

DEQ - North Carolina Community Mapping System
& Environmental Justice Tool
Wednesday November 4, 2020

Renee Kramer, Title VI and Environmental Justice Coordinator



- **Environmental justice** is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (US EPA).

Proposed Criteria

- Race and Ethnicity
- Age and Sex
- Disability
- Poverty
- Household Income
- Limited English Proficiency

-10% or more in comparison to the county average

-50% or more minority

-5% or more in comparison to the county average for poverty

Distributional Justice

- Equal distribution of environmental benefits and burdens

Procedural Justice

- Equal protection from rulemaking and enforcement

Process Justice

- Equal opportunities for meaningful engagement

Justice-Equality vs. Equity



EQUALITY VERSUS EQUITY



In the first image, it is assumed that everyone will benefit from the same supports. They are being treated equally.



In the second image, individuals are given different supports to make it possible for them to have equal access to the game. They are being treated equitably.



In the third image, all three can see the game without any supports or accommodations because the cause of the inequity was addressed. The systemic barrier has been removed.



Stakeholder Engagement and Development Process

- **Academic Focus Groups**

- Spoke with with GIS and EJ scholars from NC State, Chapel Hill, Duke, UNCG, NC Central, UNC Charlotte, and App State

- Calls with **other states** that have developed EJ mapping tools

- Meetings with Pennsylvania, California and EPA

- **Public Community Meetings**

- Wayne County
- Forsyth County
- Rutherford County

- **6 Small Community Organization Meetings/Calls**

- **Website and Public Survey**

<https://deq.nc.gov/outreach-education/environmental-justice/deq-north-carolina-community-mapping-system>

Also on the Website:

- Other States
- Survey
- 'How To'



