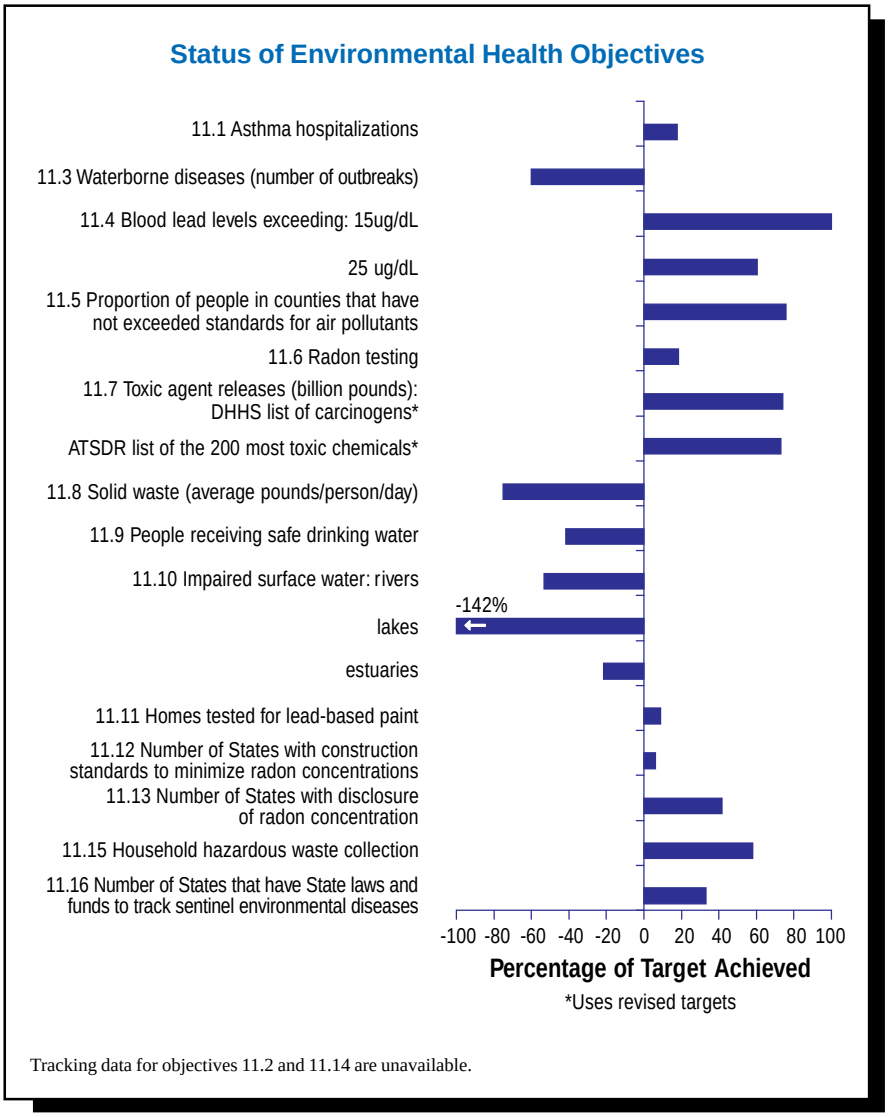
11 Environmental Health



Tracking data for objectives 11.2 and 11.14 are unavailable.

Lead Agencies: ***National Institutes of Health***

Centers for Disease Control and Prevention

ENVIRONMENTAL HEALTH

In its ongoing efforts in disease prevention, the Public Health Service (PHS) has long recognized the critical importance of environmental risks as underlying factors that can contribute to the disease process. Among the numerous diseases and dysfunctions that have a known or suspected environmental component are cancer, reproductive disorders such as infertility and low birthweight, neurological and immune system impairments, and respiratory conditions such as asthma. Exposure to environmental hazards can be through air, food, or water and covers a broad range of factors such as pesticides, toxic chemicals, and radiation. In large part the environmental component of a particular disease or health outcome is frequently the result of repeated and cumulative exposures.

