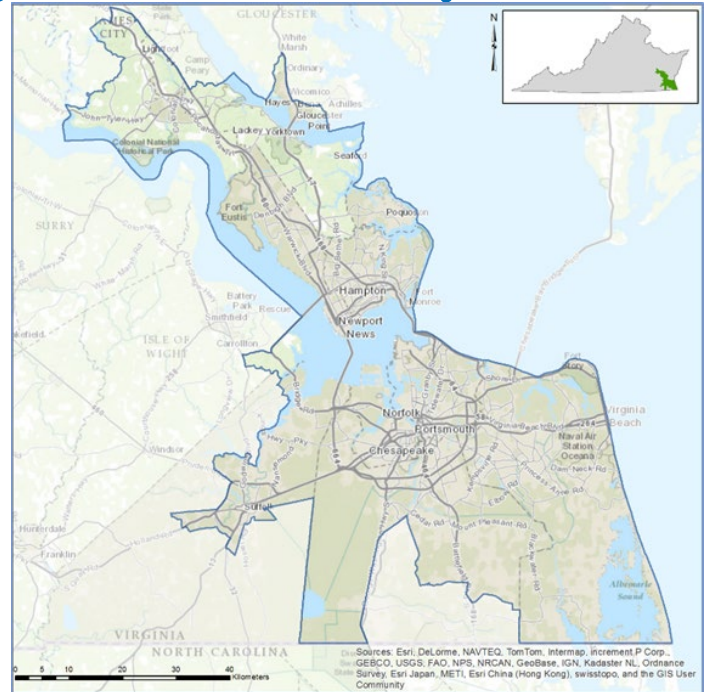# Virginia Beach/Williamsburg, VA and vicinity

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 300 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 Virginia Beach/Williamsburg, Virginia.
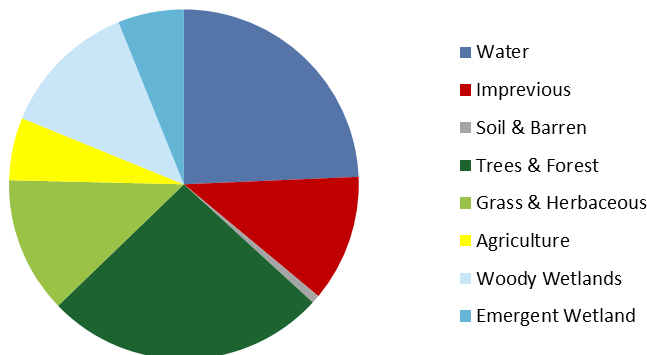
Background

The EnviroAtlas boundary for this area was determined using the 2010 Census definition of an Urban Area. In addition to Virginia Beach and Williamsburg, it includes all of Hampton, Newport News, Norfolk, Poquoson, and Portsmouth; most of Chesapeake, and some of Suffolk. The area measures 3,255 square kilometers, and encompasses 1,058 census block groups.

The area is in the Virginian Barrier Islands and Coastal Marshes ecoregion. It has a humid subtropical climate with very hot, humid summers and cool winters. The area was

historically vegetated with northern beach grass and deciduous oaks; however, much of the natural vegetation has been removed for urbanization. The leading industry sectors in the area are defense, tourism, healthcare, and manufacturing. The U.S. Navy, the Colonial Williamsburg Foundation, Chesapeake Regional Healthcare, Sentara Healthcare, and Huntington Ingalls Industries are among the largest employers. The demographics of the 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 urban greenery.

