

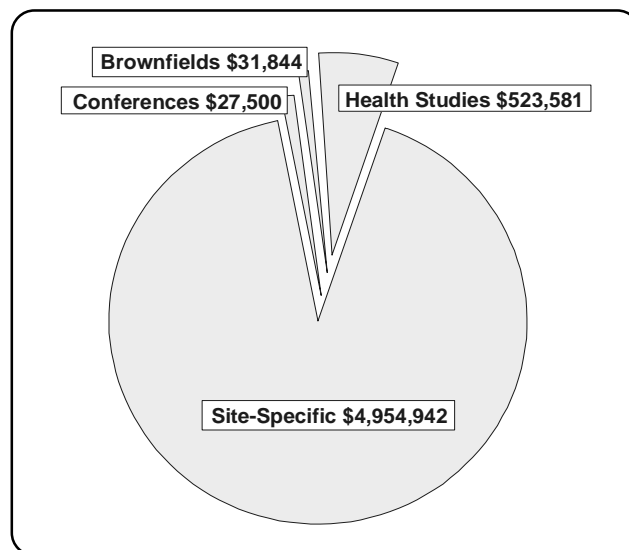
Activities in Connecticut

ATSDR in Partnership with Connecticut

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 was \$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 or grants with 31 states, 1 American Indian nation (Gila River Indian Community), and 1 commonwealth (Puerto Rico Department of Health). From 1990 through 2002, ATSDR awarded more than **\$5,537,867** in direct funds and services to the state of **Connecticut**. 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. There are currently **18** NPL sites in **Connecticut**.

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 staff, in conjunction with public health and environmental officials from **Connecticut**, has conducted **39** health assessments in the state. The following is an example of a public health assessment conducted in the state.

Cheshire Community – In September 2002, in response to a citizen petition, the **Connecticut Department of Public Health (CTDPH)** began work on a public health assessment in **Cheshire, Connecticut**. For years, the town has questioned whether exposure to contaminants in the town has resulted in high levels of cancer, mainly childhood cancers and breast cancer. The public drinking water has a history of contamination with trichloroethylene and 1,2-dichloropropane. From at least 1979, when the treatment towers were constructed, the water has

been contaminated. It is unknown whether the water was contaminated before 1979. Additionally, the town is concerned with numerous hazardous waste sites in the area that they believe may contribute to perceived high levels of cancer in the town. The public health assessment will consider available exposure and health outcome data to evaluate citizen concerns in the community.

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, **499** documented health consultations have been conducted at **86** sites in **Connecticut**.

If an imminent threat to public health is found during the performance of a public health assessment or health consultation, a **public health advisory** may be issued. A public health advisory is a statement by ATSDR that a substance released into the environment poses a significant risk to human health. It also includes recommended measures to reduce human exposure and eliminate, or substantially mitigate, the significant risk. The advisory is issued to the U.S. Environmental Protection Agency (EPA) staff to inform them and state and local health officials and the public about recommended actions at the site. In **Connecticut** ATSDR has issued the following advisory.

Raymark Industries - In 1993, ATSDR issued a public health advisory at this site in **Stratford** in response to a request from the EPA. The contamination resulted from Raymark, a local brake manufacturer, using waste asbestos as fill material. Prior to this advisory, EPA had discovered that the asbestos waste also contained polychlorinated biphenyls (PCBs), lead, and dioxin. Exposure to asbestos has been shown to significantly increase the risk of lung cancer and mesothelioma. If exposed to lead, pregnant women can transmit it to their unborn children. Such exposure can cause premature birth, low birth weight, and spontaneous abortion. Lead exposure in children has been shown to decrease IQ and to slow growth. Exposure to high lead levels can damage the brain and kidneys of children and adults. Lead levels at various sites in Stratford have ranged from 718 to 150,000 parts per million (ppm). Lead levels greater than 1,000 ppm are considered a public health hazard.