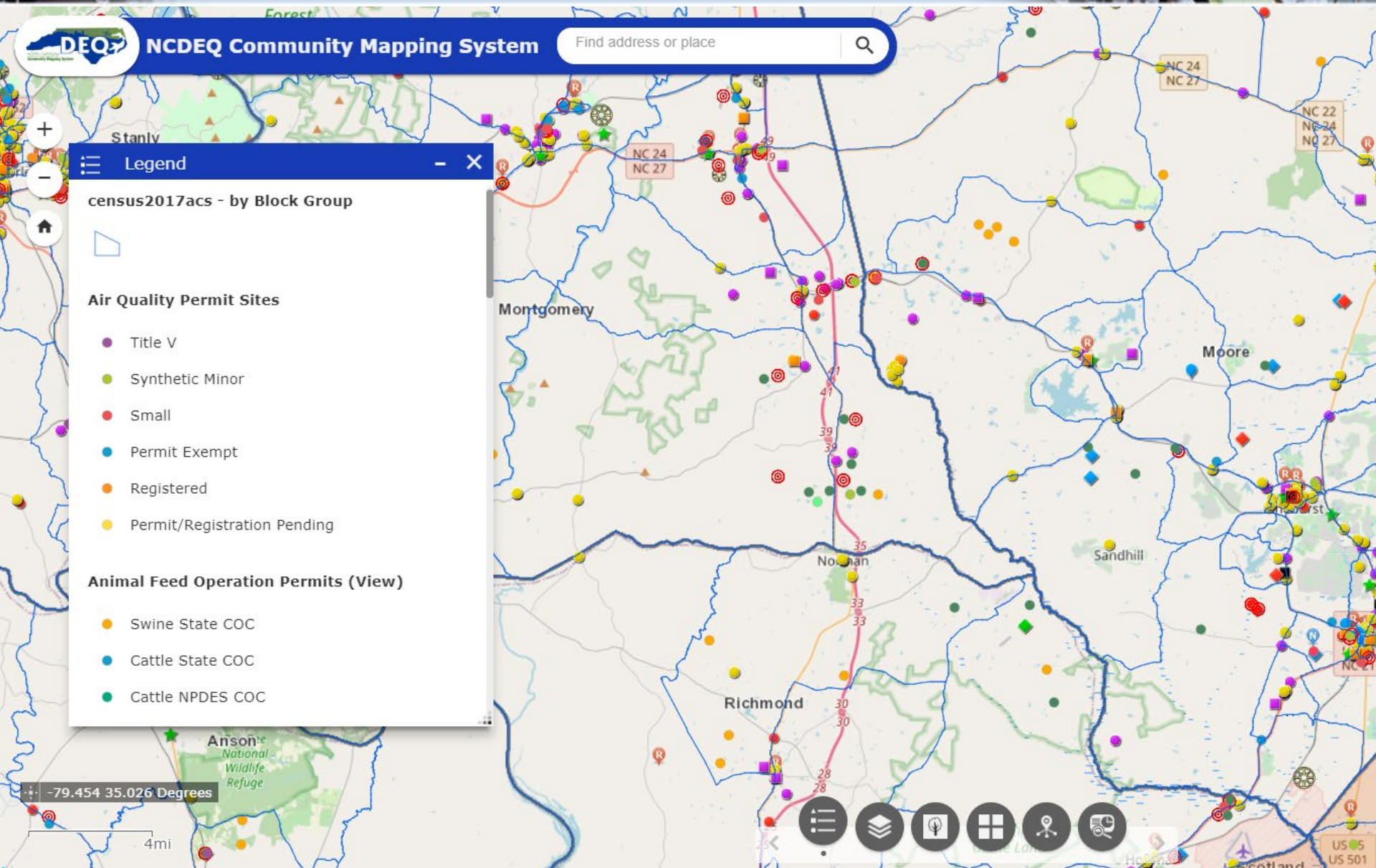

Community Mapping System



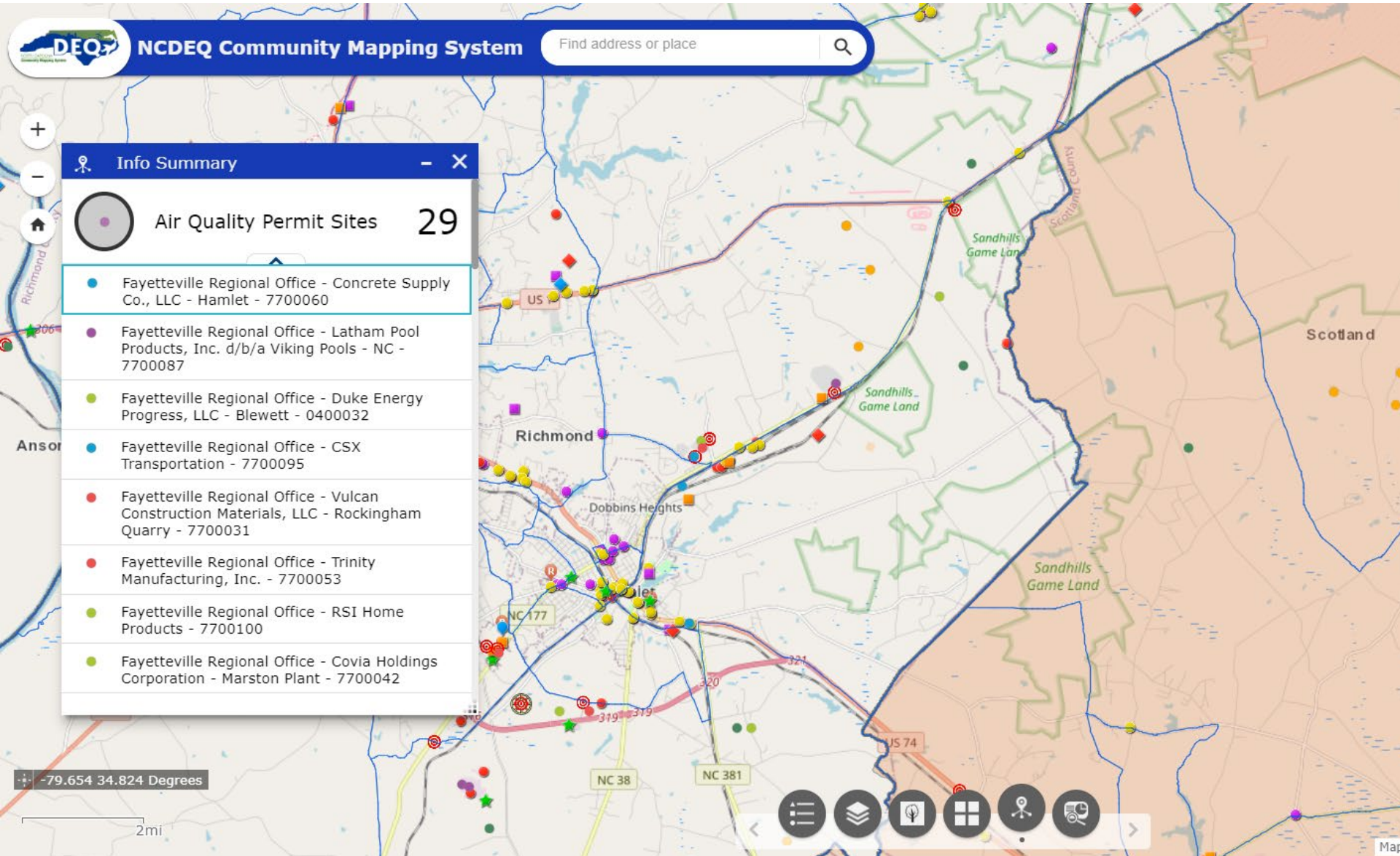
The screenshot displays the NCDEQ Community Mapping System interface. At the top, there is a search bar with the text "Find address or place" and a magnifying glass icon. Below the search bar is a map of North Carolina, with county boundaries clearly delineated. The map is overlaid with a grid of latitude and longitude lines. In the bottom left corner, there is a scale bar indicating 30 miles and a coordinate display showing "-82.839 36.571 Degrees". The bottom right corner features the Esri logo and the text "Map data © OpenStreetMap contributors, CC-BY-SA | NCDOT GIS Unit". The interface includes standard map navigation controls such as zoom in (+), zoom out (-), home, and a search icon.



