1184	-77.71169
AWS540071	Swine	194350	35.2459	-77.802633
AWS540073	Swine	1039200	35.068941	-77.60723
AWS540080	Swine	108000	35.1879	-77.72738
AWS540087	Swine	238150	35.1833	-77.69798
AWS540099	Swine	253800	35.1692	-77.705733
AWS540109	Swine	324000	35.1306	-77.704104
AWS540111	Swine	415680	35.1379	-77.666883
AWS540120	Swine	401625	35.0993	-77.659081
AWS540122	Swine	475200	35.0752	-77.673764
AWS540123	Swine	115200	35.1422	-77.67927
AWS540124	Swine	540000	35.1144	-77.59008
AWS540125	Swine	519600	35.135	-77.76255
AWS540126	Swine	194400	35.1884	-77.82282
AWS540127	Swine	356400	35.1826	-77.827856
AWS540128	Swine	972000	35.255	-77.822606
AWS540130	Swine	195000	35.0888	-77.70691
AWS540132	Swine	124800	35.3694	-77.619475
AWS540135	Swine	660960	35.2765	-77.460614
AWS540137	Swine	230400	35.0994	-77.6667
AWS540138	Swine	356400	35.1813	-77.82763
AWS540139	Swine	240000	35.0509	-77.6606
AWS540140	Swine	1555145	35.164538	-77.799262
AWS540141	Swine	950400	35.132	-77.673877
AWS540142	Swine	115200	35.0734	-77.685467
AWS540144	Swine	1039200	35.1315	-77.59586
AWS580021	Swine	242400	35.836863	-77.221698
AWS580029	Swine	212400	35.8783	-77.138489
AWS620004	Swine	213120	35.441603	-79.852234
AWS620006	Swine	261000	35.219273	-79.920948
AWS620012	Swine	213120	35.200845	-79.70309
AWS630001	Swine	1416776	35.324344	-79.635713
AWS630002	Swine	1054380	35.46908	-79.6475
AWS630003	Swine	348998	35.451186	-79.475536
AWS630004	Swine	396900	35.474744	-79.594513
AWS630005	Swine	396900	35.348368	-79.54136
AWS630006	Swine	634752	35.317805	-79.625661

AWS630007	Swine	652500	35.321075	-79.640622
AWS630008	Swine	652500	35.325533	-79.645658
AWS630012	Swine	72000	35.400741	-79.452463
AWS640007	Swine	756000	36.1	-77.9583
AWS640022	Swine	649368	36.046542	-77.990785
AWS640023	Swine	114000	36.1056	-78.0167
AWS640026	Swine	405000	36.0147	-78.0961
AWS640030	Swine	417565	35.7647	-78.2278
AWS640040	Swine	389610	36.0008	-78.0839
AWS640045	Swine	423270	35.931487	-77.945636
AWS640065	Swine	208706	35.8568	-78.1358
AWS640072	Swine	1760400	35.7672	-78.2361
AWS660005	Swine	1185420	36.4958	-77.4711
AWS660011	Swine	1039200	36.488599	-77.495467
AWS660022	Swine	626118	36.4772	-77.1353
AWS660023	Swine	1700391	36.320323	-77.357719
AWS660027	Swine	148500	36.3544	-77.3356
AWS660034	Swine	1416776	36.49	-77.3981
AWS660035	Swine	1416776	36.3433	-77.4272
AWS660039	Swine	81000	36.44	-77.3633
AWS660041	Swine	81000	36.3983	-77.2731
AWS660049	Swine	67500	36.374509	-77.277254
AWS660058	Swine	132840	36.3647	-77.2647
AWS660077	Swine	1093995	36.3181	-77.2514
AWS660078	Swine	558000	36.3306	-77.3583
AWS660084	Swine	3512000	36.2481	-77.2178
AWS670001	Swine	1298925	34.8603	-77.5906
AWS670002	Swine	950360	34.84017	-77.274138
AWS670003	Swine	441585	34.8389	-77.4967
AWS670005	Swine	567000	34.9128	-77.5461
AWS670007	Swine	540000	34.9347	-77.5644
AWS670009	Swine	115200	34.8964	-77.6108
AWS670011	Swine	115200	34.9269	-77.5603
AWS670013	Swine	1180800	34.979573	-77.647225
AWS670014	Swine	495720	34.9139	-77.62
AWS670015	Swine	475200	34.9708	-77.6375
AWS670016	Swine	495720	34.9319	-77.5381
AWS670018	Swine	475200	34.9075	-77.5169
AWS670019	Swine	475200	34.8033	-77.6467
AWS670020	Swine	475180	34.8181	-77.4792
AWS670021	Swine	1188000	34.92998	-77.621219
AWS670023	Swine	4987500	34.6636	-77.6186
AWS670025	Swine	453600	34.9725	-77.6714
AWS670027	Swine	356400	34.68	-77.5617

AWS670029	Swine	356400	34.7633	-77.6056
AWS670030	Swine	170100	34.8133	-77.6683
AWS670032	Swine	327240	34.823485	-77.485023
AWS670034	Swine	330480	34.8272	-77.6306
AWS670035	Swine	330480	34.948989	-77.552439
AWS670036	Swine	330480	34.9353	-77.5389
AWS670038	Swine	660960	34.9564	-77.5494
AWS670039	Swine	330480	34.7208	-77.5319
AWS670041	Swine	291600	34.6503	-77.6094
AWS670042	Swine	53280	34.7872	-77.6261
AWS670043	Swine	475200	34.792999	-77.570315
AWS670044	Swine	237600	34.9119	-77.5172
AWS670046	Swine	779400	34.7508	-77.6614
AWS670047	Swine	237600	34.7386	-77.5333
AWS670048	Swine	165240	34.9525	-77.5778
AWS670049	Swine	495720	34.8267	-77.6267
AWS670052	Swine	161460	34.8736	-77.6453
AWS670055	Swine	687171	34.6386	-77.6111
AWS670056	Swine	324645	34.5269	-77.5919
AWS670057	Swine	945000	34.8822	-77.5689
AWS670062	Swine	230400	34.8989	-77.6211
AWS670063	Swine	566730	34.8086	-77.2006
AWS670074	Swine	660960	34.8192	-77.6625
AWS670075	Swine	162540	34.9192	-77.6375
AWS670076	Swine	115200	34.8403	-77.4272
AWS670077	Swine	156000	34.892645	-77.620407
AWS670079	Swine	864000	34.7258	-77.5678
AWS670080	Swine	356400	34.9103	-77.6042
AWS670083	Swine	78000	34.7464	-77.6239
AWS670084	Swine	330480	34.9431	-77.6106
AWS670086	Swine	78000	34.766264	-77.657671
AWS670087	Swine	712800	34.9236	-77.6044
AWS680003	Swine	540000	36.2292	-79.0625
AWS700003	Swine	102600	36.4236	-76.3542
AWS710001	Swine	2870790	34.7139	-77.7236
AWS710003	Swine	1156680	34.687644	-77.664202
AWS710004	Swine	950400	34.605	-77.9825
AWS710006	Swine	1069155	34.659743	-78.068863
AWS710007	Swine	712800	34.655438	-78.029041
AWS710009	Swine	156000	34.648402	-78.130436
AWS710011	Swine	4987500	34.615669	-77.939896
AWS710012	Swine	567000	34.6669	-78.0164
AWS710014	Swine	495720	34.69476	-77.70339
AWS710015	Swine	495720	34.7106	-77.9428

