



Environmental Health Activities in Alabama



NCEH in Partnership with Alabama

The National Center for Environmental Health (NCEH) is part of the Centers for Disease Control and Prevention (CDC). NCEH's work focuses on three program areas: identifying environmental hazards, measuring exposure to environmental chemicals, and preventing health effects from environmental hazards. NCEH has approximately 450 employees and a budget for 2004 of approximately \$189 million; its mission is to promote health and quality of life by preventing or controlling diseases and deaths that result from interactions between people and their environment.

NCEH and partners in **Alabama** collaborate on a variety of environmental health projects throughout the state. In **fiscal years 2000–2004**, NCEH awarded more than **\$1.3 million** in direct funds and services to Alabama for various projects. These projects include activities related to asthma intervention, measuring folic acid levels in healthy adults, and chemical demilitarization. In addition, Alabama benefits from national-level prevention and response activities conducted by NCEH or NCEH-funded partners.

Identifying Environmental Hazards

NCEH identifies, investigates, and tracks environmental hazards and their effects on people's health. Following is an example of such activities that NCEH conducted or supported in **Alabama**.

- **Inner-City Asthma Intervention**—NCEH is funding the School of Medicine at the **University of Alabama at Birmingham** to provide inner-city families with asthma education and individualized asthma-control plans. The Inner-City Asthma Intervention program is based on the National Cooperative Inner-City Asthma Study (NCICAS), a multifaceted, multimodal intervention to address a range of problems that affect children who have asthma, and their families. NCICAS demonstrated that

an individually tailored intervention carried out by masters-level social workers trained in asthma management can reduce asthma symptoms among children in the inner city. This program targets children 6 to 12 years of age of low socioeconomic status who live in urban areas and have moderate to severe asthma. Funding began in fiscal year 2001 and continues through fiscal year 2005.

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Measuring Exposure to Environmental Chemicals

NCEH measures environmental chemicals in people to determine how to protect people and improve their health. Following are examples of such activities that NCEH conducted or supported in **Alabama**.

Funding

- **Antiterrorism Funding to Increase State Chemical Laboratory Capacity**—In fiscal year 2003, CDC provided more than \$1.8 million to **Alabama** to help the state expand its chemical laboratory capacity to prepare for and respond to chemical-terrorism incidents and other chemical emergencies. This program expansion will allow full participation of chemical-terrorism response laboratories in the Laboratory Response Network.

Studies

- **Measuring Folic Acid Levels in Healthy Adults**—The NCEH laboratory, in partnership with the **University of South Alabama**, will examine the process by which folic acid is absorbed, distributed, and metabolized in healthy adults. The study also will determine whether unmetabolized plasma folic acid can adversely influence homocysteine levels in some people. NCEH will analyze 2,100 plasma samples. Survey results are expected in mid-2004.

- **Blood Lead Screening in Alabama**—In response to community concerns about possible elevations in blood lead levels among the children of **Anniston**, the Agency for Toxic Substances and Disease Registry (ATSDR) facilitated a lead screening program in spring 2001. This screening program focused on children younger than 6 years of age who live in select areas of Anniston. With collaboration of the **Community Against Pollution** group, regional **Head Start** programs, **Northeast Alabama Regional Medical Center's Wellness Connection**, county and city school systems, and Anniston community centers, ATSDR screened 410 children.

The NCEH laboratory analyzed the blood samples. Four of the children tested had blood lead levels greater than 10 micrograms of lead per deciliter of blood ($\mu\text{g}/\text{dL}$). Although project results do not provide a complete picture of blood lead levels in Anniston, they indicate that less than 1% of the population tested had blood lead levels higher than the CDC guideline of 10 $\mu\text{g}/\text{dL}$. Screening project results also indicated that approximately 25% of the children had blood lead levels between 5 and 10 $\mu\text{g}/\text{dL}$. Although these findings provided evidence that children in Anniston are being exposed to lead, the source of the lead is unknown. The health risks associated with these low blood lead levels are not clear, but this evidence points to the need for continued blood screening and education for exposure prevention.

