

Topography

Do you live in the coastal plain, in the Piedmont or in the mountains? Are there a lot of hills where you live, or is it mostly flat? Topography describes the physical features of an area and is also called the terrain. It influences water drainage, soil erosion and plant growth. We pay special attention to topography during heavy rains since it determines what areas are most likely to flood. It even impacts the way roads and buildings need to be constructed.

Your Ecological Footprint

Each of us has an effect on the environment. It can be measured by our ecological footprint, or the amount of land and water needed to support our given lifestyle using current technology. We all need natural resources to survive, and while using any natural resource will cause some environmental changes, we can choose how we use them, how much we use and what we do to preserve them. These choices help determine the size of our ecological footprint.

You often hear about sustainability when dealing with environmental resources. A sustainable community can maintain its lifestyle and ensure an equal or better quality of life for future generations. The size of your ecological footprint is a good way to determine whether your lifestyle is sustainable.

Your Answers to the Following Questions Help Determine the Size of Your Footprint

1. How fuel-efficient is your vehicle of choice?
2. Do you carpool?
3. What percentage of your diet is made up of meat? Of dairy? Of fruit, grain and vegetables?
4. What do you do with your kitchen scraps?
5. How much of what you buy is produced locally?
6. Are most of the things you buy disposable?
7. ...Recyclable?
8. ...Reusable?
9. How much packaging is around what you purchase?
10. Where does rainwater go after landing on your roof?
11. How do you dispose of your household hazardous materials?
12. How many miles do you drive in the average week?
13. Do you use paper, plastic or cloth grocery bags?
14. Where do you purchase your produce?
15. When you're done with an item, do you toss it or donate it?
16. Do you plant native or exotic species around your home?
17. Do you pick up after you pet?
18. Does your car leak?
19. How do you dispose of your trash?
20. Do you share your ecological address knowledge with others?

Discover your ecological address under the Resources tab at www.eenorthcarolina.org

Climate

How much rain or snow fall do you see in a year? What are the seasonal average temperatures where you live? The term climate refers to the average weather conditions of a specific region. It affects everyone and can influence many of the decisions we make.

Plentiful water and a long growing season make agriculture productive, but just one storm can have devastating impacts. The amount and distribution of rainfall help determine what plants can grow where you live and can also influence soil erosion, drinking water availability, farming and risk of fire. The varied topography of our state, as well as the Gulf Stream off the coast, give North Carolina the largest amount of climate variability of any state east of the Mississippi River.



Soil

Soil is the loose top layer of the Earth's surface. It is made up of weathered rock materials and decayed organic matter. What kind of soil do you see where you live? Is it red clay, sandy loam or something else? The type of soil at your ecological address can determine what happens to bare soil when it is exposed to wind and rain, what happens to toxic materials when they are dumped in the ground and what kinds of plants can grow. It even influences the type of buildings and roads that can be built.



Air

Air, made up primarily of nitrogen and oxygen, envelops the earth and makes life possible. Both urban and rural areas can have significant effects on the quality of the air masses that flow across them.

We all live downwind of someplace, and we all live upwind of someplace else. We breathe pollution introduced upwind of us and contribute dust, carbon monoxide and other pollution that people downwind of us breathe. The quality of the air blowing across an area can negatively affect its forests, agricultural crops and surface water.

Connecting Health, the Economy and the Environment

Exploring your ecological address is good for the environment and your health.

Exploring natural areas around you is a great way to get active. There are many parks throughout North Carolina with trails for hiking, running, biking and horseback riding. Check out the Office of Environmental Education and Public Affairs website at www.eenorthcarolina.org for more information on environmental education centers with opportunities for staying active.

North Carolina's natural resources are vital to the healthy economy of our state. Farmers rely on healthy soil and plentiful rain to raise crops. Millions of tourists visit North Carolina each year to enjoy its beaches, forests and mountains.

A healthy environment means a healthy economy and a healthy you, so take some time to discover your ecological address!



River Basin

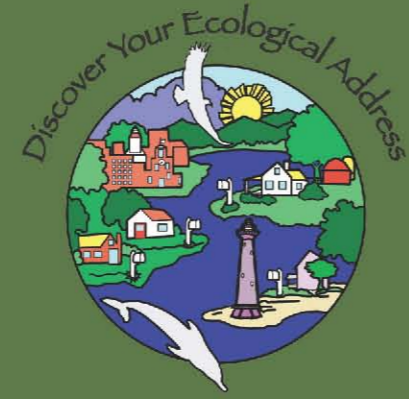
Everyone in North Carolina lives in one of the state's 17 river basins. Even if your home is not near a river, the water that falls on the land drains to a lake, creek or stream that connects to a larger body of water. Topography determines each of the river basins. Just as a bathtub drains all of the water that falls within its sides, a river basin drains all of the water landing in it to a particular river and then eventually to an estuary or the ocean. When rain falls on your yard, where does it go from there? What does it pick up along the way? When you turn on your faucet to get a glass of water, where does that water come from? When you drain your bathtub or sink, where does that water go?