AWS710017	Swine	495720	34.5717	-78.0572
AWS710018	Swine	3330636	34.6333	-78.15
AWS710019	Swine	447120	34.676294	-78.072767
AWS710020	Swine	475200	34.6381	-78.0514
AWS710021	Swine	78000	34.6452	-78.1373
AWS710022	Swine	156000	34.525724	-78.146632
AWS710024	Swine	156000	34.6642	-77.9269
AWS710028	Swine	234000	34.4444	-77.9606
AWS710029	Swine	495720	34.4931	-78.1639
AWS710030	Swine	330480	34.4917	-77.9639
AWS710031	Swine	660960	34.453066	-77.958058
AWS710033	Swine	330480	34.473138	-77.851604
AWS710034	Swine	330480	34.515964	-78.013989
AWS710036	Swine	660960	34.582057	-78.007546
AWS710039	Swine	330480	34.4928	-78.1408
AWS710041	Swine	1039200	34.62	-78.1044
AWS710042	Swine	1039200	34.704857	-77.99223
AWS710044	Swine	243000	34.6431	-77.9519
AWS710045	Swine	237600	34.6042	-77.9689
AWS710049	Swine	626118	34.582087	-77.938011
AWS710051	Swine	626400	34.561192	-78.179587
AWS710052	Swine	433000	34.552039	-78.037408
AWS710056	Swine	540384	34.6725	-77.9611
AWS710059	Swine	151860	34.484102	-78.048355
AWS710068	Swine	348300	34.693892	-77.985361
AWS710069	Swine	495720	34.695	-77.7342
AWS710070	Swine	10234800	34.5911	-78.1575
AWS710072	Swine	495720	34.5	-77.9917
AWS710073	Swine	5126400	34.5925	-78.1428
AWS710074	Swine	156000	34.6258	-77.9481
AWS710078	Swine	232875	34.6131	-77.8317
AWS710079	Swine	324000	34.6	-77.9067
AWS710082	Swine	432000	34.45	-78.0292
AWS710084	Swine	384000	34.7083	-78.0833
AWS710087	Swine	192000	34.6511	-78.1411
AWS710090	Swine	495720	34.5728	-78.0742
AWS710091	Swine	1156680	34.44276	-77.765691
AWS710094	Swine	124800	34.670825	-77.971353
AWS710095	Swine	156000	34.5325	-77.8667
AWS710096	Swine	1732000	34.7083	-78.0833
AWS710098	Swine	156000	34.5019	-78.1703
AWS710100	Swine	194400	34.6686	-77.9636
AWS710102	Swine	10494600	34.652137	-78.095868
AWS710103	Swine	495720	34.6431	-78.1228

AWS720008	Swine	490023	36.1089	-76.4794
AWS720044	Swine	243000	36.3411	-76.5197
AWS730002	Swine	542100	36.3372	-78.845
AWS730005	Swine	94218	36.3253	-79.0053
AWS730006	Swine	175500	36.3214	-78.8833
AWS730008	Swine	91350	36.265	-79.0122
AWS730010	Swine	736800	36.4247	-78.9142
AWS740006	Swine	1515355	35.3994	-77.3506
AWS740010	Swine	1878787	35.6885	-77.5504
AWS740011	Swine	1425600	35.7408	-77.37902
AWS740013	Swine	1626560	35.4858	-77.495872
AWS740014	Swine	1133900	35.5405	-77.469289
AWS740016	Swine	810000	35.5212	-77.250548
AWS740018	Swine	1166400	35.5471	-77.17735
AWS740019	Swine	649485	35.5293	-77.24615
AWS740021	Swine	660960	35.4757	-77.280296
AWS740022	Swine	648000	35.443035	-77.254873
AWS740023	Swine	647910	35.4686	-77.293328
AWS740024	Swine	649500	35.5994	-77.547789
AWS740025	Swine	518400	35.4213	-77.357386
AWS740028	Swine	495720	35.5316	-77.212539
AWS740029	Swine	991415	35.5578	-77.218633
AWS740033	Swine	442800	35.5182	-77.21278
AWS740035	Swine	114000	35.4392	-77.298581
AWS740037	Swine	388800	35.4628	-77.245761
AWS740038	Swine	356385	35.5717	-77.214719
AWS740039	Swine	1252669	35.5133	-77.265367
AWS740041	Swine	1252669	35.5356	-77.182633
AWS740043	Swine	237600	35.7244	-77.569477
AWS740047	Swine	383400	35.6296	-77.589396
AWS740051	Swine	1039200	35.7448	-77.285547
AWS740052	Swine	692760	35.5368	-77.24484
AWS740066	Swine	240000	35.3666	-77.31802
AWS740067	Swine	178200	35.4028	-77.297383
AWS740075	Swine	313145	35.4253	-77.315733
AWS740081	Swine	248860	35.4209	-77.261906
AWS740094	Swine	129900	35.6849	-77.631889
AWS740095	Swine	573900	35.6131	-77.65016
AWS740101	Swine	660960	35.4454	-77.239761
AWS740105	Swine	777600	35.6394	-77.67607
AWS740106	Swine	495720	35.5164	-77.242211
AWS740107	Swine	1555200	35.733	-77.442768
AWS740108	Swine	115200	35.4106	-77.25542
AWS740109	Swine	648000	35.4586	-77.328572

