



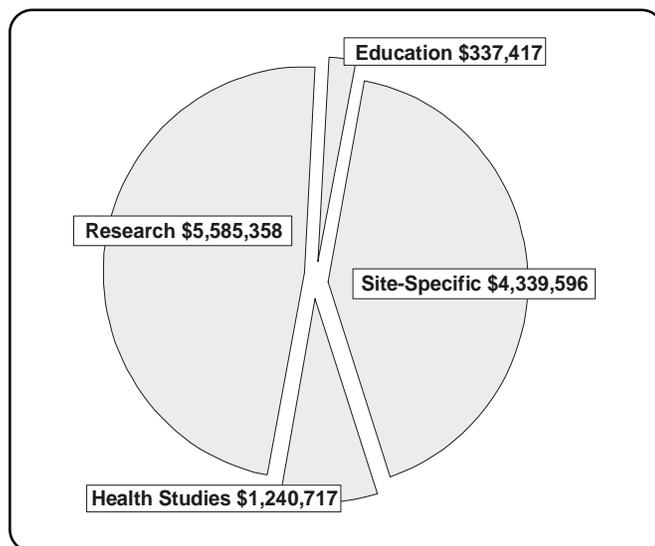
Activities in Wisconsin

ATSDR in Partnership with Wisconsin

The Agency for Toxic Substances and Disease Registry (ATSDR) is the lead public health agency responsible for implementing the health-related provisions of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). ATSDR is an Atlanta-based federal agency with more than 400 employees. ATSDR's annual budget for 2002 is \$78 million. ATSDR is responsible for assessing the presence and nature of health hazards at specific Superfund sites, helping to prevent or reduce further exposure and illnesses that result, and expanding the knowledge base about the health effects of exposure to hazardous substances.

ATSDR works closely with state agencies to carry out its mission of preventing exposure to contaminants at hazardous waste sites and preventing adverse health effects.

ATSDR provides funding and technical assistance for states to identify and evaluate environmental health threats to communities. These resources enable state and local health departments to further investigate environmental health concerns and educate communities. This is accomplished through cooperative agreements and grants. At this time, ATSDR has cooperative agreements and grants with 31 states, 1 American Indian nation (Gila River Indian Community), and 1 commonwealth (Puerto Rico Department of Health). From 1987 through 2001, ATSDR awarded more than \$11,503,088 in direct funds and services to the state of Wisconsin. In addition to direct funds and services, ATSDR provides technical and administrative guidance for state-conducted site activities.



ATSDR Site-Specific Activities

Public Health Assessment-Related Activities

One of the agency's important mandates is to conduct public health assessments of all National Priorities List (NPL) sites and of other sites where there might be a significant threat to the public health. In Wisconsin there have been 45 sites designate to the NPL.

A public health assessment provides a written, comprehensive evaluation of available data and information on the release of hazardous substances into the environment in a specific geographic area. Such releases are assessed for current or future impact on public health. ATSDR, in conjunction with public health and environmental officials from Wisconsin, have conducted 77 health assessments in the state. Following is an example of a health assessment conducted in Wisconsin.

Fox River - In July 1999, ATSDR issued a public health assessment for review by state and federal environmental agencies. The document was written by the Wisconsin Department of Health and Family Services (WDHFS) under cooperative agreement with ATSDR. ATSDR released the document for public comment on December 5, 2001; currently the comments are being addressed. The final public health assessment should be available before the end of 2002. The public health assessment discusses polychlorinated biphenyls (PCBs) that contaminate sediment and fish in the Fox River from Menasha to Green Bay. A number of facilities have

contributed to the contamination. That area of the Fox River is a popular sport fishing area, but more importantly, provides a subsistence fishing area for the Hmong and Oneida Tribe populations that reside nearby. The PCBs in the fish pose a health hazard for people who eat the fish, especially those who depend on the fish as their main protein source. Unborn babies can be exposed to PCBs through the mother's blood, and infants are exposed through breast milk. Children who are exposed to PCBs might have more trouble learning in school. For that reason both the Hmong and Oneida people have changed their diets so that they can comply with the fish consumption advisories. Both communities feel that they are now experiencing other adverse health effects because they have had to change their diet. With support from ATSDR, WDHFS is providing both communities with ways they can prepare and eat fish while lowering the amount of PCBs they consume.

A **health consultation** is a written or oral response from ATSDR to a specific request for information about health risks related to a specific site, chemical release, or hazardous material. It is a more limited response than a public health assessment. To date, **128** documented health consultations have been conducted at **77** sites in **Wisconsin**. Following is an example of a health consultation conducted in the state.