Through a cooperative agreement from ATSDR, **Connecticut** public health staff worked with EPA to issue recommendations that would ensure immediate safety and long-term remediation. The recommendations included: (1) surface soil sampling/screening for contaminants of concern in residential yards, (2) conducting blood testing to determine if residents living adjacent to contaminated sites had lead levels of health concern, (3) implementing measures to cease exposure at these sites, (4) conducting sediment and seafood sampling of Ferry Creek and the Housatonic River to determine if site-related contaminants were present at levels of health concern, and (5) conducting a public health assessment and continuing to provide health consultations to all involved parties.

Additionally, with ATSDR support, **Connecticut** greatly expanded its community involvement program. A contractor hired to coordinate communication efforts in Stratford helped organize and support a citizen's group. This citizen's group was influential in decision-making that affected the town. As opposed to large, town-wide meetings, smaller community forums were organized to discuss site-specific issues.

An **exposure investigation** collects information on specific human exposures through biological sampling, personal monitoring, related environmental assessment, and exposure-dose reconstruction. Since 1994, ATSDR has conducted two exposure investigations in **Connecticut**.

Solvents Recovery Services of New England - The CTDPH conducted a study of cancer incidence at this site in **Southington**. Part of the study methodology at this site involved assessment of exposures to contaminated groundwater distributed to residents by the Southington Water Company. CTDPH requested that ATSDR determine the location and distribution of the census subdivisions that may have received contaminated water.

ATSDR determined the location and distribution of the contaminated water by using the Exposure-Dose Reconstruction Project (EDRP). The EDRP, a cooperative research project between ATSDR and the Georgia Institute of Technology, develops methods and tools to reconstruct historical data and to predict future levels of contaminants transported through environmental media and water-distribution systems from the contamination source to the receptor populations. The use of this model allows for a precise and rigorous method to estimate census-block-level contamination for possible follow-up health studies to determine the association between past exposure and adverse health effects.

Osborn Correctional Institution - Residents of the Rye Hill Circle area near this site in **Somers** requested that ATSDR assess their exposure to tetrachloroethylene (PCE) from contaminated groundwater. The exposure investigation determined the length and level of exposure to PCE-contaminated groundwater.

The exposure investigation determined that residents at the site possibly had been exposed to PCE-contaminated groundwater for a minimum of 16 years. The bedrock aquifer probably was contaminated when the wells were installed (circa 1978). Modeling results showed that operations at the Osborn Correctional Institution contaminated the northernmost Rye Hill Circle wells above the maximum contaminant level for PCE.

Additional PCE sources could account for the groundwater contamination in the Rye Hill Circle area. An inter-agency agreement with the Connecticut District Water Resources Division of the U.S. Geological Survey to collect regional hydrogeologic data not previously available proved to be invaluable. The Connecticut Attorney General's office stated that fears in the community subsided since the results of this investigation were issued.

Educating Health Professionals and Community Activities

Another aspect of the cooperative agreement program includes the support of educational activities for physicians and other health professionals and communities concerning human exposure to hazardous substances in the environment. Under the cooperative agreement, the CTDPH has received funding as well as technical assistance for the development of 112 different educational tools, all of which relate to human health issues associated with toxic substances in the environment. Among the 17 tools developed during 2002 were "Healthy Homes: Avoiding Chemicals in Your Yard and Garden," "Asbestos Fact Sheet" for Brookfield schools, and "If I Catch It, Can I Eat It?" a women's guide to eating fish safely. Overall, more than 145,000 items have been distributed. Additionally, more than 3,700 **Connecticut** residents have attended more than 150 environmental health education seminars, workshops, and town meetings.

Connecticut conducts a wide range of fish consumption education and risk communication activities focused on educating consumers of locally caught fish about the dangers of contaminants and safe fish eating practices. Materials developed through this ongoing program have focused on high-risk populations (pregnant women and children under 6 years), low-literacy and non-English speaking community groups, a video tailored to Southeast Asian populations, and a train-the trainer program.