AWS740111	Swine	1878787	35.525	-77.185781
AWS740113	Swine	115800	35.6437	-77.59196
AWS740114	Swine	115800	35.6465	-77.58801
AWS740115	Swine	573735	35.4054	-77.22048
AWS740116	Swine	237600	35.471	-77.325167
AWS740118	Swine	1069200	35.5283	-77.174836
AWS740119	Swine	777600	35.5407	-77.170136
AWS740120	Swine	220800	35.8039	-77.435944
AWS740121	Swine	626118	35.756	-77.345144
AWS760003	Swine	1674000	35.6208	-79.6153
AWS760004	Swine	1083375	35.5639	-79.6931
AWS760008	Swine	1425600	35.6328	-79.575
AWS760009	Swine	398655	35.6992	-79.6233
AWS760010	Swine	256500	35.8303	-79.8917
AWS760011	Swine	297000	35.775	-79.5964
AWS770001	Swine	715500	35.089817	-79.787142
AWS770003	Swine	3463980	34.971361	-79.631233
AWS770004	Swine	106560	35.102819	-79.9883
AWS770005	Swine	475200	35.133706	-79.798583
AWS770006	Swine	421605	35.076925	-79.791964
AWS770007	Swine	1039200	34.825883	-79.648636
AWS770012	Swine	521765	35.11705	-79.721867
AWS770013	Swine	43875	35.009406	-79.710894
AWS770017	Swine	1188000	35.120261	-79.607281
AWS770018	Swine	1069200	35.8739	-79.8206
AWS770019	Swine	996766	34.960864	-79.624617
AWS770020	Swine	126000	34.942814	-79.62795
AWS780008	Swine	1700391	34.8298	-79.271278
AWS780009	Swine	1700391	34.652847	-79.363381
AWS780010	Swine	1700391	34.815175	-79.22415
AWS780011	Swine	1700391	34.833453	-79.145228
AWS780012	Swine	1700325	34.600053	-79.377925
AWS780015	Swine	3742200	34.825428	-78.943675
AWS780017	Swine	1069200	34.507897	-79.190111
AWS780018	Swine	1069200	34.54525	-79.208794
AWS780019	Swine	1069200	34.513906	-79.228247
AWS780020	Swine	213120	34.432219	-79.216078
AWS780021	Swine	213120	34.436486	-79.187742
AWS780022	Swine	950400	34.63885	-79.436017
AWS780023	Swine	777600	34.380206	-79.085872
AWS780024	Swine	877500	34.746594	-78.956739
AWS780026	Swine	1039200	34.643167	-79.424869
AWS780027	Swine	1039200	34.864336	-79.127033
AWS780029	Swine	1039200	34.502811	-79.214233

AWS780031	Swine	1039200	34.614917	-79.364689
AWS780032	Swine	595350	34.450056	-79.202408
AWS780033	Swine	1786050	34.359981	-79.080517
AWS780034	Swine	106560	34.605803	-79.324092
AWS780035	Swine	475200	34.663386	-78.855461
AWS780036	Swine	475200	34.819406	-79.298228
AWS780037	Swine	475200	34.400117	-79.031806
AWS780038	Swine	396900	34.482286	-78.995794
AWS780040	Swine	388800	34.537992	-79.316325
AWS780041	Swine	1909963	34.835858	-78.918181
AWS780045	Swine	171450	34.378431	-79.140328
AWS780047	Swine	519600	34.442981	-79.167694
AWS780052	Swine	336960	34.639692	-79.311294
AWS780072	Swine	531360	34.556811	-79.320242
AWS780076	Swine	1069200	34.521639	-79.206414
AWS780077	Swine	647910	34.693547	-79.3788
AWS780078	Swine	712800	34.412647	-79.03845
AWS780081	Swine	1732000	34.902158	-78.978691
AWS780083	Swine	106560	34.926703	-79.053233
AWS780084	Swine	432000	34.616589	-78.859472
AWS780085	Swine	2160000	34.789342	-79.012822
AWS780086	Swine	1039200	34.78055	-79.280308
AWS780087	Swine	106560	34.437667	-79.161942
AWS780089	Swine	372600	34.751078	-79.149075
AWS780090	Swine	4751915	34.693053	-79.342
AWS780091	Swine	2375900	34.624506	-79.390653
AWS780092	Swine	1069200	34.452944	-79.128642
AWS780094	Swine	106560	34.471731	-79.230856
AWS780095	Swine	106560	34.468236	-79.235828
AWS780096	Swine	1069200	34.484069	-79.228192
AWS780097	Swine	1080000	34.745044	-78.917589
AWS780100	Swine	3117600	34.697453	-79.328994
AWS780101	Swine	999364	34.465586	-79.244253
AWS790001	Swine	243000	36.421947	-79.821325
AWS790003	Swine	493560	36.2731	-79.6161
AWS800004	Swine	823716	35.669319	-80.37289
AWS820002	Swine	495720	35.061044	-78.573733
AWS820003	Swine	777600	35.079011	-78.262294
AWS820006	Swine	996840	34.87642	-78.46858
AWS820007	Swine	1377000	34.841025	-78.195061
AWS820008	Swine	468000	34.818638	-78.21666
AWS820009	Swine	1039140	34.911041	-78.497657
AWS820011	Swine	1296000	34.707683	-78.237938
AWS820013	Swine	2786480	35.23293	-78.323372

AWS820014	Swine	1080000	35.053366	-78.215205
AWS820015	Swine	270000	34.910183	-78.198888
AWS820018	Swine	992250	35.005394	-78.402063
AWS820019	Swine	950400	35.199114	-78.251505
AWS820020	Swine	942030	35.065069	-78.458086
AWS820022	Swine	874800	34.9454	-78.232719
AWS820023	Swine	874800	35.086484	-78.202006
AWS820024	Swine	192000	35.057061	-78.286508
AWS820025	Swine	567000	34.9624	-78.176719
AWS820026	Swine	856474	35.020527	-78.258875
AWS820028	Swine	826160	34.747738	-78.231486
AWS820030	Swine	1652400	34.725155	-78.333272
AWS820032	Swine	826200	34.869797	-78.273688
AWS820034	Swine	826200	34.768025	-78.247361
AWS820035	Swine	182400	34.893916	-78.456755
AWS820036	Swine	182400	34.676142	-78.215322
AWS820037	Swine	182400	35.031189	-78.363875
AWS820038	Swine	810000	34.960405	-78.170441
AWS820039	Swine	815400	34.954292	-78.241102
AWS820040	Swine	486000	34.650147	-78.301391
AWS820042	Swine	810000	35.113408	-78.426333
AWS820043	Swine	793800	34.688263	-78.180858
AWS820044	Swine	793800	35.140816	-78.472502
AWS820045	Swine	793800	34.918169	-78.313866
AWS820047	Swine	2016000	35.144411	-78.263377
AWS820048	Swine	777600	34.945583	-78.156316
AWS820049	Swine	777600	35.200558	-78.402786
AWS820051	Swine	1112400	34.82633	-78.268677
AWS820052	Swine	661500	34.893419	-78.343058
AWS820053	Swine	1188000	34.945919	-78.561236
AWS820054	Swine	712800	34.942966	-78.327516
AWS820055	Swine	272400	35.057755	-78.489938
AWS820056	Swine	156000	34.828975	-78.422633
AWS820057	Swine	156000	35.124922	-78.204442
AWS820058	Swine	153600	35.153827	-78.251475
AWS820059	Swine	1340700	35.084158	-78.271872
AWS820061	Swine	660960	35.015522	-78.367883
AWS820062	Swine	1321920	34.971797	-78.261291
AWS820064	Swine	658800	35.052836	-78.414197
AWS820065	Swine	144000	35.133108	-78.505519
AWS820067	Swine	4960875	35.218236	-78.358683
AWS820071	Swine	549450	35.1138	-78.285463
AWS820072	Swine	595350	34.947375	-78.393583
AWS820073	Swine	595350	34.820805	-78.404236