Ashland - One area contaminated by a former manufactured gas plant is Ashland. The coal gasification (manufactured gas) facility operated on St. Claire Street, near Chequamegon Bay on Lake Superior in Ashland. The Bay and surrounding property, Kreher Park, are contaminated with polycyclic aromatic hydrocarbons (PAHs) and with volatile organic compounds. Through the ATSDR cooperative agreement, WDHFS issued a health consultation in 1995 that provided the **Wisconsin Department of Natural Resources** with information about health effects. These effects include skin and eye irritation, increased risk of severe sunburn, headaches, dizziness, and stomach upset, which might be expected if people contact PAHs present in soil and sediment. As a result, signs have been posted at the Bay to prevent boats from weighing anchor, thus disturbing the sediment and causing oily releases, and warning signs have been posted at Kreher Park. Artesian well water that is used by many area residents was tested and found safe. The well water is periodically tested as recommended in the health consultation. Additionally, WDHFS identified workers of the former Ashland waste water treatment plant as the people most exposed to contaminants. Cooperative agreement staff met with those workers and offered to document their exposure histories and health status. ATSDR also issued results of an exposure investigation done to evaluate whether fish were safe to eat. The Governor now has a request to the U.S. EPA that Ashland Lakefront/Northern States Power (NSP) site be added to the NPL. A response is pending.

An **exposure investigation** collects information on specific human exposures through biological sampling, personal monitoring, related environmental assessment, and exposure-dose reconstruction. Following is an example of an exposure investigation conducted in **Wisconsin**.

Chequamegon Bay - In October 1999, ATSDR issued results of the "Fish Tissue Exposure Investigation for Contaminated Sediments" conducted by WDHFS at this site through a cooperative agreement with ATSDR. Fish tissue samples were collected from the Bay and tested for PAHs. The fish did not contain PAHs at levels that would be harmful, but that area of Lake Superior has a fish advisory in effect for PCBs and mercury. The document warns that although the fish do not contain PAHs at unsafe levels, the fish consumption advisory should be followed. Also, contact with sediments should be avoided as much as possible because PAHs can cause skin and eye irritation and can increase the risk of getting severe sunburn.

Educating Health Professionals and Community Activities

ATSDR awards cooperative agreements to states to support educational activities for health professionals and communities about human exposure to hazardous substances in the environment. In **Wisconsin**, more than 1,200 health professionals have been contacted through site-specific Grand Rounds and other training. Presentations on risk communication and educational sessions have been conducted for various communities concerning handling and ingesting fish with possible toxic contamination. Both the Fox River and Ashland Lakefront/NSP sites provide excellent examples of how ATSDR provides WDHFS cooperative agreement staff with support to conduct health education designed to help other agencies and the public.

Ashland - At this site, WDHFS provides fact sheets, last updated in January 2000, that describe possible health effects of PAHs, how to avoid contact with contaminants, and information on what is being done at the site. Grand Rounds have been conducted with area physicians to alert them to what people experience if exposed to PAHs at the site. Former workers have been provided additional information and the opportunity to have their exposure histories and health status documented.

Fox River - At this site a television program, starring members of the cooperative agreement staff, was shown on a public access network on May 5, 2000. Staff demonstrated fish cleaning and preparation techniques that help reduce exposure to PCBs. Staff have also worked extensively with the Oneida and Hmong communities to teach them safe fish preparation techniques. Additionally, staff are working on a video, produced in the Hmong language, to demonstrate the techniques shown on public access television. Informational brochures have been distributed in English, Spanish, and Hmong. Two Grand Rounds have been provided at two area hospitals to help physicians work with community members who are worried about their exposure. Fact sheets and other information have been distributed in innovative ways, such as through the Women Infant and Children (WIC) Program, and with posters developed for physicians' offices.

Brownfields - Wisconsin will have \$10 million available in its brownfields program this fiscal year. It has identified several continuing projects and new starts. The state is currently combining its efforts with county and local redevelopment authorities.

Health Studies

A **health study** is conducted to determine the relationship between exposure to hazardous substances and adverse health effects. They also define health problems that require further investigation through, for example, a health surveillance or epidemiologic study.

Following are descriptions of site-specific health studies and investigations that ATSDR has conducted or supported in **Wisconsin**.

Chronic and Sentinel Disease Surveillance - Beginning in 1987, ATSDR provided support for the **Wisconsin Department of Health and Social Services (WDHSS)** chronic and sentinel disease surveillance through an interagency agreement with the **Centers for Disease Control and Prevention (CDC)**. The WDHSS attempted to define the prevalence of selected chronic and sentinel diseases. It also attempted to determine if selected chronic and sentinel diseases could be associated with exposure to environmental contaminants (e.g., living near NPL sites, occupational exposure). A major problem was encountered in associating toxic waste sites with the incidence of selected cancers. WDHSS found it was not possible to link these because of the inadequacy of the environmental data; although it was able to describe the prevalence of certain chronic diseases, it was not able to assess incidence or prevalence rates of disease in relation to NPL site proximity. The final report was published in February 1992.

