



Activities in Massachusetts



ATSDR in Partnership With Massachusetts

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 and an annual budget for 2003 of approximately \$82 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 resulting from those hazards, 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 to serve the public by using the best science, taking responsive public health actions, and providing trusted health information to prevent harmful exposures and disease related to toxic substances. ATSDR provides funding and technical assistance to states and other partners through cooperative agreements and grants to identify and evaluate environmental health threats to communities. These resources enable state and local health departments to further investigate environmental health concerns and to educate communities. ATSDR has cooperative agreements or grants with 31 states, 1 American Indian nation (the Gila River Indian Community), and 1 commonwealth (the Puerto Rico Department of Health). From **fiscal years 1987 through 2002**, ATSDR awarded more than **\$12.8 million** in direct funds and services to the state of **Massachusetts**. 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 a significant threat to public health might exist.

Thirty-five sites in **Massachusetts**

have been designated to the NPL.

A **public health assessment** is 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 collaboration with public health and environmental officials from **Massachusetts**, has conducted **64** health assessments in the state. Following is an example of a public health assessment conducted in the state:

- **Shpack Landfill**—Residents from the communities of **Norton** and **Attleboro** were concerned about the perceived elevations of cancer incidence in relation to the Shpack Landfill site. The **Massachusetts Department of Public Health** (MDPH) held a public meeting with community residents and has begun an evaluation of cancer incidence data in Attleboro and Norton in response to community concerns. MDPH coordinated this meeting with Congressman Barney Frank's office and state legislative representatives. In addition, MDPH is coordinating a public availability session in the community to gather information on residents' concerns and needs in relation to the site.
- **South Weymouth Naval Air Station (SWNAS)**—This site is in the towns of **Abington**, **Rockland**, and **Weymouth**, and borders **Hingham**. Previous site operations from 1941 to 1997 included aviation training, aircraft support, logistic support, and blimp operations. Community concerns have focused on cancer incidence patterns in relation to hazardous waste sites, including SWNAS, as well as on possible

From fiscal years 1987 through 2002, ATSDR awarded more than \$12.8 million in direct funds and services to the state of Massachusetts.

arsenic exposures, as originally reported in spring 2001 by five families in South Weymouth. U.S. Representative William Delahunt has been actively involved with issues related to this site.

In February 2002, MDPH released an evaluation of cancer incidence data in these four communities. In December 2002, MDPH released supplemental analyses in response to recommendations made in the initial release.

MDPH conducted a variety of activities to address the arsenic concerns, including testing of soils on public properties and environmental testing (e.g., house dust, tap water) in the homes of the original five families who raised concern. MDPH held public meetings to report on its activities and respond to community concerns. MDPH also conducted urinary arsenic testing for 184 residents living near the original five families. Results of the environmental and urinary arsenic tests indicated that no widespread arsenic exposures were occurring among South Weymouth residents.

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 is. To date, **237** documented health consultations have been conducted at **104** sites in **Massachusetts**. Following is an example of a health consultation conducted in the state:

- **Vermiculite Sites**—Five sites in **Massachusetts (Billerica, Cambridge, Easthampton, Hingham, and Westminster)** received or processed asbestos-contaminated vermiculite. Concerns about potential exposures to asbestos are of primary interest, and **MDPH** is conducting an analysis of asbestos-related disease (e.g., mesothelioma) and other activities in these communities. MDPH is evaluating

cancer incidence and mortality data in these communities. In addition, MDPH is conducting a health consultation on the Easthampton vermiculite site. Available environmental data for the Easthampton site are being evaluated for potential health concerns. ATSDR identified the Easthampton site as a priority site in its national effort to evaluate vermiculite sites across the country. The health outcome data analyses for

the five communities are expected to be complete by fiscal year 2004. The Easthampton health consultation is expected to be completed during summer 2003.