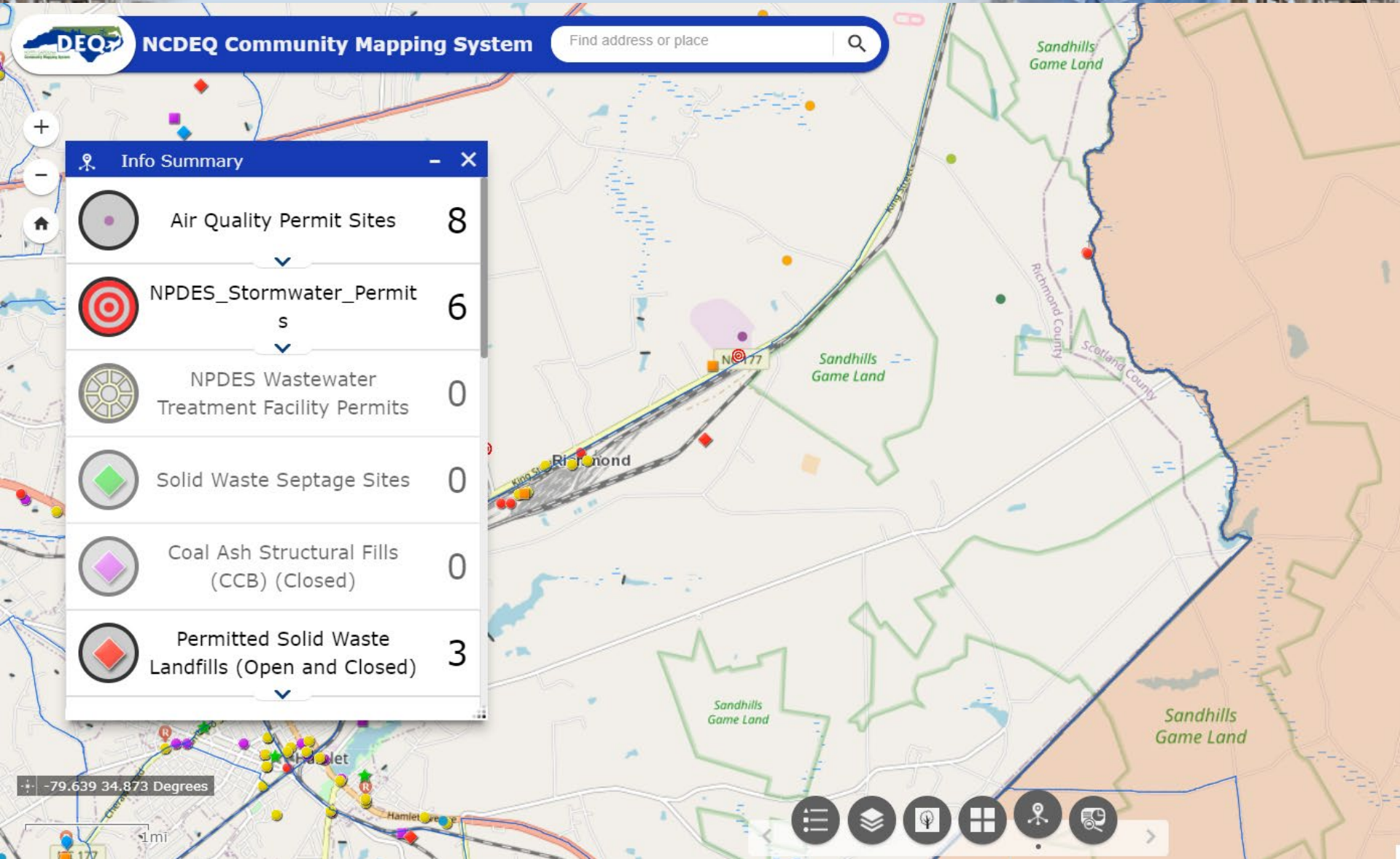
Permits and Incidents



Info Summary



Info Summary



Permit Information

A map interface showing a popup window for permit information. The popup window is titled "(1 of 3)" and contains the following data:

NPDES_Stormwater_Permits	
Permit Number	NCG020314
VERSION	
Owner Type	Organization
Owner Name	US Army Garrison Fort Bragg
Owner Affiliation	Monica Stephenson
Facility Name	Lamont West Borrow Pit
Facility Address	Lamont Rd
Facility Address 2	
Zoom to ...	

A map interface showing a popup window for permit information. The popup window is titled "(2 of 3)" and contains the following data:

Address 2	
City	Fort Bragg
State	NC
Zip	28307
Permit Type	Mining Activities Stormwater Discharge COC
Status	Active
Issue Date	3/18/2016, 4:00 AM
Effective Date	3/18/2016, 4:00 AM
Expiration Date	9/30/2020, 4:00 AM
Original Issue	10/30/1995, 3:00 AM
Location	35.138889, -79.081944
Zoom to ...	

Basemap



DEQ NCDEQ Community Mapping System

Basemap Gallery

- Human Geography Map
- Imagery Hybrid (Selected)
- Imagery
- Light Gray Canvas
- Mid-Century Map
- Modern Antique Map
- National Geographic
- Navigation

Richmond, Ledbetter Lake, Marston, Cognac, Fruitland, Dobbins Heights, Hamlet, New Town, Steen Town, Andrew Jackson Hwy, N US 1 Hwy, Pee Dee River, Diggs, Gibson, Scotland, Reservation

-79.602 34.856 Degrees

2mi

Old Hwy, NCDOT GIS Unit | NC CGIA, Earthstar Geographics | State of North

Screening Tool



NCDEQ Community Mapping System Find address or place

Screening [Close]

Area of Interest

Place name | Draw | Coordinates

Select draw mode

Buffer distance (optional)

Show results within Miles

Diggs -79.542 34.825 Degrees

2mi

Old Hwy NCDOT GIS Unit | NC CGIA, Earthstar Geographics | State of North Carolina