Hazardous Substances Emergency Events Surveillance System - The Hazardous Substances Emergency Events Surveillance System (HSEESS) was established by ATSDR in 1990 to collect and analyze information concerning hazardous substance releases that need to be neutralized according to federal, state, or local law. HSEESS also collects and analyzes information concerning threatened releases that result in a public health action, such as an evacuation. The goal of HSEESS is to reduce the morbidity and mortality experienced by first responders, employees, and the general public, resulting from hazardous substances emergencies. HSEESS captures data on more than 5,000 events annually; of these, 80% occur at fixed facilities, and 20% are transportation-related events. The state of **Wisconsin** has participated in this program since 1991.

Sheboygan River - Several residents around this site reported eating fish from the Sheboygan River that were contaminated with PCBs. ATSDR supported the WDHSS to evaluate the extent of exposure to PCBs among three Sheboygan-area subpopulations. In 1994 and 1995, the **Wisconsin Department of Health** surveyed 67 area anglers, 106 area Hmong households, and 435 participants of the area Women's, Infants, and Children (WIC) Program, concerning their fish consumption practices, particularly regarding fish caught from the Sheboygan River. Mean levels of fish consumption among the three subpopulations were comparable to levels

of fish consumption by other populations. Some households of each subpopulation regularly ate contaminated fish from the Sheboygan River. The awareness of the health-based fish consumption advisory was similar to other Great Lakes populations, though there was a segment of each subpopulation who were unaware of the advisories. Among households who had recently arrived in Sheboygan had a significantly lower awareness of the advisories than those who had lived there four or more years. The study did not identify a substantial portion of the subpopulations that eat the most heavily PCB-contaminated fish from the Sheboygan River. The final report was published in 1998.

Exposure to Tremolite Asbestos in Vermiculite Ore - In 2001, ATSDR entered into a cooperative agreement with the WDHHS to conduct health statistics reviews related to human exposure to contaminated vermiculite ore at sites in **Wisconsin** that received and/or processes ore from the mine in Libby, Montana.

ATSDR Great Lakes Human Health Effects Research Program

In support of the Great Lakes Critical Programs Act, this program's purpose is to: (1) build upon and extend the results from past and ongoing research in the Great Lakes region, (2) develop information data bases, and research methodology that will provide long-term benefit to the Great Lakes human health research effort, (3) develop directions and methodology for future research on human health effects, (4) provide health information for the subjects of the research and their medical professionals, and (5) increase public awareness of the health implications of the toxic pollution problems in the Great Lakes.

In 1992, ATSDR initiated the funding of nine three-year grant projects that focused on populations who consumed Great Lakes fish and had a high risk of long-term adverse health effects from exposure to contaminants in these fish. These populations included sport anglers, American Indians, urban poor, young children, pregnant women and their fetuses, and nursing infants. Collectively, these studies extended our knowledge of the effects of Great Lakes contaminants on human reproductive/developmental, behavioral, neurological, endocrinological, and immunological health effects. These studies were conducted by the WDHHS.

An epidemiologic study by a consortium of five state health departments, including **Wisconsin**, established surveillance cohorts for prospective studies which helped ATSDR and EPA evaluate the effectiveness of remediation efforts in the Great Lakes basin. The project characterized the impact of previous dietary habits on current contaminant body burdens and estimated the disease risk attributable to ingestion of contaminants in sports fish. Establishing this consortium allowed interstate data sharing which will provide long-term benefits to the Great Lakes human health research effort. This project was conducted by the University of **Wisconsin-Superior, Lake Superior Research Institute**.

Toxicological Profiles

ATSDR develops toxicological profiles that describe health effects, environmental characteristics, and other information for substances found at NPL sites. These profiles describe pathways of human exposure and the behavior of toxic substances in environmental media such as air, soil, and water. In the past 5 years, more than 344 of these profiles have been supplied directly by ATSDR to requesters, including representatives of federal, state, and local health and environmental departments; academic institutions; private industries; and nonprofit organizations; in **Wisconsin**. Toxicological profiles are available for PCBs and PAHs.

If you would like additional information, contact ATSDR toll-free at (888) 42ATSDR, that is, (888) 422-8737 or visit the homepage at <http://www.atsdr.cdc.gov>