AWS820074	Swine	705510	35.091933	-78.5597
AWS820075	Swine	595350	35.024211	-78.454947
AWS820076	Swine	595350	34.884905	-78.250152
AWS820077	Swine	3547800	34.866922	-78.189213
AWS820080	Swine	1077975	35.155972	-78.400119
AWS820081	Swine	639541	34.950247	-78.368911
AWS820083	Swine	1085940	35.122205	-78.492827
AWS820086	Swine	334800	35.216161	-78.52493
AWS820088	Swine	533250	35.063672	-78.260161
AWS820089	Swine	529200	35.110047	-78.334152
AWS820090	Swine	529200	35.128738	-78.268916
AWS820091	Swine	529200	35.103125	-78.253847
AWS820095	Swine	115200	35.165155	-78.495897
AWS820096	Swine	502200	34.857469	-78.259211
AWS820097	Swine	502200	35.157627	-78.213786
AWS820098	Swine	502200	35.029413	-78.257447
AWS820099	Swine	502200	35.04808	-78.259775
AWS820100	Swine	496800	35.170761	-78.340536
AWS820101	Swine	831600	35.206019	-78.321011
AWS820102	Swine	495720	35.160558	-78.443755
AWS820103	Swine	495720	35.063052	-78.426333
AWS820104	Swine	495720	34.876325	-78.308205
AWS820105	Swine	495720	35.008583	-78.446711
AWS820106	Swine	660905	34.633913	-78.219686
AWS820107	Swine	495720	35.167463	-78.502125
AWS820108	Swine	991440	34.946275	-78.207386
AWS820109	Swine	495720	34.863211	-78.2688
AWS820110	Swine	495720	35.168972	-78.433202
AWS820112	Swine	991440	34.914686	-78.29793
AWS820113	Swine	495720	35.127869	-78.412788
AWS820114	Swine	988200	34.876038	-78.275555
AWS820115	Swine	495720	35.133438	-78.477533
AWS820116	Swine	495720	34.876658	-78.303444
AWS820119	Swine	991440	34.981477	-78.163125
AWS820121	Swine	388800	35.126217	-78.296514
AWS820122	Swine	813375	34.944211	-78.396286
AWS820123	Swine	481140	35.094889	-78.256578
AWS820125	Swine	114000	35.233688	-78.400047
AWS820126	Swine	10234800	34.839036	-78.223655
AWS820129	Swine	106560	35.041283	-78.278372
AWS820131	Swine	610200	35.102286	-78.434222
AWS820132	Swine	475200	34.866238	-78.336297
AWS820134	Swine	475200	35.0845	-78.460292
AWS820136	Swine	1776166	34.809119	-78.345675

AWS820139	Swine	1662287	34.869727	-78.452088
AWS820140	Swine	3324574	34.844958	-78.412806
AWS820142	Swine	93000	34.83895	-78.339738
AWS820143	Swine	398250	34.880494	-78.342133
AWS820144	Swine	4987500	34.793608	-78.275555
AWS820146	Swine	9975000	34.692025	-78.338267
AWS820150	Swine	325616	34.899091	-78.223441
AWS820151	Swine	100500	35.066822	-78.218111
AWS820152	Swine	195000	34.929424	-78.547755
AWS820154	Swine	445500	34.919256	-78.526344
AWS820156	Swine	432000	34.824497	-78.435888
AWS820158	Swine	606000	35.108919	-78.621833
AWS820159	Swine	96000	35.137619	-78.492144
AWS820160	Swine	192000	35.129314	-78.362256
AWS820161	Swine	408000	35.119063	-78.458055
AWS820164	Swine	694575	35.080911	-78.391363
AWS820166	Swine	519600	34.906958	-78.33758
AWS820169	Swine	8139726	34.750425	-78.249397
AWS820171	Swine	421740	35.117086	-78.368047
AWS820173	Swine	273600	35.090805	-78.607555
AWS820175	Swine	91200	35.204991	-78.182586
AWS820177	Swine	91200	35.240255	-78.29143
AWS820178	Swine	91200	35.083344	-78.427588
AWS820179	Swine	91200	35.108847	-78.413719
AWS820183	Swine	411345	34.960713	-78.415997
AWS820184	Swine	396900	34.757302	-78.330761
AWS820185	Swine	396900	35.153327	-78.318566
AWS820186	Swine	388800	35.164083	-78.324188
AWS820187	Swine	396900	35.141017	-78.3455
AWS820188	Swine	496125	34.933299	-78.475666
AWS820189	Swine	396900	35.003086	-78.197536
AWS820190	Swine	396900	35.122242	-78.358497
AWS820191	Swine	396900	35.130194	-78.225744
AWS820193	Swine	396900	34.90988	-78.283166
AWS820194	Swine	396900	35.087561	-78.249452
AWS820195	Swine	595350	34.932827	-78.423061
AWS820196	Swine	388800	35.089922	-78.269952
AWS820198	Swine	396900	34.723905	-78.251286
AWS820199	Swine	396900	35.119002	-78.395622
AWS820200	Swine	766800	35.047188	-78.302744
AWS820201	Swine	396900	34.93734	-78.315006
AWS820202	Swine	396900	34.92335	-78.400713
AWS820203	Swine	396900	34.881391	-78.207197
AWS820204	Swine	396900	35.132269	-78.35715