Screening Tool



DEQ NCDEQ Community Mapping System

Screening Area : 87,513,003.27 ft²

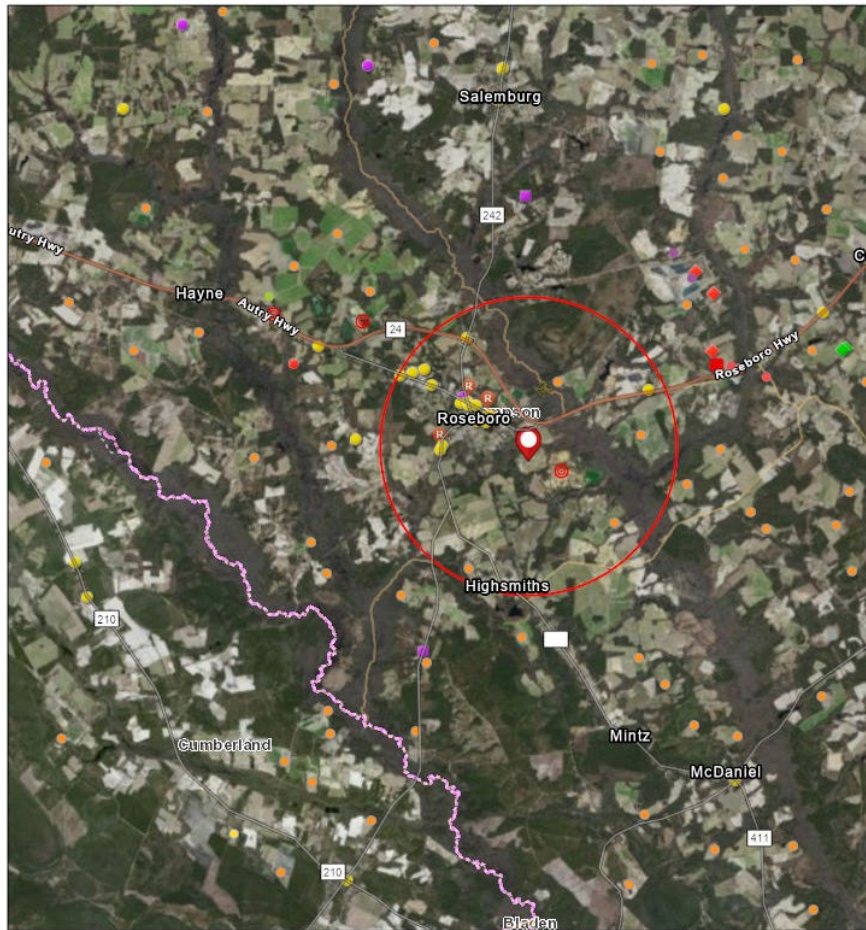
- Report
- Back
- NPDES_Stormwater_Permits (0)
- NPDES Wastewater Treatment Facility ... (0)
- Solid Waste Septage Sites (0)
- Coal Ash Structural Fills (CCB) (Closed) (0)
- Permitted Solid Waste Landfills (Open ... (0)
- Land Clearing and Inert Debris (LCID)... (0)
- Contaminated Dry-Cleaning Sites (0)
- Inactive Hazardous Sites (0)

Richmond, Marston, Cognac, Fruitland, Dobbins Heights, Hamlet, New Town, Steen Town, Andrew Jackson Hwy, Ledbetter Lake, N US High, N US 1 Hwy, Pee Dee River, Scotland, Gibson MI, Reservation

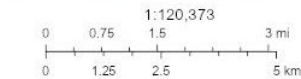
Diggs -79.496 34.825 Degrees 2mi

Old Hwy NCDOT GIS Unit | NC CGIA, Earthstar Geographics | State of North Car

Info Summary Report



- Air Quality Permit Sites
 - Title V
 - Synthetic Minor
 - Small
- Animal Operation Permits
 - Swine State COC
- Animal Individual State
 - Animal Individual State
- NPDES Stormwater Permits
 - NPDES Stormwater Permits
- NPDES Wastewater Treatment Facility Permits
 - Minor
- Solid Waste Septage Sites
 - Solid Waste Septage Sites
- Permitted Solid Waste Landfills (Open and Closed)
 - Permitted Solid Waste Landfills (Open and Closed)