Percent Land Cover in Community Area

- Water
- Impervious
- Soil & Barren
- Trees & Forest
- Grass & Herbaceous
- Agriculture
- Woody Wetlands
- Emergent Wetland

Virginia Beach/Williamsburg Area Demographics 2010 Census	
Total population	1,541,779
Under 13 years old	17%
Over 70 years of age	8.20%
Other than white/non-Hispanic	45.56%
Below twice the U.S. poverty level	26.85%

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:
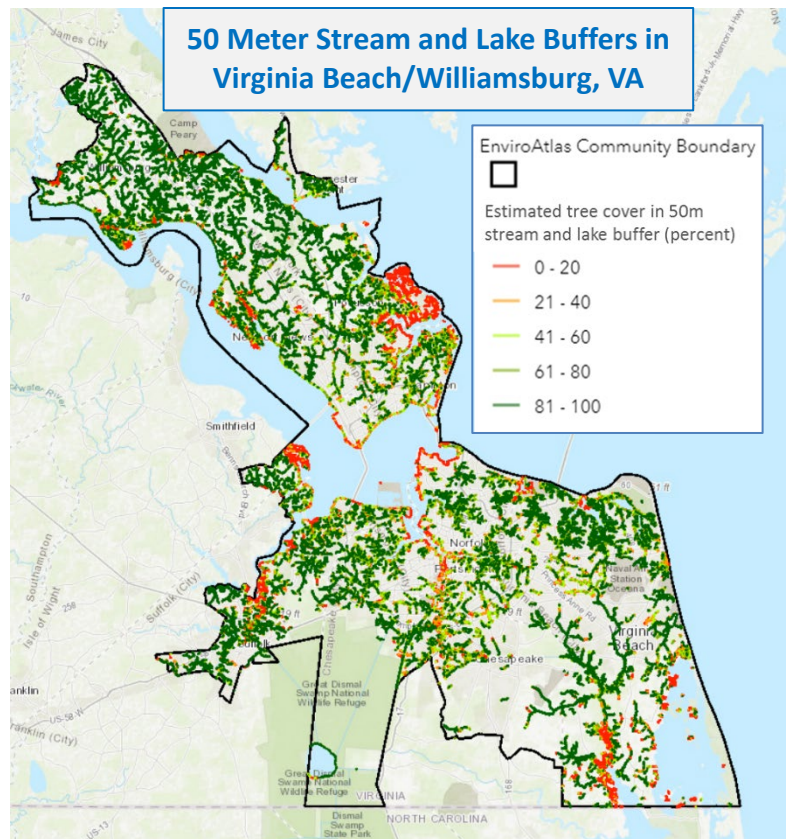
Green Space and Trees

Research indicates that physical and visual access to trees and other green space has positive physiological, cognitive, and emotional benefits. Lack of these resources in the places where we live, learn, work, and play can adversely impact human health and well-being. In the Virginia Beach/Williamsburg community area:

- There are 5,169 square meters of green space per person.
- More than 6,300 residents have less than 5 percent tree coverage within 50 meters of their home.
- There are 10,016,214 tons of carbon stored in the local tree biomass, with an additional 381,632 tons sequestered annually. Carbon in the atmosphere is an important factor related to climate stabilization.
- 9,161,623 kilograms of the common air pollutant ozone are removed from the air by local tree biomass every year.

50 Meter Stream and Lake Buffers in Virginia Beach/Williamsburg, VA

EnviroAtlas Community Boundary

Estimated tree cover in 50m stream and lake buffer (percent)
- 0 - 20
- 21 - 40
- 41 - 60
- 61 - 80
- 81 - 100

Stream and Lake Buffers

Natural land cover adjacent to streams and rivers, sometimes called the riparian area or zone, helps protect water quality and supply for drinking, recreation, and aquatic habitat. The EnviroAtlas community component quantifies riparian vegetation in both 15- and 50-meter buffers. These reflect water quality and habitat guidelines, respectively, although standards vary across geographies.

- An estimated 12 percent of the community land area is within 50 meters of a stream, river or lake.
- 28 percent of these 50-meter buffers contain less than 20 percent tree cover (red lines in the figure above).

EnviroAtlas Tools and Features

- Learn more about 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 Virginia Beach/Williamsburg 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.

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