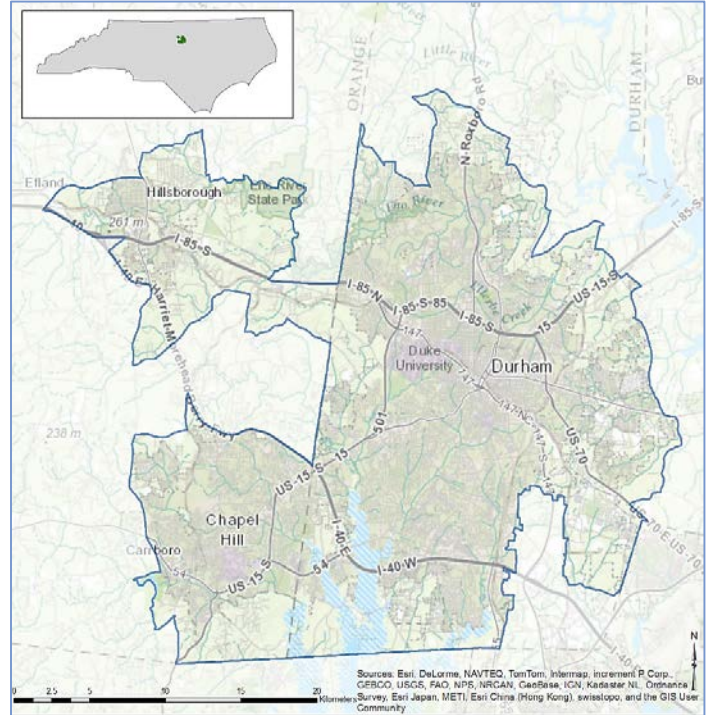# Durham, NC and surrounding area

Towns and cities rely on clean air, clean water, green space, and other natural amenities for economic sustainability and quality of life, yet their benefits are not always fully understood or considered in local decisions. EPA and its partners are producing EnviroAtlas to help communities better use environmental assets for public good.

EnviroAtlas includes an online interactive mapping application that anyone can use. The interactive map contains over 200 maps available for the U.S., as well as 100+ fine-scale maps for selected U.S. communities about existing and potential benefits from the local natural environment. The EnviroAtlas community component is based on 1-meter resolution land cover data. Information derived from these data is summarized by census block groups; more spatially explicit map layers are also provided. This fact sheet highlights some of the many community data layers available for the featured area of Durham, North Carolina.
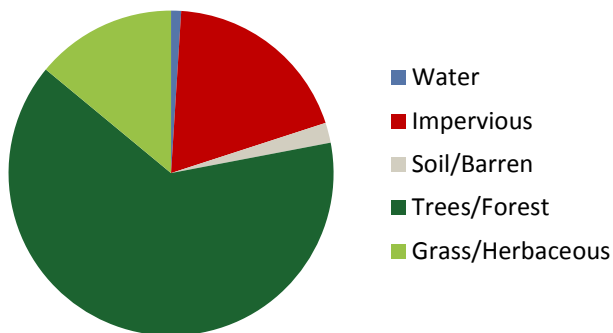
Background

The Durham, North Carolina area was chosen as the first EnviroAtlas community, based on its proximity to the EPA offices in Research Triangle Park, NC, and its inclusion as the research pilot for EPA's Sustainable and Healthy Communities program. The EnviroAtlas boundary for the Durham area was determined using the 2000 Census definition of an Urban Area. It includes Durham, Chapel Hill, Carrboro, and Hillsborough, measures 569 square kilometers, and encompasses 193 census block groups.

The Durham, North Carolina area is in the Piedmont ecoregion. It has a mild, humid, sub-tropical climate with moderate precipitation throughout the year. Historically, the area was vegetated with pine and mixed oak-hickory forests; however, much of the area was once cultivated for tobacco and other crops. Currently, the non-urban environment is reverting to successional pine and hardwoods; it also supports planted pine stands. The community is part of the Research Triangle area, which is among the fastest growing regions in the U.S. The leading industries today are health care and information technology; the largest employers are Duke University, the University

Percent Land Cover in Community Area

- Water
- Impervious
- Soil/Barren
- Trees/Forest
- Grass/Herbaceous

Durham Area Demographics 2010 Census	
Total population	340,851
Under 13 years old	16.40%
Over 70 years of age	6.29%
Other than white/non-Hispanic	50.32%
Below twice the poverty level	32.46%

of North Carolina at Chapel Hill and IBM. The demographics of the Durham community

area indicate that the potential exists for income and other disparities in the distribution of environmental assets. EnviroAtlas includes demographic maps that can help screen for potential health and well-being disparities resulting from disproportionate distribution of "green infrastructure."