AWS820205	Swine	693900	34.861802	-78.284808
AWS820206	Swine	396900	35.005508	-78.464769
AWS820207	Swine	499500	34.826177	-78.207166
AWS820208	Swine	619534	35.109211	-78.303333
AWS820210	Swine	388800	35.165847	-78.438066
AWS820211	Swine	388800	34.99805	-78.264236
AWS820212	Swine	712800	34.997544	-78.261325
AWS820213	Swine	388800	34.877133	-78.270747
AWS820214	Swine	977400	35.152794	-78.271369
AWS820215	Swine	396900	35.125692	-78.25425
AWS820216	Swine	383940	34.826069	-78.228939
AWS820217	Swine	793800	35.101408	-78.267947
AWS820218	Swine	168000	35.045	-78.4394
AWS820219	Swine	576450	34.891011	-78.281747
AWS820220	Swine	495930	35.2005	-78.564799
AWS820221	Swine	249600	35.169933	-78.384697
AWS820224	Swine	167400	35.026519	-78.5186
AWS820225	Swine	762750	35.152311	-78.373088
AWS820226	Swine	365850	35.212805	-78.257122
AWS820227	Swine	365850	34.905227	-78.313136
AWS820229	Swine	364500	35.231363	-78.281555
AWS820230	Swine	564300	34.925755	-78.269822
AWS820232	Swine	325728	34.803041	-78.419111
AWS820233	Swine	1975200	34.823958	-78.441639
AWS820234	Swine	78000	34.845069	-78.379272
AWS820235	Swine	157200	34.969301	-78.404441
AWS820236	Swine	595620	34.928338	-78.359775
AWS820237	Swine	595620	34.935058	-78.358422
AWS820239	Swine	78000	34.845438	-78.355986
AWS820240	Swine	78000	34.668	-78.198588
AWS820242	Swine	234000	34.698355	-78.172597
AWS820243	Swine	78000	34.867694	-78.325011
AWS820246	Swine	78000	34.948228	-78.5431
AWS820248	Swine	156000	34.944783	-78.166994
AWS820249	Swine	78000	34.984416	-78.432794
AWS820250	Swine	156000	34.704311	-78.325877
AWS820251	Swine	78000	34.842003	-78.395361
AWS820253	Swine	78000	34.73418	-78.258891
AWS820254	Swine	312000	34.986438	-78.444994
AWS820257	Swine	78000	34.868994	-78.310906
AWS820258	Swine	78000	34.90698	-78.470169
AWS820260	Swine	156000	34.758111	-78.213291
AWS820262	Swine	234000	34.950813	-78.166933
AWS820265	Swine	78000	34.854783	-78.306675

AWS820266	Swine	348300	34.683813	-78.206444
AWS820267	Swine	324000	34.674513	-78.262855
AWS820268	Swine	345600	34.685861	-78.217555
AWS820269	Swine	486000	35.116189	-78.273403
AWS820270	Swine	337500	34.672491	-78.272236
AWS820271	Swine	1193348	35.199416	-78.418822
AWS820272	Swine	1560600	35.179519	-78.358555
AWS820273	Swine	334800	34.859825	-78.325036
AWS820274	Swine	345600	35.169955	-78.335302
AWS820275	Swine	502200	35.133767	-78.2446
AWS820276	Swine	334800	34.874681	-78.238792
AWS820279	Swine	334800	34.896011	-78.285524
AWS820281	Swine	418500	35.087816	-78.497088
AWS820282	Swine	334800	35.200566	-78.191991
AWS820283	Swine	334800	35.11755	-78.376244
AWS820284	Swine	930150	35.216722	-78.415733
AWS820286	Swine	332100	34.688622	-78.226314
AWS820289	Swine	1023270	34.862847	-78.4724
AWS820290	Swine	330480	35.058867	-78.572969
AWS820291	Swine	495720	35.20943	-78.548075
AWS820292	Swine	330480	35.043608	-78.523381
AWS820293	Swine	495720	35.119197	-78.559294
AWS820294	Swine	330480	35.060516	-78.549066
AWS820297	Swine	330480	35.140152	-78.483355
AWS820301	Swine	826200	35.134591	-78.4503
AWS820302	Swine	451980	35.107686	-78.450802
AWS820303	Swine	660960	34.984819	-78.172811
AWS820305	Swine	330480	35.252088	-78.461472
AWS820307	Swine	504000	34.797994	-78.301333
AWS820309	Swine	501000	34.811452	-78.427383
AWS820311	Swine	189000	35.180492	-78.450864
AWS820312	Swine	324000	34.829697	-78.198055
AWS820314	Swine	364500	35.187836	-78.53318
AWS820315	Swine	2078400	34.78081	-78.249548
AWS820316	Swine	332100	35.113738	-78.4547
AWS820318	Swine	1039200	34.783294	-78.287036
AWS820319	Swine	1039200	35.088238	-78.332551
AWS820321	Swine	562900	34.643616	-78.268997
AWS820323	Swine	310500	34.884069	-78.227636
AWS820325	Swine	995895	34.947455	-78.45058
AWS820327	Swine	307800	35.135922	-78.36183
AWS820328	Swine	297675	35.166238	-78.281913
AWS820329	Swine	793800	35.092269	-78.300733
AWS820330	Swine	297660	35.089177	-78.397519

AWS820331	Swine	297675	35.122283	-78.371455
AWS820334	Swine	182400	34.917839	-78.345161
AWS820335	Swine	337500	35.104522	-78.446191
AWS820336	Swine	234000	35.013188	-78.572544
AWS820337	Swine	631800	34.808913	-78.185172
AWS820339	Swine	866000	34.75398	-78.326936
AWS820340	Swine	1043963	35.085877	-78.206592
AWS820341	Swine	1043963	34.820975	-78.17968
AWS820343	Swine	1732000	34.842977	-78.469636
AWS820345	Swine	268650	35.150675	-78.392625
AWS820347	Swine	866000	34.839666	-78.46631
AWS820348	Swine	866000	34.837111	-78.46338
AWS820349	Swine	2598000	34.681247	-78.286313
AWS820352	Swine	1732000	35.137333	-78.190794
AWS820354	Swine	866000	34.940705	-78.458714
AWS820355	Swine	1732000	35.109197	-78.374516
AWS820356	Swine	866000	35.275125	-78.542338
AWS820358	Swine	1790888	34.752052	-78.358025
AWS820361	Swine	270000	34.692011	-78.197033
AWS820363	Swine	810576	34.895727	-78.36252
AWS820365	Swine	548775	34.706386	-78.144233
AWS820366	Swine	251100	34.947433	-78.251344
AWS820367	Swine	251100	35.058016	-78.311105
AWS820369	Swine	106560	34.892766	-78.523009
AWS820370	Swine	106560	35.098652	-78.492911
AWS820376	Swine	216000	35.083722	-78.243163
AWS820377	Swine	243000	35.133811	-78.529547
AWS820378	Swine	1039200	35.193933	-78.173977
AWS820381	Swine	216405	34.800441	-78.36548
AWS820384	Swine	202500	35.0375	-78.1631
AWS820385	Swine	1700730	34.928158	-78.151152
AWS820388	Swine	396900	34.908869	-78.315925
AWS820389	Swine	533250	35.056058	-78.447197
AWS820390	Swine	194400	35.118991	-78.469769
AWS820392	Swine	190350	35.093772	-78.407094
AWS820394	Swine	189000	34.749275	-78.245147
AWS820395	Swine	585900	34.892833	-78.287997
AWS820398	Swine	182925	34.907827	-78.220063
AWS820400	Swine	541190	34.727611	-78.177327
AWS820401	Swine	1209000	34.699625	-78.283825
AWS820402	Swine	3636814	34.602563	-78.278213
AWS820403	Swine	99225	35.073363	-78.601933
AWS820405	Swine	541190	34.950352	-78.469411
AWS820406	Swine	652050	34.932194	-78.43958

