

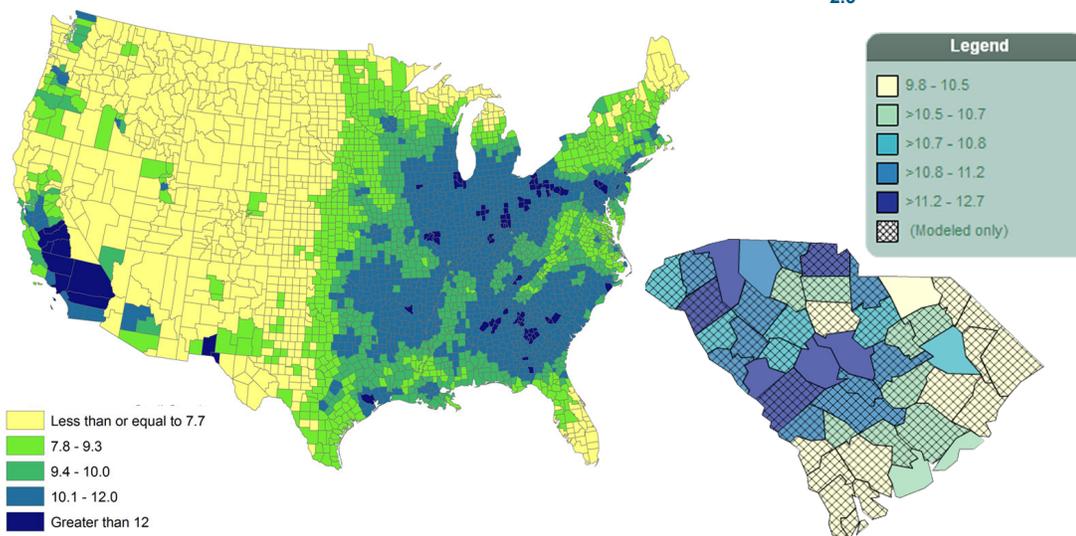
CDC's National Environmental Public Health Tracking Network

The Environmental Public Health Tracking Network is a dynamic system that provides information and data about environmental hazards and potentially related health problems. It presents what is known about environmental hazards, such as air pollution, and where they might exist, where people are exposed to hazards, and how targeted action can protect health, reduce illness, and save lives.

AIR POLLUTION (PM_{2.5}) AND HEALTH

Air pollution is a leading environmental threat to human health. Particles in the air such as dust, dirt, soot, and smoke are kinds of air pollution that have been linked with health problems. Some particles in the air are large or dark enough to be seen, like some kinds of smoke and soot. Other particles are so small that you cannot see them. Very small particles that are less than 2.5 micrometers wide (smaller than a grain of sand) are known as fine particulate matter or PM_{2.5}.

2011 Annual Average Ambient Concentrations of PM_{2.5} (µg/m³)



PM_{2.5} particles are small enough to be inhaled deeply into the lungs. Once fine particles are in the lungs, they can affect the heart, blood vessels, and lungs. People exposed to fine particles over a long period of time can have more heart and lung problems than people who are not breathing this kind of air pollution. Being exposed to any kind of particulate matter may lead to increased emergency department visits and hospital stays for breathing and heart problems and other health problems. In South Carolina:

60 Age-adjusted Rate of Emergency Department Visits for Asthma - 2011
/10,000

33 Age-adjusted Rate of Hospitalizations for Heart Attacks (over 35) - 2011
/10,000

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Mobile App Aids in the Prevention of Environmental Public Health Impacts

Recreational boating is a very popular activity in South Carolina as the state has thousands of miles of shoreline and weather conditions conducive to outdoor activities throughout the year. However, with the popularity of boating there comes an increased risk to human health and the environment because boaters are often unaware of the risks, such as the degradation of air and water quality. Boaters can also be exposed to carbon monoxide (CO) gases from a boat's engine.

The South Carolina Environmental Public Health Tracking Program (South Carolina Tracking Program) collaborated with South Carolina's GIS program and the state Department of Natural Resources to create the MarinaMate application for mobile devices and computers. The MarinaMate application provides boaters a reference to marinas that offer services (e.g., shore power hookup, septage pump-out stations, and restrooms) that can aid in the prevention of water and air quality degradation and exposure to harmful levels of CO gases.

Environmental Hazards



South Carolina has over **372,404** registered boaters



According to the Environmental Protection Agency (EPA), boats contribute to both air and water quality degradation

Health Effects



204 users have downloaded MarinaMate to their mobile device. With the mobile device, a user can locate marinas that offer the services needed while in route



281 users have returned to MarinaMate from their desktop and/or mobile device. From a desktop a user can plan a trip based on the services they are looking for.

Tracking Heat Related Illnesses

Heat can have a direct or indirect impact on human health. For example, heat may have the direct effect of causing a heat-related rash or even a life threatening heat stroke. Also, heat can have an indirect effect on health; for example, people use more electricity during a heat wave, causing an increase in fossil fuel usage. Increased fossil fuel usage can generate more particulate matter in the air, exasperating respiratory issues. Columbia, South Carolina is "famously hot," -- and according to the National Weather Service, 2011 was the hottest summer (June-August) ever recorded at the Columbia Metro Airport.

South Carolina experienced some of its highest rates of hospital and emergency department (ED) admissions related to heat-related illnesses during May – September in 2011. The SC Tracking Program uses data and information to help with prevention, education, and other outreach efforts to stress the importance of reducing exposure to heat that can lead to heat-related illnesses.

Health Effects



In 2012, Hampton County had the highest rate of ED visits related to heat-related injury: 9.2 per 100,000



Chester County was ranked first in the highest number of hospital admissions related to heat-related injury in 2011 and second highest in 2012