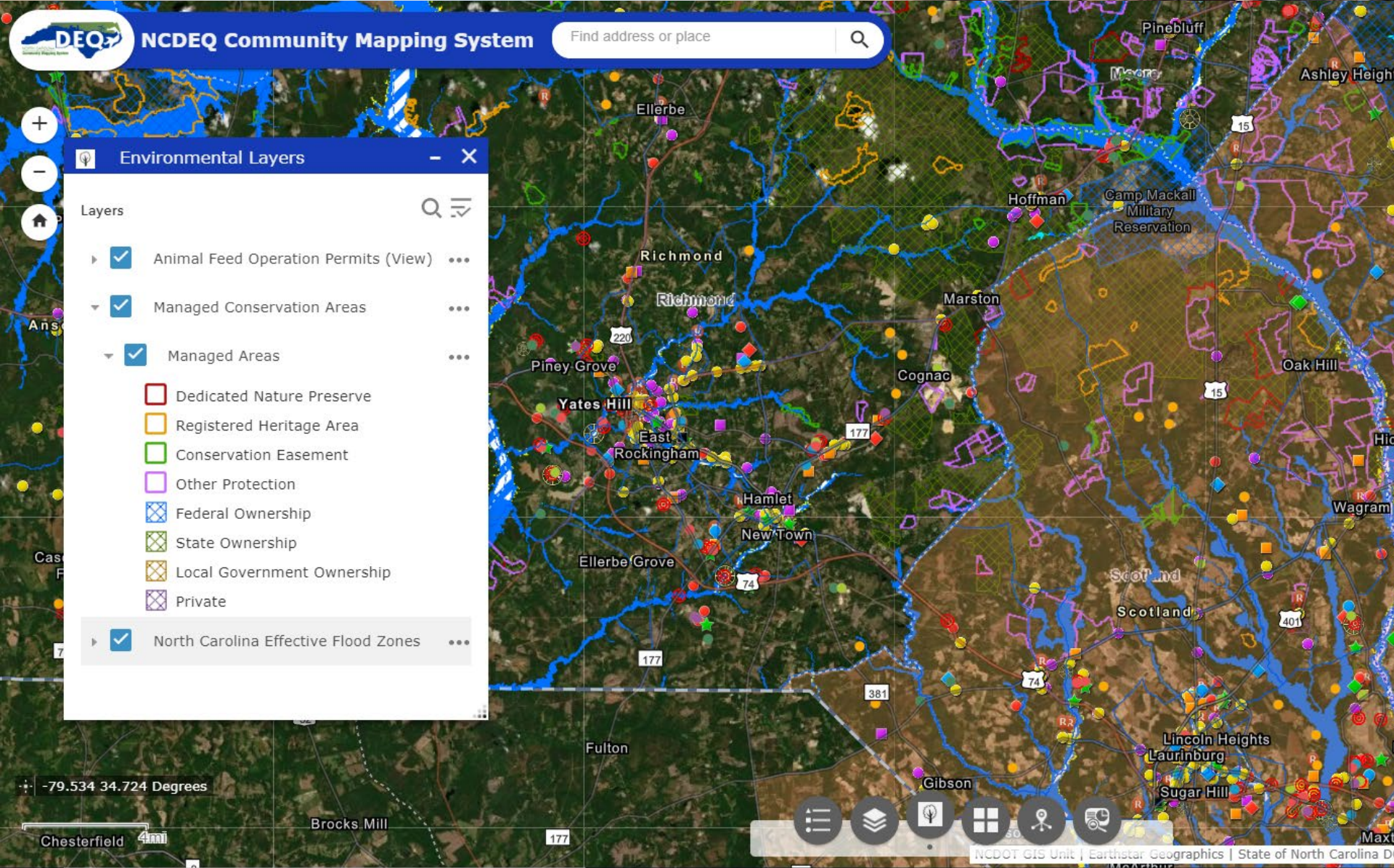


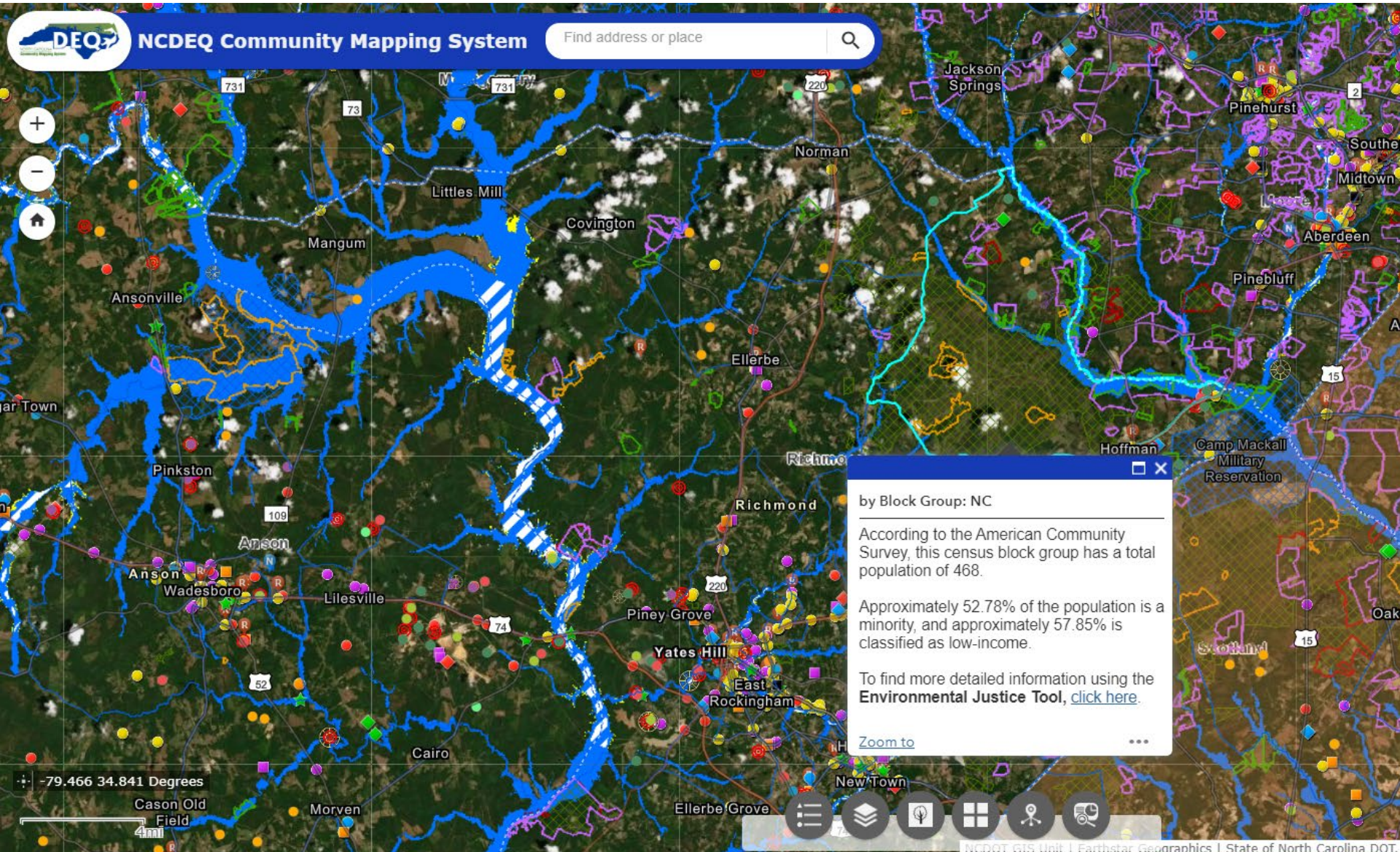
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, NC Counties, NCCOGA, NC OneMap, US EPA, Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User