AWS820407	Swine	652098	34.894902	-78.206069
AWS820408	Swine	866000	34.671083	-78.314183
AWS820409	Swine	866000	34.672691	-78.307694
AWS820410	Swine	866000	34.681277	-78.314302
AWS820411	Swine	866000	34.679205	-78.319091
AWS820412	Swine	866000	34.665397	-78.312924
AWS820415	Swine	866000	34.664919	-78.303891
AWS820416	Swine	1300299	34.84173	-78.323666
AWS820417	Swine	1645240	34.850002	-78.48558
AWS820420	Swine	167400	35.0187	-78.542447
AWS820422	Swine	1358100	35.005511	-78.436102
AWS820423	Swine	167400	35.065861	-78.311541
AWS820426	Swine	266625	35.057316	-78.308816
AWS820427	Swine	167400	35.0519	-78.445
AWS820430	Swine	167400	35.152411	-78.495375
AWS820432	Swine	167400	35.070091	-78.554119
AWS820436	Swine	165240	35.171516	-78.417994
AWS820439	Swine	991440	34.699461	-78.332383
AWS820442	Swine	1700391	35.108827	-78.19053
AWS820443	Swine	1700325	34.773455	-78.197858
AWS820444	Swine	3461550	34.899522	-78.426663
AWS820445	Swine	626118	35.098501	-78.46593
AWS820448	Swine	162000	35.19468	-78.294952
AWS820449	Swine	2078400	34.845802	-78.456066
AWS820458	Swine	288900	35.030983	-78.383881
AWS820465	Swine	1416960	35.072042	-78.215381
AWS820469	Swine	940410	35.049105	-78.176486
AWS820470	Swine	960595	34.954036	-78.214186
AWS820471	Swine	918850	34.807358	-78.29968
AWS820472	Swine	521910	35.035644	-78.187936
AWS820473	Swine	521640	34.996772	-78.240803
AWS820474	Swine	521640	34.938263	-78.232072
AWS820475	Swine	845100	34.903997	-78.167027
AWS820478	Swine	476300	35.032752	-78.568731
AWS820481	Swine	97200	35.060011	-78.4399
AWS820485	Swine	108000	35.184377	-78.305969
AWS820487	Swine	406890	35.12743	-78.639247
AWS820490	Swine	391365	35.144088	-78.291833
AWS820491	Swine	99225	35.074616	-78.464166
AWS820493	Swine	460712	34.668088	-78.253336
AWS820497	Swine	352350	35.065981	-78.398531
AWS820499	Swine	74250	35.125736	-78.522872
AWS820501	Swine	1187595	35.124116	-78.381274
AWS820502	Swine	325485	34.935422	-78.44343

AWS820505	Swine	325616	34.940236	-78.255402
AWS820508	Swine	325616	34.923838	-78.419369
AWS820511	Swine	321975	35.057081	-78.252831
AWS820513	Swine	431701	34.905312	-78.358463
AWS820516	Swine	492754	35.099044	-78.565775
AWS820517	Swine	325616	34.906008	-78.520419
AWS820519	Swine	325650	34.930308	-78.308908
AWS820520	Swine	266400	34.740897	-78.305802
AWS820521	Swine	83700	35.259019	-78.480675
AWS820529	Swine	36000	34.995886	-78.409569
AWS820530	Swine	469800	34.888975	-78.25048
AWS820533	Swine	261000	35.042547	-78.394433
AWS820536	Swine	261000	35.088408	-78.362133
AWS820538	Swine	261000	35.042908	-78.38795
AWS820539	Swine	261000	35.043152	-78.241636
AWS820540	Swine	64800	35.003816	-78.392352
AWS820545	Swine	223428	34.66978	-78.293844
AWS820546	Swine	189000	34.794447	-78.192308
AWS820548	Swine	134400	34.908402	-78.25845
AWS820557	Swine	130500	34.866177	-78.297888
AWS820576	Swine	2267190	35.186138	-78.575659
AWS820577	Swine	506250	35.214111	-78.538766
AWS820580	Swine	283500	34.902611	-78.27618
AWS820582	Swine	1190700	35.077511	-78.379683
AWS820586	Swine	1792800	35.186605	-78.187138
AWS820594	Swine	1389150	35.163163	-78.27368
AWS820595	Swine	495720	35.158305	-78.403363
AWS820597	Swine	156000	34.68733	-78.153383
AWS820599	Swine	182400	34.994166	-78.425341
AWS820601	Swine	496800	35.182533	-78.433144
AWS820602	Swine	694575	34.894358	-78.280222
AWS820606	Swine	793800	35.131055	-78.235197
AWS820610	Swine	874800	35.18835	-78.402519
AWS820611	Swine	156000	34.97605	-78.605238
AWS820612	Swine	475200	34.9833	-78.551988
AWS820613	Swine	312000	35.034244	-78.222731
AWS820615	Swine	793800	35.0967	-78.3689
AWS820619	Swine	297675	35.139592	-78.345328
AWS820620	Swine	182400	35.107281	-78.530688
AWS820621	Swine	396900	35.072641	-78.189081
AWS820622	Swine	96000	35.023202	-78.432261
AWS820624	Swine	541250	35.118047	-78.349058
AWS820625	Swine	621000	35.251044	-78.405541
AWS820626	Swine	595350	35.159941	-78.276647

AWS820627	Swine	348300	34.719583	-78.170602
AWS820630	Swine	192000	34.8409	-78.303152
AWS820632	Swine	78000	34.85803	-78.428672
AWS820634	Swine	495720	35.145244	-78.435705
AWS820636	Swine	194400	35.157741	-78.567675
AWS820639	Swine	1736100	35.165855	-78.351816
AWS820640	Swine	2944400	35.173024	-78.238747
AWS820642	Swine	688390	34.835319	-78.181572
AWS820644	Swine	192000	34.966788	-78.428844
AWS820645	Swine	2505600	34.889689	-78.178956
AWS820647	Swine	866000	34.924416	-78.510452
AWS820650	Swine	660960	35.022644	-78.466861
AWS820651	Swine	864000	34.994466	-78.586933
AWS820652	Swine	160000	34.708861	-78.345352
AWS820653	Swine	495720	35.136005	-78.377436
AWS820654	Swine	396900	35.071327	-78.185844
AWS820655	Swine	114600	35.162075	-78.319247
AWS820656	Swine	777600	35.073613	-78.265144
AWS820657	Swine	595350	34.757738	-78.335122
AWS820658	Swine	689310	34.975769	-78.458725
AWS820661	Swine	182400	34.891619	-78.446694
AWS820663	Swine	291600	35.128236	-78.459561
AWS820664	Swine	175080	35.195336	-78.207519
AWS820666	Swine	475200	34.860577	-78.33527
AWS820667	Swine	1190700	34.939261	-78.420022
AWS820669	Swine	360000	34.970228	-78.574442
AWS820672	Swine	716175	34.964861	-78.388116
AWS820674	Swine	78000	34.978338	-78.533797
AWS820677	Swine	595350	35.100091	-78.405916
AWS820678	Swine	182400	34.870425	-78.433291
AWS820679	Swine	156000	34.669599	-78.188125
AWS820681	Swine	518400	35.222741	-78.616519
AWS820682	Swine	2112174	34.815566	-78.386316
AWS820683	Swine	475200	35.193113	-78.253711
AWS820688	Swine	348300	34.652594	-78.20218
AWS820689	Swine	348300	34.689269	-78.280452
AWS820691	Swine	595350	34.90265	-78.29115
AWS820692	Swine	6505728	34.857055	-78.220472
AWS820693	Swine	660960	35.055072	-78.566055
AWS820695	Swine	468000	34.733591	-78.363727
AWS820696	Swine	726705	35.139238	-78.372075
AWS820697	Swine	192000	35.069127	-78.531258
AWS820698	Swine	156000	34.839658	-78.372016
AWS820699	Swine	1125800	35.193813	-78.410988