Ecosystem Services Overview

In EnviroAtlas, the benefits humans receive from nature are grouped into seven categories that demonstrate the interconnectedness of these ecosystem services:

- Clean air
- Clean and plentiful water
- Natural hazard mitigation
- Climate stabilization
- Recreation, culture, and aesthetics
- Biodiversity conservation
- Food, fuel, and materials (data available only for communities with farm land)

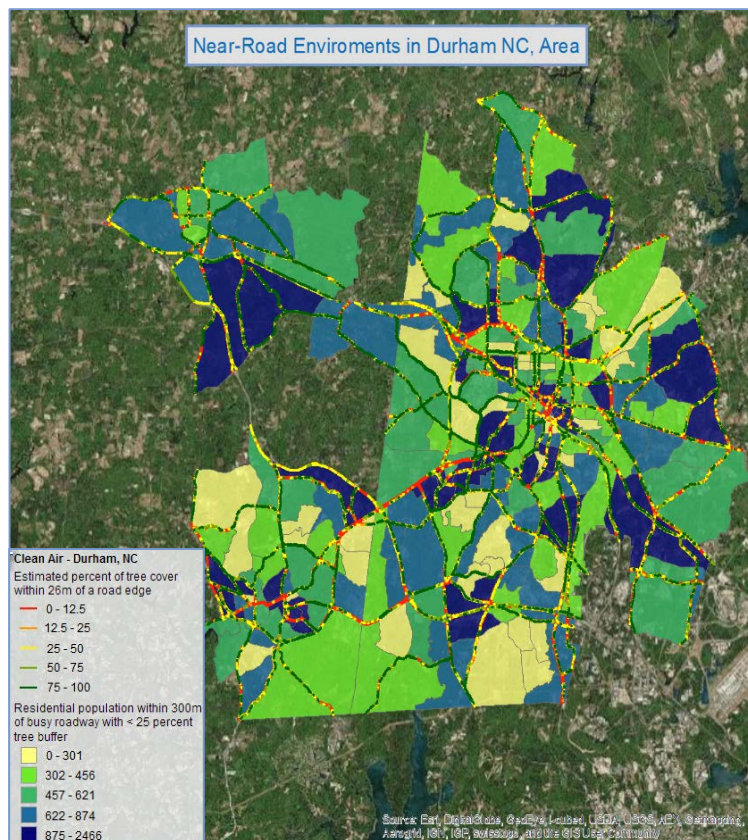Examples of some of the data included in EnviroAtlas are detailed below:

Green Space and Tree Cover

Research indicates that physical and visual access to trees and other green space has positive physiological, cognitive, and emotional benefits. In the Durham community area:

- There are 1,301 square meters of green space per person.
- Almost 29,000 residents have less than 5 percent tree coverage within 50 meters of their home.
- There are 2,803,385 tons of carbon stored in the local tree biomass, with an additional 589 tons sequestered annually.

Near-Road Enviroments in Durham NC, Area

Clean Air - Durham, NC
Estimated percent of tree cover within 26m of a road edge
— 0 - 12.5
— 12.5 - 25
— 25 - 50
— 50 - 75
— 75 - 100
Residential population within 300m of busy roadway with < 25 percent tree buffer
- 0 - 301
- 302 - 456
- 457 - 621
- 622 - 874
- 875 - 2466

Near-Road Environments

Studies indicate that the capacity of trees to filter air may reduce the health impacts of vehicular pollution. In EnviroAtlas, you can find analyses of tree coverage near busy roads.

- An estimated 56 percent of the Durham area population lives within 300 meters of a busy roadway (yellow to blue block groups in the figure above).
- 35 percent of the estimated Durham population lives within 300 meters of a roadway that has little to no tree coverage (roadways indicated by red and orange lines in the figure above).

EnviroAtlas Tools and Features

- Learn more about and download EnviroAtlas data: https://www.epa.gov/enviroatlas/enviroatlas-data
- Search our data layers and access their fact sheets: https://www.epa.gov/enviroatlas/enviroatlas-dynamic-data-matrix
- Explore data for the Durham community area in our interactive mapping application: https://www.epa.gov/enviroatlas/enviroatlas-interactive-map
- Use our Eco-Health Relationship Browser to explore ecosystems, the services they provide, and their benefits to human health and well-being: https://www.epa.gov/enviroatlas/enviroatlas-eco-health-relationship-browser
- Contact us with questions about EnviroAtlas: https://www.epa.gov/enviroatlas/forms/contact-enviroatlas

EnviroAtlas combines maps, graphs, and other analysis tools, fact sheets, and downloadable data into an easy-to-use, web-based educational and decision-support tool. EnviroAtlas helps users understand the connections between the benefits we derive from ecosystem services and the natural resources that provide them. For more information, please visit www.epa.gov/enviroatlas.