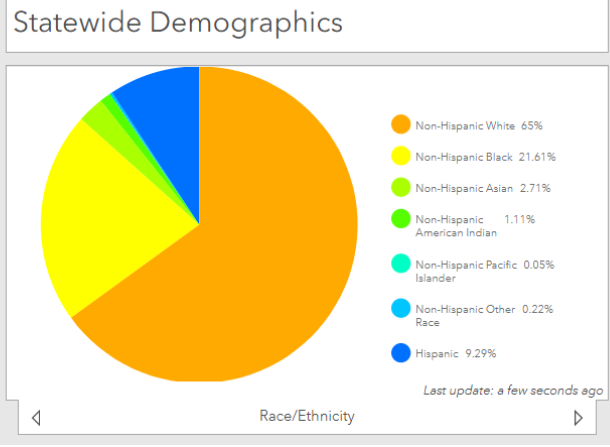
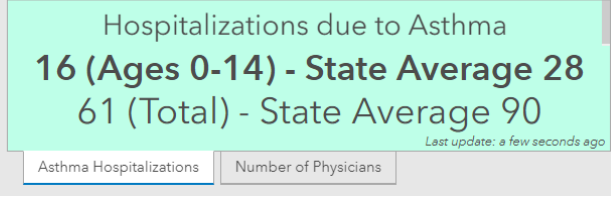
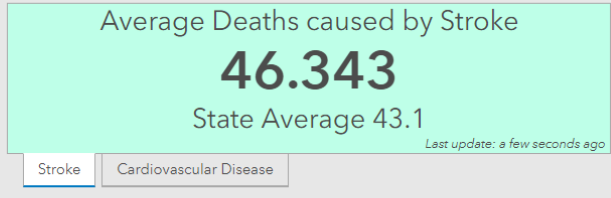
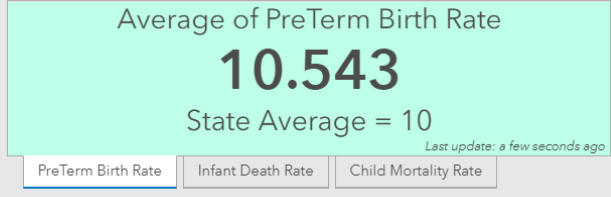
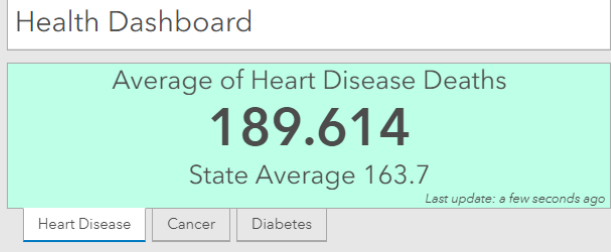
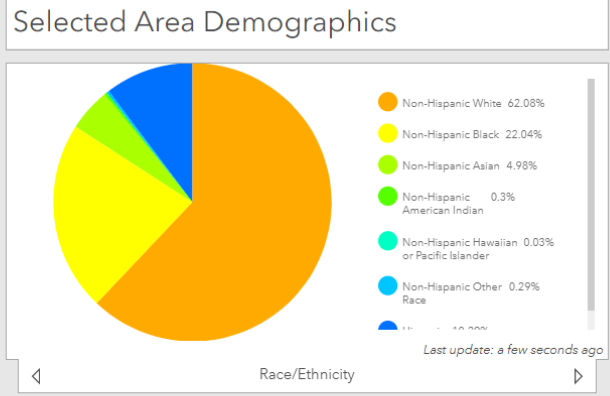
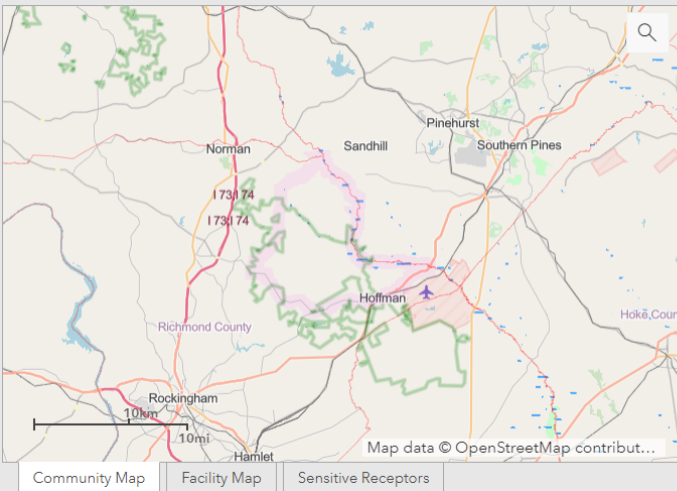
Summary

Name	Count
Animal Operation Permits	4
NPDES_Stormwater_Permits	1
NPDES Wastewater Treatment Facility Permits	1
Solid Waste Septage Sites	0
Coal Ash Structural Fills (CCB) (Closed)	0
Permitted Solid Waste Landfills (Open and Closed)	0
Land Clearing and Inert Debris (LCID) Notifications	0
Contaminated Dry-Cleaning Sites	0
Possible Dry-Cleaning Contamination	0
Inactive Hazardous Sites	0
Pre-Regulatory Landfill Sites	0
Brownfields Program Sites	0
Hazardous Waste Sites	0
Underground Storage Tank Incidents	18
Above Ground Storage Tank Incidents	1
Underground Storage Tank Active Facilities	4
Petroleum Contaminated Soil Remediation Permits	0
Land Use Restriction and/or Notices	3

Environmental Layers







Environmental Justice Tool Maps

The three maps above can be toggled for additional information on demographics, facilities, and sensitive receptors (these are areas where the occupants are more susceptible to the adverse effects of exposure to toxic chemicals, pesticides, and other pollutants). Pop-ups on the map display the information. Click on a block group, or facility, sensitive receptor for more information.