Services

- **Helping State Public Health Laboratories Respond to Chemical Terrorism**—NCEH is working with **Alabama's** public health laboratory to prepare state laboratory scientists to measure chemical terrorism agents or their metabolites in individuals' blood or urine. The NCEH laboratory is transferring analytic methods for measuring chemical terrorism agents (including cyanide-based compounds and other chemicals) to Alabama. In addition, the NCEH laboratory instituted a proficiency-testing program to measure the compatibility of the state's analytic results with results from the NCEH laboratory.
- **Blood Lead Laboratory Reference System (BLLRS)**—Six laboratories in **Alabama**

participate in NCEH's standardization program to improve the overall quality of laboratory measurements of blood lead levels. This program helps laboratories nationwide evaluate their performance on these critical laboratory tests. NCEH provides BLLRS materials to the laboratories four times a year without charge.

- **Newborn Screening Quality-Assurance Program**—NCEH provided proficiency-testing services and dried-blood-spot, quality-control materials to monitor and help assure the quality of screening program operations for newborns in **Alabama**. The importance of accurate screening tests for genetic metabolic diseases cannot be overestimated. Testing of blood spots collected from newborns is mandated by law in almost every state to promote early intervention that can prevent mental retardation, severe illness, and premature death.

Preventing Health Effects That Result from Environmental Hazards

NCEH promotes safe environmental public health practices to minimize exposure to environmental hazards and prevent adverse health effects. Following are examples of such activities that NCEH conducted or supported in **Alabama**.

- **Communities of Excellence in Environmental Health**—NCEH funded the School of Public Health at the **University of Alabama at Birmingham** to develop Communities of Excellence in Environmental Health in the Deep South. This project's goals are to create an advisory partnership group that will guide the development and implementation of an environmental health training program for practitioners, deliver state-of-the-art training for environmental health practitioners, and conduct community-based research on environmental health interventions for rural settings. Funding began in fiscal year 2001 and continues through fiscal year 2004.
- **Chemical Demilitarization**—Before the **Anniston** Chemical Agent Destruction Facility began operations, NCEH's Chemical Weapons Elimination Team examined the facility's design and operating procedures to ensure protection of the workforce and surrounding communities. Since the facility's opening, NCEH has

conducted several on-site reviews to ensure its safety. Recently, NCEH examined air-monitoring procedures and strategies, including the number and placement of air monitors and the quality of data from these systems. NCEH also is active in other prevention activities—process safety, industrial hygiene, and medical readiness—that coordinate to provide sound approaches to preventing exposure to chemical agents. To ensure preparedness of local medical and emergency personnel in responding to incidents involving a chemical agent, NCEH provides consultation services to medical and emergency personnel near storage sites and can help review their capabilities to respond to emergencies related to chemical agents.

- **Lead Poisoning Prevention—The Alabama Childhood Lead Poisoning Prevention Program (AL CLPPP)** has received NCEH funding since 1992. In 2001, the program screened 12,077 children for lead poisoning. The number of children under 6 years of age who had elevated blood lead levels decreased from 1,501 in 1997 to 654 in 2001.

The AL CLPPP uses NCEH funding to develop and implement a childhood lead poisoning elimination plan, targeted screening plan, and case management plan for Alabama; to maintain and enhance the Alabama statewide surveillance system; and to increase primary prevention activities and strategic partnerships.

applied to environmental health, radiation studies, safe disposal of chemical weapons, specific health studies, vessel sanitation, and veterans' health.

Resources

NCEH develops materials that public health professionals, medical-care providers, emergency responders, decision makers, and the public can use to identify and track environmental hazards that threaten human health and to prevent or mitigate exposure to those hazards. NCEH's resources cover a range of environmental public health issues, including air pollution and respiratory health (e.g., asthma, carbon monoxide poisoning, and mold exposures), biomonitoring to determine whether selected chemicals in the environment get into people and how much, childhood lead poisoning, emergency preparedness for and response to chemicals and radiation, environmental health services, environmental public health tracking, international emergency and refugee health, laboratory sciences as

For more information about NCEH programs, activities, and publications as well as other resources, contact the NCEH Health Line toll-free at 1-888-232-6789, e-mail NCEHinfo@cdc.gov, or visit the NCEH Web site at www.cdc.gov/nceh.