Breast cancer, the second leading cause of cancer death in women, is a critical public health problem that results from the complex interaction of genetics, hormonal, and possibly environmental factors. PHS has supported research to examine potential environmental and other risks, including the Long Island Breast Cancer Study Project. Among the factors being evaluated in study participants are exposures to contaminated drinking water, sources of indoor and ambient air pollution, electromagnetic fields, pesticides and other toxic chemicals, hazardous and municipal waste, and lifestyle factors such as dietary patterns. An increase in the knowledge base of the many factors contributing to breast cancer will support development of population-based prevention strategies.

In carrying out its responsibility to monitor health impacts related to environmental exposures, public health has shown increasing concern about disproportionate and adverse effects on low-income and minority populations. Programs have been undertaken in response to such concerns and include the collection of data to monitor particular health outcomes such as blood lead levels and the establishment of registries for particular events, such as cancer sites. Use of such information has stimulated policy to ensure increased consideration of human health effects related to disproportionate environmental exposures among these populations, more generally known as environmental justice. A 1994 Executive Order requires Federal agencies to develop a strategic plan to address environmental justice issues in their programs.

Increasingly, there has been recognition of the need for better coordination and integration across all levels for the most effective response to environmental health concerns. Among the examples of this type of process are the U.S. Environmental Protection Agency's (EPA) development of national environmental goals. EPA used the background and experience of PHS in developing national goals, including public participation, quantitative orientation, and a means to track progress. Goals now are set for clean air, clean water, safe drinking water, safe food, safe workplaces, prevention of toxic releases, and better waste management. Successful collaboration also is ongoing among health and environmental officials in Federal, State, and local settings. One important case example occurred in the Milwaukee area where approximately 400,000 residents were affected by a contaminated water supply.

A prompt and coordinated public health response resulted in identification of the microorganism involved and led to successful restoration of the city's clean drinking water supply.

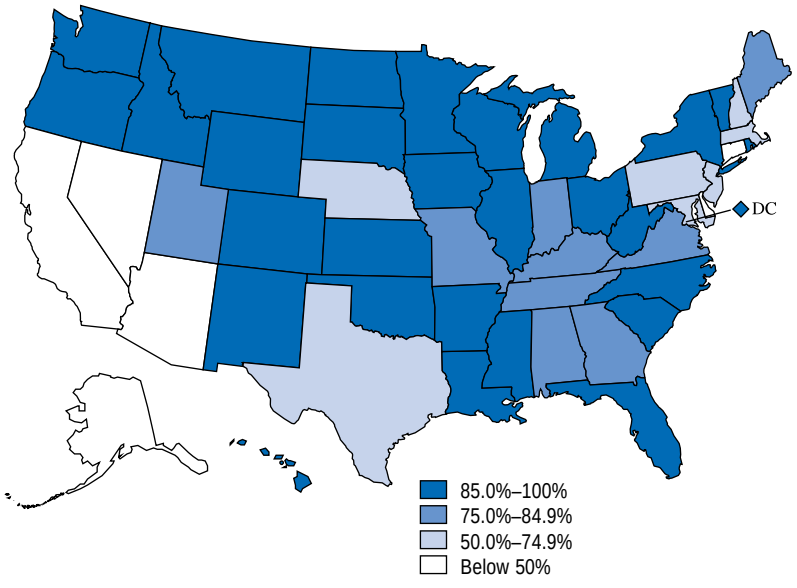
Review of Progress

In many western countries, including the United States, the prevalence of asthma morbidity and mortality has increased over the past decade. Asthma disproportionately affects children, women, minorities, and people who live in urban areas. Although every asthma death should be preventable, this disease resulted in 183 hospitalizations per 100,000 population and 4,964 deaths in 1992. There is a continuing need for research to determine the underlying etiology of asthma in order to improve prevention and treatment.

Substantial progress has been made in reducing blood lead levels, particularly among children. As reported in the National Health and Nutrition Examination Survey, the number of children with blood lead levels above 25 µg/dL has been reduced from 234,000 in 1984 to 93,000 in 1989; for lead levels above 15µg/dL these numbers are 3 million and 503,000, respectively. Several factors have contributed to these improvements. First, the amount of lead used in gasoline declined by 99.8 percent from 1976 to 1990. Second, the percentage of U.S. manufactured food and soft-drink cans containing lead solder declined from 47 percent in 1980 to 0.9 percent in 1990. Other factors include the ban on leaded paint for residential use, promulgation of a standard for lead exposure in industry, the ban on lead-containing solder in household plumbing, the implementation of lead poisoning prevention programs by numerous States and cities, lead screening laws in 16 States, and lead paint abatement programs in some jurisdictions.

