

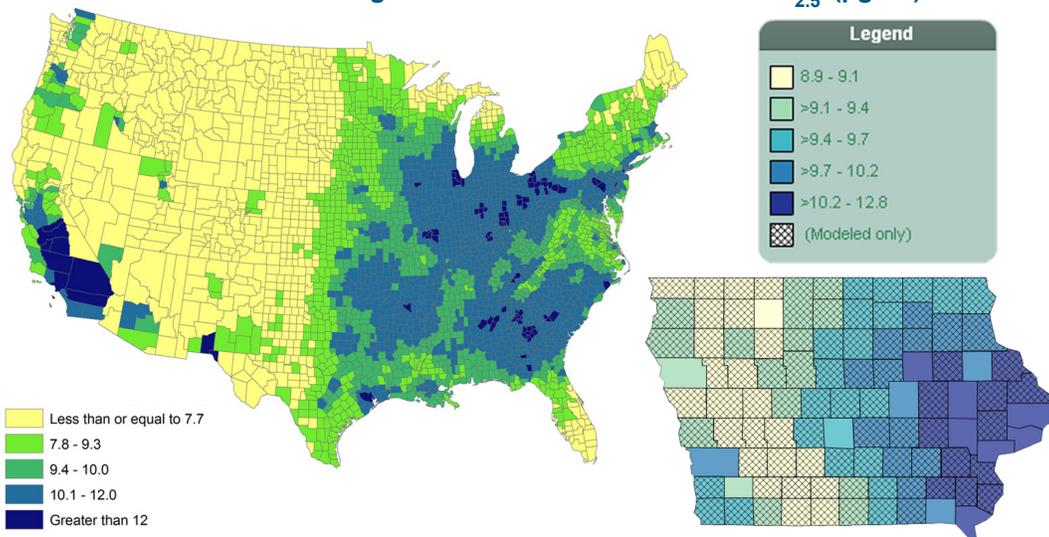
# CDC's National Environmental Public Health Tracking Network

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<sub>2.5</sub>) 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<sub>2.5</sub>.

2011 Annual Average Ambient Concentrations of PM<sub>2.5</sub> (µg/m<sup>3</sup>)



PM<sub>2.5</sub> 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 Iowa:

**43** Age-adjusted Rate of Emergency Department Visits for Asthma - 2012  
/10,000



**31** Age-adjusted Rate of Hospitalizations for Heart Attacks (Over 35) - 2010  
/10,000





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## Above Normal Temperatures and Health Effects in Iowa

Extreme heat events, or heat waves, are the most common cause of weather-related deaths in the United States. In Iowa, data about heat-related illnesses come from hospital discharge data collected by the Iowa Hospital Association on behalf of the Iowa Department of Public Health (IDPH). Heat illness includes a range of health effects caused by heat stress. They range from milder conditions like heat rash and heat cramps, to more severe conditions like heat exhaustion and heat stroke. In 2012, Iowa had more days above 90° temperature than any year since 1988, according to the state climatologist.

### Environmental Hazards



42 days above 90° in 2012



11 days above 100° in 2012

### Health Effects



1,447 emergency department visits for heat illness between May and September 2012



The age adjusted rate during this time period was **30.28** per 100,000

## Universal Blood Lead Testing for Iowa Children

In Iowa, the Lead Poisoning Prevention Program tracks blood lead testing in children younger than six years of age to reduce the burden of lead poisoning. The CDC recommends public health interventions for blood lead levels greater than 5 micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). No safe level of lead has been identified. Even low levels of lead in children's blood have been shown to affect IQ, ability to pay attention, and academic achievement. Since 2008, all Iowa children are required to have at least one blood lead test prior to entering kindergarten. This universal testing requirement facilitates early detection and referral for treatment of lead poisoning. By comparing the percent of children born in the same year and tested prior to age three and prior to age six, Iowa can show that children having lead exposure can be identified and action can be taken to reduce or prevent negative health outcomes.

### Health Effects



Children born in 2006 and tested before age 3 as a percent of Iowa 2006 births: **81%**<sup>1</sup>



Children born in 2006 and tested before age 6 as a percent of Iowa 2006 births: **104%**<sup>1</sup>

1. The measures do not represent a true cohort because the denominator data uses the Birth Records data for the number of children born in that cohort year. Because of the way the measures are calculated percentages greater than 100% are possible due to the movement of children within Iowa and between states.