Exposure Investigations

An exposure investigation collects information on specific human exposures through biologic sampling, personal monitoring, related environmental assessment, and exposure-dose reconstruction. MDPH is

conducting an exposure investigation on the **Great Pond Reservoir in Weymouth** to assess potential arsenic contamination in surface water and sediment in the pond, as well as testing raw drinking water for arsenic. This exposure investigation is expected to be finalized by the end of fiscal year 2003.

Health Education and Community Activities

Another aspect of the cooperative agreement program includes the support of educational activities for physicians, other health professionals, and communities about human exposure to hazardous substances in the environment. The state of **Massachusetts** became a partner in the program in **1987**. Through this program, **MDPH** has conducted grand rounds presentations at area hospitals, conducted community and physician education activities, and participated in environmental exchange sessions. MDPH is also collaborating with EPA and the **Massachusetts Department of Environmental Protection** to conduct extensive community education and outreach activities around fish and shellfish consumption issues for closed areas of the **New Bedford Harbor NPL** site. MDPH also



Former vermiculite processing facility in Easthampton.

has prepared educational materials related to the statewide fish consumption advisory for mercury, which is among the most stringent in the country.

Recent environmental health education activities in **Massachusetts** include the following:

- In 2003, **MDPH** coordinated two Grand Rounds on lead exposure in children. Continuing medical education (CME), continuing nursing education (CNE), and continuing health education specialist (CHES) credits were offered to participants.
- Through a cooperative agreement with the Migrant Clinicians Network (MCN), ATSDR provides assistance to health care providers working with migrant and seasonal farm workers. MCN, the second largest clinical network in the nation, brings together clinicians from various professions to meet the needs of migrant and seasonal farm workers. Local MCN members in **Massachusetts** are the **Massachusetts League of Community Health Centers, Inc.**, with three offices in the **Boston** area, and the **New England Community Health Center Association**, with offices in **Woburn**.

Association of Occupational and Environmental Clinics

ATSDR provides financial and technical support to members of the Association of Occupational and Environmental Clinics (AOEC). This support is provided to improve education and communication related to surveillance, diagnosis, treatment, and prevention of illness or injury related to exposure to hazardous substances.

The AOEC member institutions in **Massachusetts** are Caritas Good Samaritan; CareGroup Occupational Health Network, Boston; Center for Occupational and Environmental Medicine, Northeast Specialty Hospital; Occupational and Environmental Health Center, Cambridge Hospital; and Occupational Health Program, Boston Medical Center.

Through a national cooperative agreement with AOEC, ATSDR supports five Occupational and Environmental Health Programs in **Massachusetts**. All five are associated with medical schools and/or schools of public health. Areas of significant research include biomarkers of dose and effect in adult lead poisoning, bloodborne pathogen exposures, biohazards and biotechnology, lead, and adolescent occupational toxic exposures.

Since 1998, ATSDR has provided funds to AOEC to support a project establishing Pediatric Environmental Health Specialty Units (PEHSUs) that specialize in children's environmental health issues. The PEHSU for the New England area is the Pediatric Environmental Health Center at Children's Hospital in **Boston**. The center offers multidisciplinary evaluation and management of children with known or suspected exposure to a range of environmental toxicants. Staffed by pediatricians, medical toxicologists, nurses, and resource specialists, the center also provides consultative services by telephone; publishes articles advancing the field of pediatric environmental health; and conducts educational activities for medical students, residents, and other health care providers.

Health Studies

Health studies are investigations conducted to determine the relationships between exposures to hazardous substances and adverse health effects. They also define health problems that require further investigation through, for example, health surveillance or an epidemiologic study. Following are examples of health studies that ATSDR conducted or supported in **Massachusetts**:

- **Massachusetts Military Reservation (MMR), Upper Cape Cod Cancer Incidence Review**—In 1992, a Community Assistance Panel (CAP) was established as a result of a recommendation from the public health assessment. Collaboration between ATSDR and CAP led to the design and development of a symptom and prevalence study that was conducted in four communities around **MMR** and in one control group not on the Upper Cape. This study included a census and a well-use survey and a disease and symptom prevalence survey with biomonitoring testing. The results did not identify any pattern of health problems requiring public health actions.

