

### Building a Network

Without question environmental contaminants are affecting people's health. Environmental hazards are among parents' top health concerns for their children, according to the American Academy of Pediatrics. Understanding how these contaminants and other environmental factors are linked to chronic disease is essential to disease prevention—and to protecting the health of our communities.

The Centers for Disease Control and Prevention (CDC) is leading the initiative to build the National Environmental Public Health Tracking Network. The Tracking Network is being developed in response to calls for better understanding of how the environment can affect people's health. This Web-based system will integrate health and environmental data and provide information to address public health concerns, educating the public about ways to protect themselves from possible contamination and disease.

States and communities can act upon data generated through tracking. Today, because of tracking, public health officials in Washington State can do more than determine mercury levels in fish. They can also compile information from many sources and use the data to educate citizens about healthy fish choices with greater speed and accuracy. In Maine, tracking has allowed researchers to examine high arsenic levels in well water and its effects on reproduction. Consequently, state public health officials can now warn well users about the hazards of exposure to arsenic during pregnancy.

The Tracking Network will enable and encourage communities, health care providers, state and local health departments and others to take control of their health.

The building blocks of this network are grants to state and local health departments and universities around the country to build capacity and demonstrate just what tracking can do.

### Building the Foundation: Missouri (2002 — 2006)

In 2002, the Missouri Department of Health and Senior Services (MDHSS) received funding from CDC to plan for a statewide Environmental Public Health Tracking Network that will be part of the National Network. Missouri used the funding to build capacity, enhance infrastructure, and complete data linkage projects. The results range from improving surveillance to faster responses to environmental public health questions and action to prevent disease.

### Why Tracking Matters to Missouri

Deteriorating lead-based paint is the most common source of childhood lead exposure. Although its use was banned in 1978, older homes are likely to contain lead-based paint. Because many older homes in St. Louis were being demolished for new construction, exposure to lead based paint was a concern. Missouri's Tracking Program partnered with St. Louis City officials to examine the relationship between the demolition of houses built prior to 1978 and blood lead levels in children living close to demolition sites. The study showed that exposure to multiple demolitions is related to an increase in blood lead level.

Using the results of the Tracking study, the city developed new environmental safety procedures for demolitions. The Tracking Program shed light on the problem of blood lead levels among children, allowing public health professionals to conduct targeted health outreach and to decrease the number of children affected by exposure.



*“So much has changed since the Pew Commission report,” says Shelley Hearne, Dr.P.H., founding executive director of Trust for America’s Health. “It’s phenomenal to see the rapid evolution from concept to implementation, from gap to engagement.”*

# Tracking in Action

## What is the problem?

### Linking Mine Tailings to Health Effects

In August 2003, the U.S. Environmental Protection Agency (EPA) banned the sale of mine tailings in St. Francois County. Mine tailings are waste products from the mining process. Local farmers protested the ban, pointing out that a previous study showed there was little chance of lead from tailings being absorbed by plants. The farmers also claimed that no rural children tested positive for lead poisoning.

## What did tracking do?

To assist in a request from the EPA, Missouri Tracking staff created maps that showed the locations of childhood blood lead screenings; children with elevated blood lead levels; the proximity of these children to agricultural lands; and a general environmental assessment of the county.

## Improved public health

The maps and surveillance report showed that from 2001-2003 about 20 percent of all children with elevated blood lead levels lived in rural areas in Missouri. The EPA conducted additional soil samplings across the region, and in 2005, established a policy that banned further use of mine tailings as lime throughout the United States. These efforts also led to the development of a land stewardship program in the county to alert potential property buyers about the previous use of mine tailings.

### Building Capacity in the State

The Missouri Tracking Program saw a need to increase the technical capacity of the Missouri Department of Health and Senior Services (MDHSS) and local public health agencies. Specifically, they wanted to increase the use of geographic information system (GIS) software in order to more efficiently analyze and manage data.

Over a five-year period, Missouri Tracking Program staff worked with MDHSS GIS staff to train more than 300 individuals

This training allowed local agencies to conduct multiple levels of surveillance. Those who had been trained used their knowledge to improve water and fish sampling; track lead poisoning cases; and to monitor confined animal feeding operations and mine tailings used as agricultural lime in Washington County, Missouri.



Centers for Disease Control and Prevention  
1600 Clifton Rd.  
Atlanta, Georgia 30333, U.S.A.  
Tel: (404) 639-3311  
Public Inquiries: (404) 639-3534 / (800) 311-3435  
Web: [www.cdc.gov](http://www.cdc.gov)

For more information about the National Environmental Public Health Tracking Program please visit: [www.cdc.gov/nceh/tracking](http://www.cdc.gov/nceh/tracking)