To learn more about your ecological address, check out the Office of Environmental Education and Public Affairs' website at www.eenorthcarolina.org

The North Carolina Department of Environment and Natural Resources

Pat McCrory, Governor
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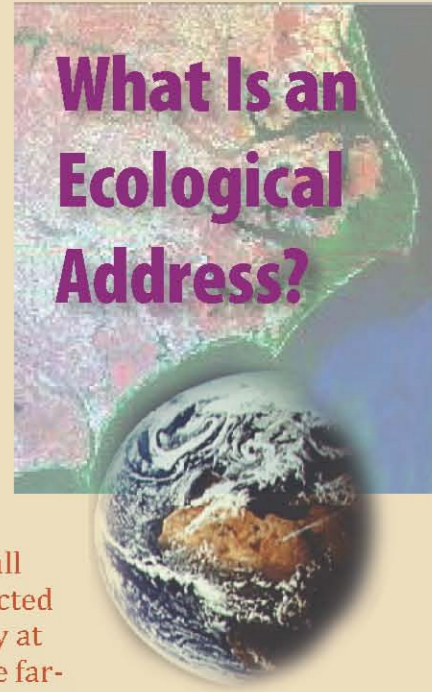
Discover Your

Ecological Address

You know what street you live on and what town you live in, but where do you live ecologically? Whether you live in a busy city, on a farm in the country or somewhere in between, you have an ecological address. Rainwater falling on your roof flows to a certain body of water. The fuel used to heat your home had to come from somewhere. The vegetation you plant around your home must be tolerant of the local soil and weather conditions.

What Is an Ecological Address?

There are nine major components of your ecological address – river basin, topography, wetlands, groundwater, climate, soil, air, biodiversity and energy. They are all connected to each other and connected to you. The things you do every day at home, at work or at school can have far-reaching impacts on your ecological address. These impacts are not only environmental; they can be economic or health-related as well. Keep reading to learn more about the parts of your ecological address.



Wetlands

Wetlands are areas saturated by surface water or groundwater for a period of time. They support plants adapted for life in wet soils. These areas are not necessarily wet year-round. Wetlands form along the edges of streams, rivers, ponds, lakes, estuaries, sounds, bays and the ocean. Types of wetlands include ponds, marshes, swamps and bogs.

Why should people care about wetlands? What do they do? Wetlands help regulate water flow, providing flood control. They act like giant sponges, soaking up water when it rains and slowly releasing it into the ground and surface water during the year. Do you like seafood? Without the nursery habitat that wetlands provide, most of the seafood that people enjoy would not exist. Wetlands also help filter sediment and pollutants out of water before these contaminants reach major waterways.



Energy is the ability to do work. Everything we do requires energy. Our bodies get the energy they need from food. We use fossil fuels to power our cars and provide our houses with electricity. Energy is an easy ecological address component to overlook because we often don't see the source of our energy. However, it is the component that touches our lives the most and on which we have perhaps the greatest impact. Think about the energy that you use in a day. How does your food get to your table? How far did it travel to get there? What resources were used to produce it?

Energy

Humans depend on biodiversity for food, medicine and the equilibrium of natural systems. The loss of a single species can have far-reaching and often times unforeseen effects on an ecosystem.

Carolina has a high amount of natural diversity due to its climate and topography. From the mountains to the coast, the state is home to a wealth of plants, animals and unique natural areas, some of which can be found nowhere else on Earth! For example, the Venus Flytrap is only found in coastal areas of the Carolinas.

Biodiversity



Biodiversity

Groundwater is the water found in cracks and pores of sand, gravel and rocks below the surface of the earth. When it rains, some of the water flows over the surface of the land and into a waterway, but some soaks into the ground. Plants use some of what soaks into the ground, and the rest sinks deeper into the earth and becomes groundwater. If there are contaminants on the ground, such as car oil, fertilizer or pesticides, they can end up in the groundwater. Why does this matter? More than half of North Carolina's population gets its drinking water from a groundwater source. It is important that this water not be polluted and that there is enough of it for the plants, animals and people depending on it. In the coastal plain, groundwater is often found in porous layers of earth located between watertight layers of rock or clay. These water-filled porous layers are called aquifers. The increasing population in coastal areas of North Carolina raises the concern of aquifers being depleted faster than they can be naturally replenished.

Groundwater

