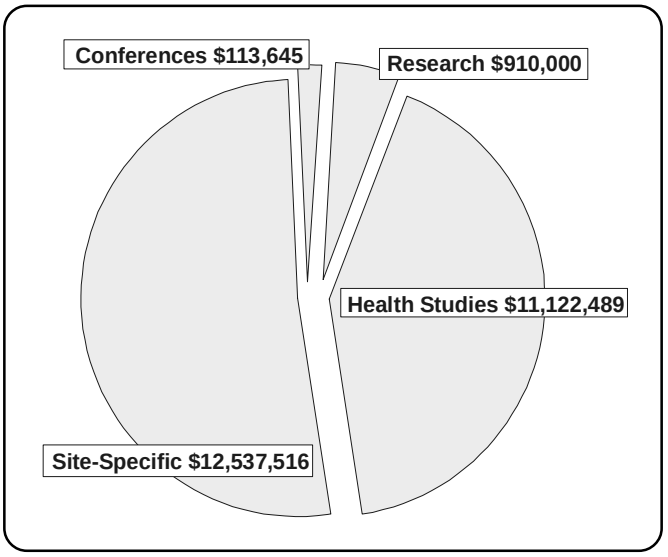
Activities in New Jersey

ATSDR in Partnership with New Jersey

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 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 and grants with 31 states, 1 American Indian nation (Gila River Indian Community), and 1 commonwealth (Puerto Rico Department of Health). From 1985 through 2002, ATSDR awarded more than **$24,683,650** in direct funds and services to the state of **New Jersey.** In addition to direct funds and services, ATSDR staff 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 have been **135** NPL sites in **New Jersey**.

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 and the **New Jersey Department of Health and Senior Services (NJDHSS)** staff, in conjunction with environmental officials from **New Jersey,** have conducted **173** health assessments in the state. Below is an example of a public health assessment conducted in the state.

> **Puchack Well Field** – The Puchack well field supplied approximately 50,000 residents of **Camden** with drinking water until 1998 when the last of the seven wells was taken out of service. Contaminants including metals and volatile organic compounds were found in one of the wells in the early 1970s. This contamination spread to other wells in the field. The public health assessment sponsored by ATSDR concluded that the site represented a public health hazard because of past exposures and recommended follow-up health activities, including a review of health outcome data, determining other community health concerns, and developing appropriate health education actions.

Many environmental health issues were voiced through both the public comment process and ongoing meetings with a coalition of community members and group representatives. The NJDHSS has and is continuing to address some of the environmental health issues prevalent in Camden. The NJDHSS is completing a review of cancer data for presentation to the community with modifications of its original protocol to incorporate community needs. The state is also developing educational materials for both residents and health care providers on community environmental health issues of concern.

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, **237** documented health consultations have been conducted at **132** sites in **New Jersey.** An example of a health consultation conducted in the state follows.

(Former) White Swan Laundry and Dry Cleaners – In response to requests for assistance from the U.S. Environmental Protection Agency (EPA), and concerns from local school officials and community members in **Wall Township**, ATSDR and NJDHSS conducted a series of health consultations to evaluate indoor air quality in schools and private residences. Concerns were raised about possible inhalation exposures to chemicals found in shallow groundwater in the vicinity of the former White Swan Laundry and Dry Cleaners site.

ATSDR and NJDHSS were able to determine normal background concentrations of contaminants that are both associated with the site and found in the environment from non-site sources. They were also able to provide the EPA with a health interpretation of the levels measured in the schools and residences and interpret individual results for residents. ATSDR and NJDHSS met publicly with concerned residents and parents on several occasions and developed fact sheets on contaminants of concern as they related specifically to the site and potential exposures.

An **exposure investigation** is the collection and analysis of site-specific data to determine if populations have been exposed to hazardous substances. Biologic sampling, personal monitoring, related environmental assessment, and exposure-dose reconstruction are used to collect this information. ATSDR and state staff from **New Jersey** have conducted several exposure investigations in the state, including those which supported the **Dover Township Childhood Cancer Investigation**, and the **Grand Street Mercury Investigation**, which led to a public health advisory (see below). The Grand Street Mercury exposure investigation collected both environmental and human specimens. Mercury vapor was measured in air samples taken in the breathing zones of adults and children. Since elemental mercury is excreted in urine, uptake of mercury through inhalation among the residents could be demonstrated by laboratory analysis of urine for mercury. This did, in fact, occur, effectively demonstrating a completed exposure pathway to mercury in a residential setting.

A **public health advisory** is a statement of findings 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 EPA to inform them, state and local officials, and the public about recommended actions.

ATSDR has issued **four** public health advisories in **New Jersey**. Following is an example of a public health advisory issued in the state.

Grand Street Mercury – In December 1995, the NJDHSS was contacted by the health officer for the city of **Hoboken** regarding mercury in a condominium complex. Investigation by the NJDHSS and ATSDR revealed that the building was formerly used in the manufacture of mercury vapor lamps, and that mercury vapors were detectable throughout the 16 condominiums in the building. More significantly, an exposure investigation indicated that 20 of the 29 residents and two workers, including five of the six children, were experiencing significant mercury exposures; that is, urine mercury concentrations were higher than those permitted in occupational settings. ATSDR issued a public health advisory within two weeks of the initial call by the local health officer, who was then able to condemn the building. The EPA dissociated all residents from the building, which was later listed on the NPL, and eventually torn down.