AWS820700	Swine	234000	34.696641	-78.309755
AWS820702	Swine	826200	35.146044	-78.387802
AWS820705	Swine	91200	34.886883	-78.326247
AWS820706	Swine	182400	35.000391	-78.450058
AWS820708	Swine	864000	34.960588	-78.489094
AWS820709	Swine	950400	35.011463	-78.182833
AWS820711	Swine	1188000	34.775663	-78.261705
AWS820714	Swine	692800	34.911125	-78.352119
AWS820715	Swine	1900800	34.966888	-78.589944
AWS820716	Swine	172800	35.041053	-78.429514
AWS820718	Swine	334800	35.154705	-78.258255
AWS820719	Swine	192000	34.901838	-78.463633
AWS820721	Swine	398360	35.067889	-78.616111
AWS820722	Swine	324000	34.650745	-78.307255
AWS820724	Swine	388800	35.083511	-78.598378
AWS820725	Swine	793800	34.911742	-78.372683
AWS820726	Swine	334800	34.937331	-78.314042
AWS820727	Swine	348300	34.671075	-78.265883
AWS820728	Swine	1389064	34.822991	-78.19473
AWS820729	Swine	1156680	35.1556	-78.2658
AWS820731	Swine	730710	35.059033	-78.206909
AWS820733	Swine	396900	35.1311	-78.2353
AWS820734	Swine	495720	34.909346	-78.301771
AWS830006	Swine	1700391	34.662669	-79.46216
AWS830007	Swine	1700391	34.798776	-79.41135
AWS830008	Swine	1439225	34.806013	-79.379359
AWS830009	Swine	8283240	34.895069	-79.430994
AWS830010	Swine	1253845	34.784909	-79.390212
AWS830012	Swine	1069155	34.692227	-79.466016
AWS830013	Swine	712800	34.697849	-79.486464
AWS830014	Swine	583200	34.799582	-79.639765
AWS830015	Swine	704605	34.770465	-79.389701
AWS830017	Swine	519600	34.807225	-79.510195
AWS830019	Swine	522000	34.656645	-79.444492
AWS830021	Swine	1039200	34.936726	-79.471581
AWS830022	Swine	1039200	34.928926	-79.473174
AWS830023	Swine	1039200	34.932178	-79.490894
AWS830028	Swine	63750	34.769574	-79.562001
AWS830035	Swine	1188000	34.763285	-79.349904
AWS840015	Swine	747300	35.3083	-80.375
AWS850001	Swine	417600	36.472976	-80.209589
AWS860028	Swine	1039200	36.3742	-80.7819
AWS860029	Swine	230400	36.4022	-80.7706
AWS860030	Swine	1032750	36.2931	-80.5864

AWS890001	Swine	4131686	35.827	-76.3217
AWS900010	Swine	1161000	34.8333	-80.4917
AWS900020	Swine	1700400	34.8564	-80.4197
AWS920012	Swine	372671	35.73	-78.6764
AWS930001	Swine	1416776	36.4917	-78.1583
AWS930006	Swine	1771250	36.5411	-78.2817
AWS930007	Swine	324750	36.5361	-78.2086
AWS930010	Swine	850200	36.4811	-78.0839
AWS930011	Swine	850200	36.357961	-77.991965
AWS930034	Swine	693000	36.5208	-78.2494
AWS940001	Swine	7965000	35.8889	-76.5358
AWS940024	Swine	283400	35.8544	-76.6583
AWS960002	Swine	647910	35.3197	-78
AWS960004	Swine	511650	35.2131	-77.8506
AWS960005	Swine	992250	35.3347	-78.1581
AWS960006	Swine	433000	35.2917	-78.0794
AWS960007	Swine	826200	35.325479	-78.134296
AWS960008	Swine	793800	35.2714	-78.1717
AWS960009	Swine	777600	35.321543	-77.965996
AWS960010	Swine	777515	35.2883	-77.8389
AWS960011	Swine	777600	35.2139	-77.9042
AWS960012	Swine	777600	35.3294	-78.1436
AWS960013	Swine	777600	35.4139	-78.1278
AWS960014	Swine	777515	35.2767	-78.2533
AWS960016	Swine	777600	35.5067	-77.8633
AWS960017	Swine	777515	35.239506	-77.828245
AWS960018	Swine	777515	35.2994	-78.1381
AWS960019	Swine	777600	35.3078	-78.2089
AWS960020	Swine	168000	35.2569	-78.0006
AWS960021	Swine	168000	35.2514	-77.9228
AWS960024	Swine	660960	35.3825	-77.8278
AWS960025	Swine	1652400	35.3208	-78.2569
AWS960028	Swine	604800	35.1706	-77.8553
AWS960029	Swine	595350	35.3283	-78.2117
AWS960030	Swine	577800	35.2478	-78.0786
AWS960031	Swine	1555145	35.3064	-78.0678
AWS960033	Swine	1801280	35.2756	-77.9583
AWS960034	Swine	3560000	35.257634	-77.934717
AWS960035	Swine	1870560	35.4653	-77.8778
AWS960037	Swine	496125	35.2694	-78.1858
AWS960040	Swine	495720	35.219	-78.139171
AWS960041	Swine	495720	35.2661	-78.1389
AWS960042	Swine	495720	35.2778	-78.29
AWS960044	Swine	495720	35.218803	-78.136843