Recognizing the importance of school indoor air quality as a major public environmental health issue, the CTDPH has provided leadership to develop the Connecticut School Indoor Environmental Resource Team. This is a state-wide consortium involving fifteen state and federal agencies. Based on EPA's Tools for Schools program, the consortium has conducted more than 70 trainings which led to more than 180 schools adopting the program.

Funding amounts for education are included under Site-Specific Activities.

Association of Occupational and Environmental Clinics (AOEC)

ATSDR supports three occupational and environmental medicine programs in **Connecticut** through a national cooperative agreement with the AOEC. These programs focus on the diagnosis and treatment of environmental related diseases impacting state residents. Areas of specialization include: pesticide poisoning, occupational and environmental lung disease, indoor air quality problems, multiple chemical sensitivity, and water contamination. The following are member institutions in the state: **Northwest Connecticut Occupational Medical Center**, the **University of Connecticut**, and **Yale University**.

Public Health Conference Support

To encourage information sharing, technical discussion, and other training activities related to acute illness and chronic disease in persons exposed to hazardous substances, ATSDR awards grants to state and local agencies to support public health conferences.

Environmental Health Concerns Conferences - The Center for Environmental Health at the **University of Connecticut, Storrs**, conducts these annual conferences to discuss pressing environmental issues for **Connecticut**. Leaders in their fields have addressed environmental concerns in the state such as lead poisoning, asbestos, radon, ozone, air pollution, hazardous waste, poverty, low birth weight, food safety, biomonitoring, and Long Island Sound. The conferences allow the academic community to network with state and local agencies, labor, private industry, public interest groups, and the general public. An extensive mailing list of more than 2,500 individuals is utilized for advertisement. In addition to ATSDR, the programs have included co-sponsorships with the CTDPH, EPA, Rural Community Assistance Program, the University of Connecticut Cooperative Extension System, and the Institute of Water Resources.

Health Studies

Health studies are conducted to determine the relationships 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 that ATSDR has conducted or supported in **Connecticut**.

Upjohn Company, North Haven – In March 2000, the CTDPH released a public health assessment regarding environmental exposures and potential impacts on rates of cancer in the community near the former Upjohn chemical plant in **North Haven**. A 1995 occupational study of the former workers at the plant found a significant elevation in rates of bladder cancer. Citizens in the area were concerned that past plant emissions could have had similar impact. In January 2002, ATSDR funded a project in which CTDPH conducted an analysis of bladder cancer and leukemia distribution via computer mapping also known as Geographic Information System (GIS) analysis. Neither cancer type was elevated in areas near the plant and this information was relayed to the community members via health consultation and fact sheet.

Raymark Industries, Stratford - In January 2001, CTDPH released a follow-up evaluation of bladder cancer levels and environmental exposures to Raymark waste in **Stratford**. Bladder cancer was selected for study because a 1998 CTDPH health study found elevated female bladder cancer levels near some of the Raymark waste sites.

In the 2001 follow-up study sponsored by ATSDR, CTDPH re-analyzed the original data to more accurately evaluate where people lived in Stratford and how close their homes were to Raymark. Enhancements were made to identify the population at risk. In addition, 5 additional years of bladder cancer data were added to the data from the 1998 study and examined to see if there were spatial patterns of where cancer occurred in town. The follow-up study found that when the cancer data were analyzed in the same way as the original 1998 study, female bladder cancer levels continued to be slightly elevated. However, there does not appear to be a consistent geographic pattern between bladder cancer level and nearness to Raymark waste sites. Overall conclusions are that there are no new findings in the five-year follow-up for bladder cancer in Stratford. The 2001 study supports the original findings in the 1998 study, that there is no definitive evidence linking bladder cancer to Raymark waste.

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. Since 1995, more than **520** 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 **Connecticut**.

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>