In 1997, ATSDR and **MDPH**, with funding from the Department of Defense, established a joint office at MMR to address public health issues. This office addresses environmental public health questions and concerns of the Upper Cape communities in relation to potential exposures to hazardous substances in the environment.

- **Pediatric Asthma in the Merrimack Valley**—**MDPH** has entered into a 3-year cooperative

agreement with ATSDR to conduct an asthma study to determine whether the prevalence of pediatric asthma in each **Merrimack Valley community** is higher than the rate from a demographically similar comparison community. The project will also compare Merrimack Valley pediatric asthma prevalence in areas with greater opportunity for exposure to incinerator emissions with areas with lesser opportunity for exposure. Data were collected and reported to MDPH by school health nurses, who provided complete and accurate pediatric asthma data for these communities. Preliminary results indicate that other data sources, such as hospital discharge data, greatly underestimate pediatric asthma rates in these communities and indicate the value of school health records as a source of pediatric asthma data. This model of collecting pediatric asthma data has received national attention. The results of this pediatric asthma data collection should be released by the end of fiscal year 2003.

- **Exposure to Tremolite Asbestos in Vermiculite Ore**—In 2001, MDPH entered into a cooperative agreement with ATSDR to conduct health statistics reviews related to human exposure to contaminated vermiculite ore at sites in **Massachusetts** that received ore or processed ore, or both, from the mine in Libby, Montana.
- **Determining the Prevalence of Multiple Sclerosis (MS) and Amyotrophic Lateral Sclerosis (ALS) in Communities Living Around Hazardous Waste Sites**—MDPH was awarded a cooperative agreement by ATSDR to develop a methodology for estimating the prevalence of ALS and MS and to apply that methodology in five towns where very active concerns about ALS and MS exist. These towns also have either EPA or state-recognized hazardous waste sites. One town, **Middleborough**, has metal plating and organic solvent wastewater sites, as well as agricultural activities (e.g., cranberry growing) that use pesticides and herbicides. The other four towns (**Weymouth, Abington, Rockland, and Hingham**) surround the **South Weymouth Naval Air Station** NPL site. Heavy metals, solvents, and pesticides are the contaminants of concern for these four communities. The comparison population consists of 23 communities in

southeast Massachusetts that surround or are adjacent to the study communities. The study is expected to be completed by fiscal year 2005.

- **Nyanza**—The **Nyanza** NPL site in **Ashland** is a former dye-manufacturing facility. Residents of Ashland reported several cases of various types of sarcomas among young adults from the same graduating class in Ashland. **MDPH** has worked closely with a community advisory committee in conducting a retrospective cohort study to examine the possible relationship between exposure opportunities to the Nyanza site as a risk factor for cancer. Through extensive outreach efforts, aided by community members, approximately 1,700 persons who attended school in Ashland during 1960 to 1985 agreed to participate in the study. These persons were interviewed for this study and medical records of those diagnosed with cancer were sought. Data collection has been completed, and data analysis is ongoing. Study results are expected to be available during fiscal year 2004.

Brownfields

In 1997 the Brownfields National Partnership, a collaboration of 17 federal agencies, was formed to address local clean-up and reuse issues in a more coordinated manner. ATSDR is among the participating agencies. Brownfields are abandoned, idled, or underused industrial and commercial properties where expansion or redevelopment is complicated by real or perceived contamination. The federal agencies participating in the partnership offer special technical, financial, and other assistance to selected communities—**Brownfields Showcase Communities**—to demonstrate the benefits of focused, coordinated attention on brownfields. In 1998, 16 showcase communities were selected for the pilot program. In October 2000, 12 additional showcase communities were selected for redevelopment. In **Massachusetts**, two communities, the city of **New Bedford**, and the cities of **Everett, Malden, and Medford**, which make up the **Mystic Valley**, were selected to receive grants.

For more information, contact ATSDR toll-free at 1-888-42ATSDR (1-888-422-8737) or visit the ATSDR Web page at www.atsdr.cdc.gov.