AWS960046	Swine	210000	35.5311	-77.9078
AWS960049	Swine	96000	35.2261	-78.1597
AWS960051	Swine	96000	35.4736	-77.9433
AWS960052	Swine	192000	35.5414	-77.9319
AWS960055	Swine	96000	35.185	-77.8347
AWS960056	Swine	96000	35.4961	-77.8883
AWS960057	Swine	96000	35.4922	-77.8894
AWS960058	Swine	192000	35.5022	-77.8744
AWS960060	Swine	96000	35.2958	-77.9025
AWS960062	Swine	388800	35.4731	-78.0928
AWS960063	Swine	388800	35.3133	-78.2244
AWS960064	Swine	388700	35.3842	-77.8719
AWS960065	Wet Poultry	13520	35.3883	-77.8714
AWS960068	Swine	388700	35.4278	-77.8492
AWS960069	Swine	388800	35.2394	-78.0364
AWS960070	Swine	388700	35.2797	-77.8292
AWS960071	Swine	388800	35.3333	-78.1692
AWS960072	Swine	388800	35.3583	-77.8367
AWS960073	Swine	388700	35.42	-77.8233
AWS960074	Swine	388800	35.4481	-78.0783
AWS960075	Swine	388800	35.2792	-78.2006
AWS960077	Swine	388800	35.271	-78.295295
AWS960078	Swine	317250	35.3283	-78.1931
AWS960079	Swine	388800	35.4578	-78.0675
AWS960082	Swine	360450	35.2875	-78.0917
AWS960083	Swine	158400	35.232804	-78.216984
AWS960085	Swine	334800	35.207866	-78.145602
AWS960088	Swine	660960	35.2733	-78.1369
AWS960089	Swine	330480	35.2653	-78.2342
AWS960090	Swine	330480	35.28253	-78.28981
AWS960091	Swine	403380	35.3161	-78.2014
AWS960092	Swine	330480	35.4219	-78.0325
AWS960093	Swine	330480	35.2833	-78.2297
AWS960094	Swine	327240	35.4461	-78.0914
AWS960096	Swine	1828000	35.310489	-78.090692
AWS960097	Swine	1817200	35.2	-77.9856
AWS960098	Swine	1732000	35.5025	-77.9231
AWS960099	Swine	1780000	35.1967	-77.9472
AWS960100	Swine	1838780	35.2417	-77.9844
AWS960101	Swine	270000	35.1867	-77.9625
AWS960102	Swine	247860	35.4222	-78.1222
AWS960103	Swine	1756000	35.235195	-77.911641
AWS960109	Swine	194400	35.30169	-77.843633
AWS960110	Swine	388800	35.1786	-77.9686

AWS960111	Swine	194350	35.2342	-78.0078
AWS960112	Swine	194400	35.2783	-78.0258
AWS960113	Swine	361800	35.1783	-77.9481
AWS960114	Swine	194400	35.4483	-78.0819
AWS960115	Swine	194400	35.2536	-77.8467
AWS960116	Swine	194400	35.2672	-78.1567
AWS960118	Swine	151335	35.4514	-78.1183
AWS960119	Swine	1039200	35.3192	-78.1017
AWS960120	Swine	162000	35.2828	-78.2519
AWS960121	Swine	167400	35.2403	-78.0486
AWS960122	Swine	167400	35.3444	-78.1406
AWS960124	Swine	266625	35.2103	-77.9872
AWS960125	Swine	165140	35.2639	-78.1375
AWS960126	Swine	564300	35.2492	-78.1297
AWS960127	Swine	5884620	35.230148	-78.098348
AWS960128	Swine	297570	35.2089	-77.9561
AWS960132	Swine	502280	35.2008	-77.9069
AWS960134	Swine	1762000	35.5736	-77.9283
AWS960135	Swine	330480	35.346713	-78.104175
AWS960136	Swine	125550	35.200973	-77.828312
AWS960137	Swine	113400	35.4655	-77.8287
AWS960138	Swine	704260	35.245	-78.141211
AWS960139	Swine	1012460	35.2997	-78.1031
AWS960141	Swine	519600	35.2403	-78.1819
AWS960143	Swine	325616	35.3489	-78.1169
AWS960144	Swine	651105	35.2433	-78.0889
AWS960151	Swine	141615	35.246672	-77.850703
AWS960157	Swine	177125	35.274249	-77.929068
AWS960161	Swine	156300	35.2369	-78.1483
AWS960162	Swine	410930	35.3189	-78.2042
AWS960164	Swine	140000	35.3556	-77.8778
AWS960165	Swine	80000	35.2414	-77.9247
AWS960166	Swine	148500	35.2189	-77.8939
AWS960171	Swine	162265	35.3281	-78.1192
AWS960177	Swine	426938	35.2783	-77.9186
AWS960178	Swine	162000	35.2342	-77.9469
AWS960179	Swine	259800	35.3272	-77.9011
AWS960182	Swine	862500	35.3053	-78.1433
AWS960183	Swine	124800	35.4358	-77.8411
AWS960184	Swine	388700	35.2286	-78.1372
AWS960185	Swine	144000	35.337633	-77.956136
AWS960186	Swine	281450	35.2439	-77.945
AWS960187	Swine	583200	35.3028	-78.2719
AWS960189	Swine	495720	35.184988	-78.154445

AWS960190	Swine	388800	35.2353	-78.0433
AWS960192	Swine	105000	35.5708	-78.005
AWS960193	Swine	793800	35.23	-78.1722
AWS960194	Swine	583200	35.3078	-78.2783
AWS960197	Swine	1555200	35.2383	-78.1639
AWS960198	Swine	1069155	35.504251	-77.821267
AWS960199	Swine	152130	35.3922	-77.8128
AWS960200	Swine	388700	35.3289	-77.8456
AWS960201	Swine	567000	35.3447	-78.1328
AWS960203	Swine	1876000	35.587698	-77.887391
AWS960204	Swine	777515	35.37	-77.8333
AWS960205	Swine	660960	35.2703	-78.1078
AWS960206	Swine	324000	35.2694	-78.2764
AWS960207	Swine	585900	35.4433	-78.1269
AWS960210	Swine	96000	35.5642	-77.8803
AWS960211	Swine	777600	35.4233	-77.8744
AWS960213	Swine	1555200	35.3497	-77.83
AWS960214	Swine	156000	35.5492	-78.0686
AWS960215	Swine	1732000	35.5061	-77.9058
AWS960221	Swine	24000	35.498228	-77.914545
AWS980001	Swine	960000	35.7792	-77.7417
AWS980009	Swine	887217	35.620352	-77.882303
AWS980015	Swine	255060	35.7086	-78.115
AWS980017	Swine	602225	35.726608	-78.07561
AWS980027	Swine	121230	35.7247	-78.0697
AWS980041	Swine	438480	35.705163	-77.811288
AWS990031	Swine	1166400	36.1667	-80.7083