Continued improvements have been seen on other fronts in environmental health. Implementation of the Clean Air Act of 1990 has helped to increase the proportion of people living in counties that meet EPA standards for air pollution from 49.7 percent in 1988 to 76.5

Objective 11.5: ***Reduce human exposure to criteria air pollutants as measured by an increase to at least 85 percent in the proportion of people who live in counties that have not exceeded EPA standards***



Source: EPA,1993

percent in 1993. Recycling efforts also have increased across the Nation. In 1991, 26 percent of the population was served by a curbside recycling program, according to the *Biocycle Journal of Composting and Recycling*. By 1993 the number had increased to 39 percent.

There has been a decrease in toxic agents released into the air, water, or soil. Between 1988 and 1993, the volume of HHS-listed carcinogens has decreased from an estimated 0.36 to 0.19 billion pounds. During this same period, the volume of 200 most toxic substances listed by the Agency for Toxic Substances and Disease Registry has decreased from 1.93 to 1.23 billion pounds. The year 2000 targets have been achieved.

Slight progress toward the year 2000 targets has been made for objectives related to reducing exposure to radon. The proportion of people who report their homes have been tested for radon has increased from less than 5 percent in 1989 to 11.4 percent in 1993. As of 1993, only three States had adopted construction standards and techniques to minimize radon levels. As of 1992, 13 States required disclosure of radon concentrations in conjunction with the sale of property. This relatively slow rate of progress may be related to consumers' lack of knowledge about radon and to public uncertainty about the extent of health risk that radon poses.

There is an apparent increase in the proportion of rivers, lakes and estuaries that are impaired; however, the data reported are on "assessed waters" and do not represent all surface waters. The locations tested may vary each year and preclude interpretation of the data as trends. Further, several States adopted stricter standards since the 1988 baselines were established, producing an apparent increase in impaired waters.

The number of waterborne disease outbreaks from infectious agents and chemical poisoning increased from 16 in 1988 to 19 in 1992. The percentage of the population whose drinking water meets EPA safe drinking standards declined from 73 percent in 1988 to 68 percent in 1993. Strengthened collaborations with EPA and State health officials should help to ensure safe drinking water availability.

1995 Revisions

Women of all races suffer greater asthma mortality and morbidity than men. Women also are more likely than men to be hospitalized for asthma problems and have a greater number of physician visits. Although the reasons for these gender differences are not clearly understood, a subobjective has been added which seeks to reduce asthma morbidity in women and focus attention on research and prevention of asthma with respect to women's health needs.

In July 1994, CDC released the results from the National Health and Nutrition Examination Survey III of blood lead levels (BLLs) in the U.S. population. These data show that the year 2000 goal related to the numbers of children in the United

States with BLLs above 15 μg/dL had already been achieved. The new goals take into account this recent data and have been made more challenging.

Language revisions have been made to update and further clarify several environmental health objectives. Exposure to solid waste contamination now will be tracked both before and after recovery to take into account the impact of recycling and composting on reducing the levels of municipal solid waste. This refinement will help demonstrate the progress of national recycling activities. Modifications also have been made to objective 11.10, which now will track potential human health risks from surface water by the percent of rivers, lakes, and estuaries supporting consumable fish and recreational activities. This revision reflects EPA data collection and provides greater insight into the impact of surface water contamination. A third language revision relates to monitoring recycling programs. Recycling now will be tracked for curbside programs on the basis of population served (rather than by county). A new focus on household hazardous waste collection has been added. Both changes are in line with EPA policy whereby curbside recycling and household hazardous waste collection are separate. The target for objective 11.8 has been revised to be consistent with EPA data and goals.

Objective 3.8, which seeks to reduce children's exposure to tobacco smoke at home has been added as a shared objective in this priority area.

The targets for objective 11.7, toxic agent releases, have been achieved. Therefore the targets have been revised to be more challenging.