Demographic and Health Data

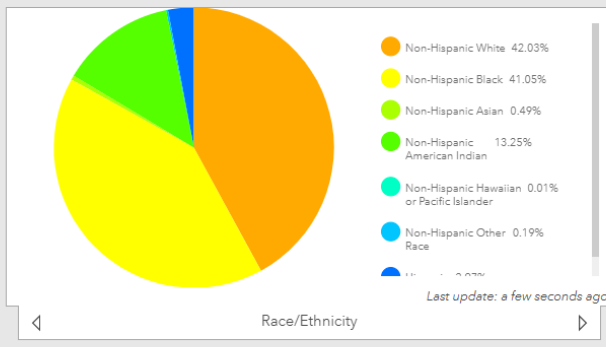
The Demographic Dashboard displays information on the census block group level from the 2017 5-year estimate American Community Survey (ACS). The North Carolina Department of Health and Human Services (NCDHHS) provides health data at the county level, so data shown on the dashboard for health rates tell the overall county average, not the census block group average. The data shown in the graphics are an average of all the block groups (or counties for health data) included on the above map extent. Zoom in and out for information on a smaller or larger scale. More information can be found about how each demographic group is defined in the Glossary of Terms section.

EJ Tool

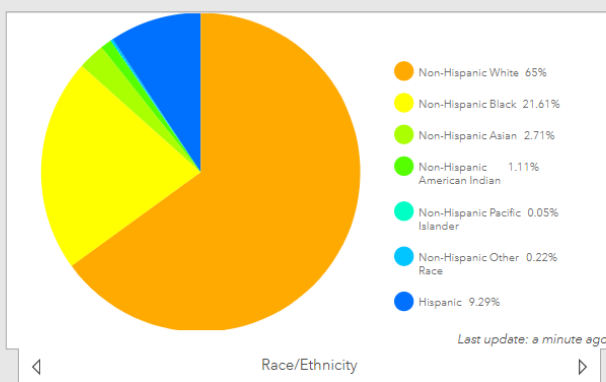
Zoom in



Selected Area Demographics



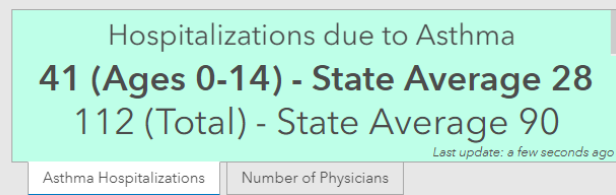
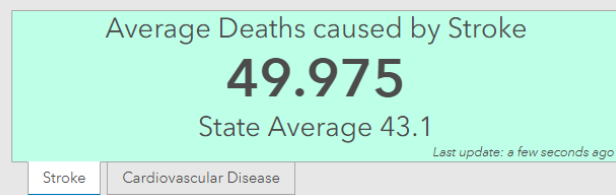
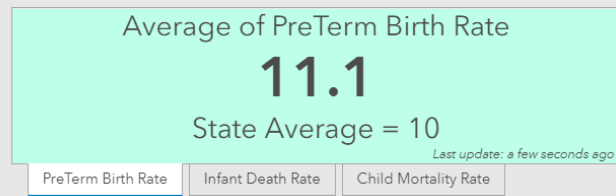
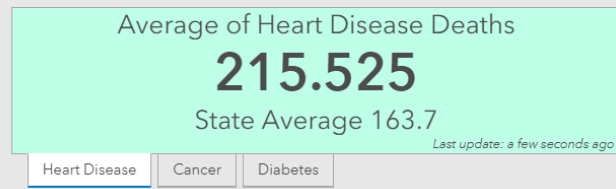
Statewide Demographics



Environmental Justice Tool Maps
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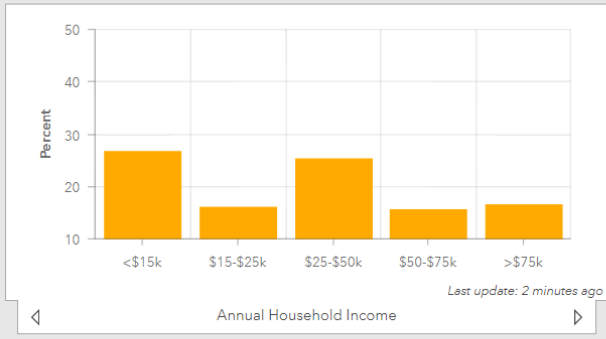
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Health Dashboard

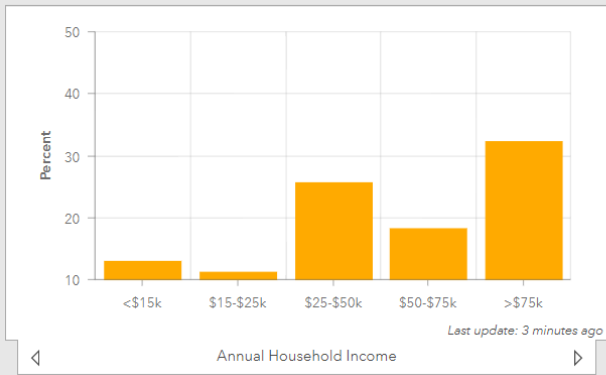




Selected Area Demographics



Statewide Demographics



Health Dashboard

Average Deaths caused by Cancer

184

State Average 169.1

Last update: 2 minutes ago

Heart Disease **Cancer** Diabetes

Average of Infant Death Rate 2011-2015 (Per 100,000)

