

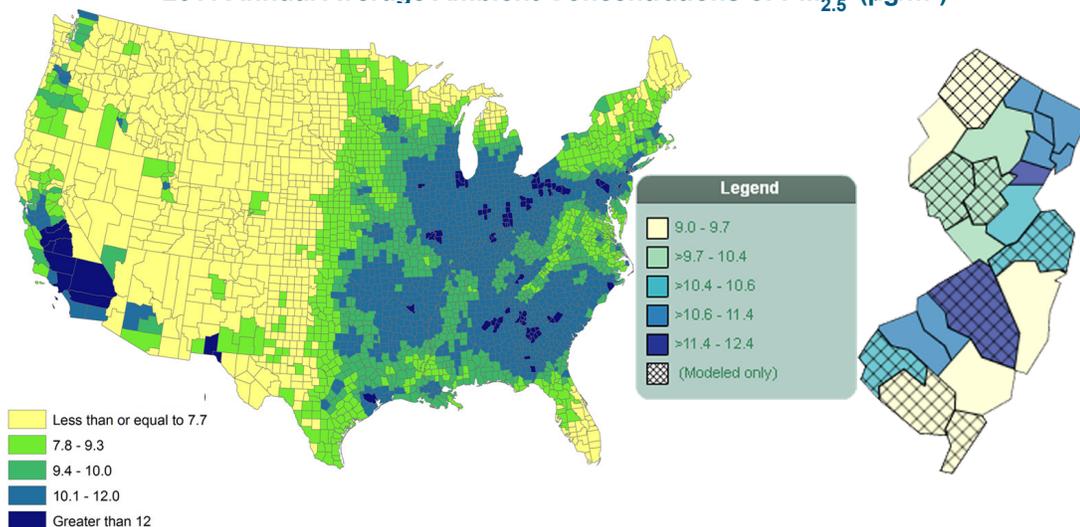
CDC's National Environmental Public Health Tracking Network

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 New Jersey:

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



34 Age-adjusted Rate of Hospitalizations for Heart Attacks (Over 35) - 2012
/10,000





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Arsenic in Private Wells

About 85% of New Jersey residents obtain their drinking water from community water systems that routinely test their finished water for arsenic, nitrate and other chemicals. The other 15% of New Jersey's residents (1.3 million people) get their water from private residential wells. They are responsible for testing their own water quality. New Jersey's Private Well Testing Act, passed in 2001, requires the testing of residential wells whenever a property is sold or at regular intervals when a property is rented.

New Jersey Tracking partners within the NJ Department of Environmental Protection have mapped arsenic and nitrate contamination in private wells, so people can see the contamination rates for their communities.

Arsenic is a naturally-occurring element in the earth's crust. Trace amounts can be found in geologic formations, soil, and groundwater in parts of New Jersey. The U.S. Environmental Protection Agency (EPA) standard for arsenic in drinking water is 10 micrograms per liter ($\mu\text{g/L}$); community water systems regulated by EPA must be below the standard. Chronic exposure to high levels of arsenic in drinking water can lead to skin problems, liver disease, reproductive effects, or cancer.

Environmental Hazards



Over **1.3 million** people living in less populated parts of NJ get their drinking water from private wells.



In Hunterdon, Somerset, and Mercer Counties over **17%** of tested private wells were found to exceed safe levels for arsenic

Health Effects

Nitrate in Private Wells

Nitrate is a nitrogen compound that occurs naturally in soil, water, plants, and food. Nitrate is formed when microorganisms in the environment break down organic materials, such as plants, animal manure, and sewage. Nitrate can also be found in chemical fertilizers.

Nitrate can get into drinking water from runoff or seepage into groundwater or surface water from farms, golf courses, home lawns, and gardens. Other sources of nitrate in water include landfills, poorly managed animal feedlots, and faulty septic systems. High levels of nitrate in drinking water can be dangerous to health, especially for infants and pregnant women. The EPA set a level of 10 mg/L as a drinking water standard for nitrate.

Environmental Hazards



In Salem and Cumberland Counties over **11%** of tested private wells were found to exceed safe levels for nitrate