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 NJDHSS has developed approximately 70 different educational tools related to human environmental health issues and has distributed more than 14,000 copies. An example of educational material developed by NJDHSS includes "Health Care Provider Update," a series of newsletters for **Ocean County** physicians and **Toms River School District** school nurses on the progress of cancer cluster investigations in **Toms River**. Additionally, more than 725 **New Jersey** residents have attended approximately 40 public meetings or training sessions.

ATSDR also supported the Environmental and Occupational Health Sciences Institute (EOHSI) in implementing their Toxicology, Risk Assessment and Pollution (ToxRAP) environmental health curriculum in the **Toms River School District**. EOHSI provided instruction to more than 135 elementary school teachers on use of these modules. More than 3,000 elementary school students were taught how to investigate health problems in their community. This program will be extended to include 11th grade teachers and students.

Through a national cooperative agreement with the Association of Occupational and Environmental Clinics, ATSDR supports the Environmental and Occupational Health Sciences Institute at the **Robert Wood Johnson Medical School**. The Institute's Clinical Center is the only academically based occupational and environmental health facility in **New Jersey**. Multiple chemical sensitivity and hazardous waste exposures are the most common environmental diagnoses seen at the clinic.

In September 2001, ATSDR sponsored Grand Rounds on Pediatric Cancer Clusters and Environmental Exposures at the **Toms River Community Medical Center**. A Mt. Sinai Pediatric Environmental Health Specialty Unit physician along with a senior scientist from the NJDHSS conducted the session. More than 100 physicians and 15 other health care professionals participated.

Funding for these projects is included in Site-Specific funds.

Integrated Site-Specific Activities

Dover Township Childhood Cancer Investigation – ATSDR and NJDHSS often incorporate multiple activities at a single site or in a community. The **Dover Township Childhood Cancer Investigation** is an example of a wide range of activities, including early community involvement, public health assessments on two sites on the National Priorities List (the **Ciba-Geigy** and the **Reich Farm** sites), a public health assessment on a site of community concern (the **Dover Township Municipal Landfill**), a health consultation on community water supply quality, exposure investigations on private wells, health consultations on the post office, and two health consultations on childhood cancer rates in the community. These all led to a case-control study, which examined the relationship of certain childhood cancers with environmental exposures within the community.

As all of these activities were underway, ATSDR and NJDHSS met regularly and frequently with the community to inform them of the progress of all components of the investigations and respond to additional concerns. Health care providers, including physicians and school nurses, attended grand rounds and other seminars and were provided with a series of newsletters describing the investigation.

Public Health Conferences

Grants are awarded to state and local agencies by ATSDR to support public health conferences. These conferences encourage information sharing, technical discussion, and training activities, related to acute illness and chronic disease associated with human exposures to hazardous substances. **Three** public health conferences have been conducted in **New Jersey**.

Health Studies

A **health study** is conducted to determine the relationships between exposure to hazardous substances and adverse health effects. Health studies also define health problems that require further investigation through additional mechanisms, for example, a health surveillance or epidemiologic study. Following are examples of site-specific health studies and investigations that ATSDR has conducted or supported in **New Jersey**.

Multistate Case-Control Study of Childhood Brain Cancers - This study is evaluating the association between residential proximity to NPL sites and the diagnosis of brain cancer. Cases of childhood brain cancer have been identified in four states, **New Jersey**, New York, Florida, and Pennsylvania. This larger study is the result of cluster investigations around three sites - Rochester, New York; Port St. Lucie, Florida; and **Dover Township, New Jersey**. Data collection began in 2000, and the telephone interview phase of the study has been completed. Collection of blood samples for the second phase of the study was completed in 2001. The second phase will examine the relationship between the childhood brain cancer risk and blood levels of environmental chemicals among mothers of children diagnosed at less than 5 years of age during the most recent 2 years and mothers of corresponding controls. Data analysis for the interview phase began in 2001 and will continue through 2002.

The Childhood Cancer Incidence Update: A Review and Analysis of Cancer Registry Data – This review was conducted for **Dover Township** for the years 1979-2000 and a report was released in January 2003. It is an update of a previous report that evaluated cancer incidence data for Dover Township for the years 1979-1995 which was released in 1997.

The Case-Control Study of Childhood Cancers in Dover Township (Ocean County), New Jersey – This exploratory study sought to identify possible disease risk factors for leukemia and brain and nervous system cancers, which were elevated among children in **Dover Township** and the **Toms River** section of the township. The case-control study examined several specific hypotheses about the relationship between these childhood cancers and certain environmental pathways identified in the community, including exposures to specific community and private drinking water sources and major air pollution sources. Several associations between exposure and cancers were found, including prenatal exposures to a certain public water supply well field, exposures to a major air pollutant source, and leukemia. The final report was released in 2003.

Environmental Health Research

Between 1992 and 1995, ATSDR awarded funding to **New Jersey** to conduct environmental health research. Following are examples of research activities conducted in the state.

Research Program for Exposure Characterization (1992 - 1995) - In 1992, the **University of Medicine and Dentistry of New Jersey** and ATSDR initiated a 3-year cooperative agreement to develop an exposure characterization research program. This collaboration was in response to the national need for detailed information on human exposure and dose for contaminants commonly found at Department of Energy hazardous waste facilities and NPL sites.

Toxicological Profiles

ATSDR develops toxicological profiles that describe health effects, environmental characteristics, and other information for substances found at NPL sites. These profiles contain information on pathways of human exposure and the behavior of hazardous substances in environmental media such as air, soil, and water. In the past 5 years, more than **1,811** of these profiles have been sent to requesters, including representatives of federal, state, and local health and environmental departments; academic institutions; private industries; and nonprofit organizations in **New Jersey**.

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