9.775

State Average 7.2

Last update: 2 minutes ago

PreTerm Birth Rate **Infant Death Rate** Child Mortality Rate

Average Cardiovascular Disease Deaths

287.15

State Average 221.9

Last update: 2 minutes ago

Stroke **Cardiovascular Disease**

Number of Primary Care Physicians

6.381

State Average 4.812

Last update: 2 minutes ago

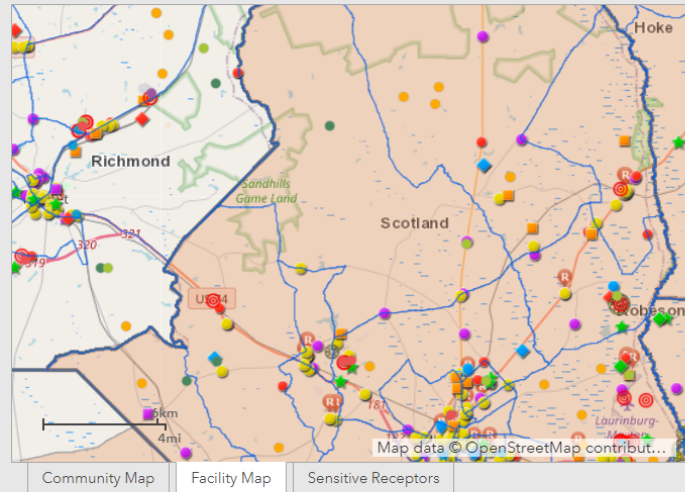
Asthma Hospitalizations **Number of Physicians**

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EJ Tool

Demographic and Health Dashboard



Selected Area Demographics

Median Household Income
\$32,885.738

Last update: 3 minutes ago

Median Household Income

Health Dashboard

Average Deaths caused by Diabetes

42.6

State Average 22.8

Last update: 3 minutes ago

Heart Disease | Cancer | **Diabetes**

Child Mortality Rate 2011-2015 (Per 100,000)

79.575

State Average 57.8

Last update: 3 minutes ago

PreTerm Birth Rate | Infant Death Rate | **Child Mortality Rate**

Average Cardiovascular Disease Deaths

287.15

State Average 221.9

Last update: 3 minutes ago

Stroke | **Cardiovascular Disease**

Number of Primary Care Physicians

6.381

State Average: 4.812

Last update: 3 minutes ago

Asthma Hospitalizations | **Number of Physicians**

Statewide Demographics

Median Household Income
\$50,320

Last update: 5 minutes ago

Median Household Income

Environmental Justice Tool Maps

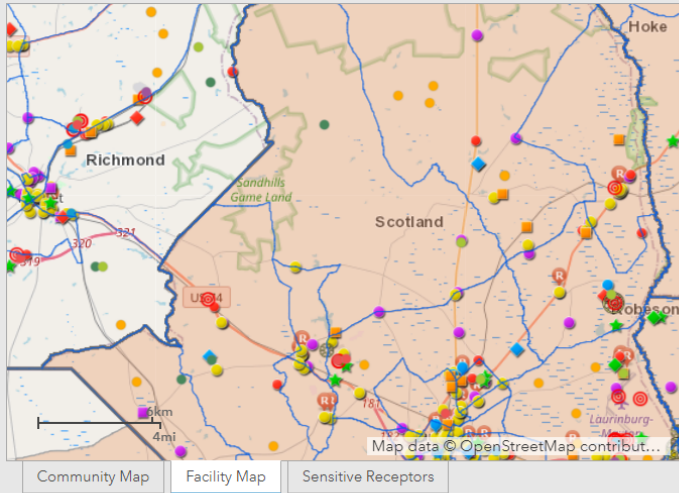
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Demographic and Health Data

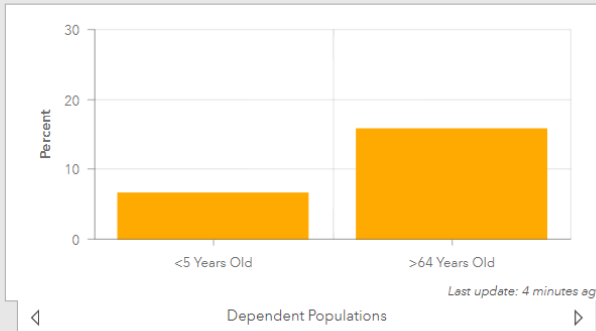
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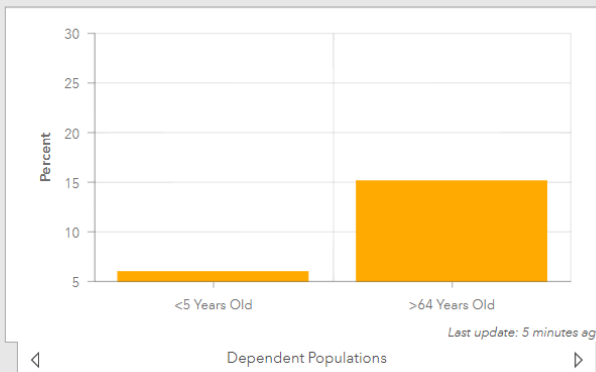
Facility Map



Selected Area Demographics



Statewide Demographics



Health Dashboard

Average Deaths caused by Diabetes

42.6

State Average 22.8

Last update: 4 minutes ago

- Heart Disease
- Cancer
- Diabetes**

Child Mortality Rate 2011-2015 (Per 100,000)

79.575

State Average 57.8

Last update: 4 minutes ago

- PreTerm Birth Rate
- Infant Death Rate
- Child Mortality Rate**

Average Cardiovascular Disease Deaths

287.15

State Average 221.9

Last update: 4 minutes ago

- Stroke
- Cardiovascular Disease**

Number of Primary Care Physicians

6.381

State Average: 4.812

Last update: 4 minutes ago

- Asthma Hospitalizations
- Number of Physicians**

Environmental Justice Tool Maps

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- US Census data
 - 2020 Census Data with Differential Privacy
 - ACS accuracy and MOE
- Tribal boundaries
- AHTF- EJ and Inclusion Subcommittee Short Term Goal 2:
 - Conduct an inventory on aging infrastructure and buildings (schools, senior centers, etc.) that have exposure to radon, asbestos, mildew, mold, etc. and consider remediation projects of impacted facilities for job creation initiatives.

Renee Kramer

Title VI and EJ Coordinator, DEQ

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