

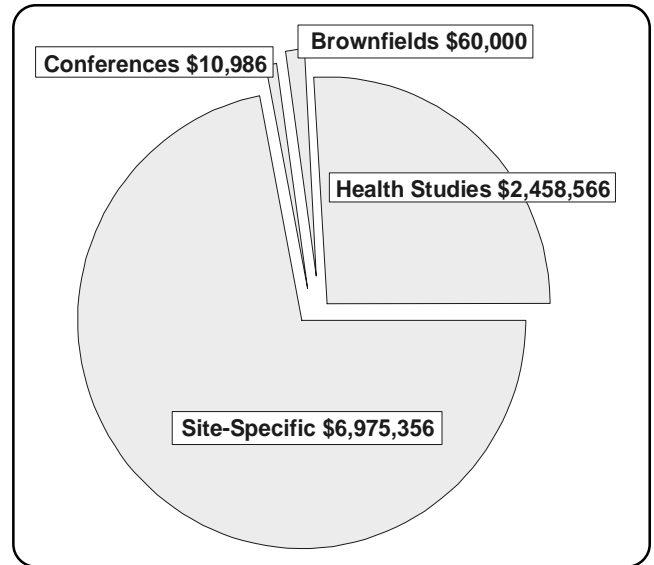


# Activities in Washington

## ATSDR in Partnership with Washington

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 1989 through 2001, ATSDR awarded more than **\$9,504,908** in direct funds and services to the state of **Washington**. 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 public health. There are currently **63** sites designated to the NPL in **Washington**.

A **public health assessment** provides a 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. The ATSDR staff, in conjunction with public health and environmental officials from **Washington**, has conducted **89** public health assessments in the state. Following are examples of public health assessments conducted in the state.

Recent public health assessments conducted in **Washington** under the cooperative agreement program highlight the diverse technical and community outreach challenges faced by health assessment staff. The rich cultural diversity that surrounds **Lower Duwamish Waterway** NPL site in south **Seattle** presented significant outreach and educational challenges. Successful communication and interaction with the community required strategies beyond traditional public meetings and informational mailings. **Washington Department of Health Cooperative Agreement Program (WCAP)** staff identified community leaders and participated in local meetings where messages could be delivered and feedback received in a manner and setting that was comfortable and appropriate for each community.

A community petition asking ATSDR to evaluate groundwater contamination in the north **Whatcom County/Bertrand Creek** area was addressed cooperatively by ATSDR and WCAP. Sampling of indoor air by ATSDR validated concerns raised about exposure to volatiles released during showering. This information was incorporated by the WCAP into the health assessment resulting in remedial efforts that included distribution of shower filters as an interim measure to reduce inhalation exposure.

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, **155** documented health consultations have been conducted at **102** sites in **Washington**.

Health consultations allow ATSDR and WCAP to quickly address a myriad of sites and issues from across the state. Recent health consultations have evaluated exposure to contaminants in groundwater, indoor air, fish/shellfish, and ambient air. A health consultation documenting community concerns about exposures at the **Georgia-Pacific pulp and paper mill in Camas** resulted in a recommendation for detailed evaluation of potential exposures. **Philip Services, Cadet Manufacturing and Eastside Cleaners** are all sites where the pathway of concern is inhalation of volatiles migrating from groundwater to indoor air. Health consultations for these sites highlighted the importance of this exposure pathway. As a result, WCAP is formulating a protocol that will evaluate the necessity of indoor air sampling at sites with volatiles in groundwater. The **Spokane River** health consultations evaluated lead and PCBs in fish leading to consumption advisory primarily based PCBs.

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.

Blood, breast milk and indoor dust samples were collected and analyzed for organochlorines at the **Able Pest Control** site providing residents and regulatory agencies with important exposure information. Blood lead samples taken from workers at the **Les' Radiator Shop** indicated excessive exposure of one worker living near the shop. Geoduck samples will be collected and analyzed for dioxin near the **Rayonier Mill pulp and paper mill** located in **Port Angeles**. Samples will be collected from the usual and accustomed fishing grounds of the **Lower Elwha Klallam Tribe**, which may support subsistence level consumption. Indoor air samples were taken from homes and businesses at both the Eastside Cleaners and Philip Services where concerns were raised over the potential migration of volatiles from groundwater into indoor air.

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## **Educating Health Professionals and Community Activities**

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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 **Washington State Department of Health** has received funding as well as technical assistance leading to the development of 83 different educational tools. More than 31,000 copies have been distributed. Twelve different fact sheets related to environmental health issues have been developed and distributed since January 2000. Additionally, more than 3,000 **Washington** citizens have attended 154 public meetings or training sessions.

Extensive outreach is planned for Asian and Pacific Islander immigrants who consume seafood contaminated with polychlorinated biphenyls (PCBs) from the **Lower Duwamish Waterway Superfund site**. The communities impacted by the site will receive a presentation on seafood safety issues, along with illustrated fact sheets in six languages, and a "hands-on" seafood cleaning and cooking demonstration through a partnership with the **University of Washington**.

ATSDR has been involved in a variety of other health education and promotion activities in **Washington**. These activities include: Migrant Clinicians Network, Hanford Nuclear Reservation, National Workshop to Establish an Environmental Safety Net for Children, and the Southpark site in King County.

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## **Pediatric Environmental Health Specialty Unit (PEHSU)**

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In collaboration with the Association of Occupational and Environmental Clinics (AOEC), ATSDR developed PEHSUs throughout the nation as a resource for pediatricians, other health care providers, federal staff, and the public. These units help reduce environmental health threats to children, improve access to pediatric environmental medicine expertise, and strengthen public prevention capacity. A PEHSU was established at **Harborview Medical Center** in 1998. The unit provides consultations and clinical services, along with education for health care providers and the public.

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## ATSDR Tribal Programs

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**Hanford Affected Tribes** - American Indian Tribes located down wind and stream from the **Hanford Nuclear Reservation** (HNR) are concerned if their tribal members are affected by off-site contamination. The Tribes are interested to learn if tribal members are directly exposed to off-site contamination from the HNR, and if they experience health effects from exposures. The Tribes are also interested to learn how off-site contamination affects native food sources and organic materials used in tribal products such as baskets, mats, and clothing. Under a new funding agreement, ATSDR is working with seven Northwest Indian Tribes to build tribal environmental health capacity. The tribal environmental health programs will evaluate the impact of environmental contamination from the HNR on the health of tribal members and will develop culturally appropriate environmental health education materials.

**Suquamish Indian Reservation** - ATSDR obtained Department of Defense funding for the Tribe to conduct a subsistence dietary consumption study. This data is being used on other Northwest Indian reservations.

Additional work has been supported by ATSDR for the following sites and tribes: **Rayonier Mill (Lower Elwha Klallam Tribe)**, **Yakama Indian Reservation**, **Midnite Mine (Spokane Indian Reservation)**, and **Colville Confederated Tribes**.

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## Hanford Nuclear Reservation Activities

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**Hanford Health Effects Subcommittee** – In December 1994, the Citizen’s Advisory Committee on Public Health Service Activities and Research at Department of Energy sites was chartered and subsequently established the Hanford Health Effects Subcommittee (HHES). Composition includes representatives of the Hanford area American Indian Tribes, affected downwinders, organized labor, affected Columbia River users, scientific and medical experts, as well as ethnic minorities. The subcommittee has provided ATSDR and CDC with a wide variety of advice and recommendations concerning Hanford public health activities. Although ATSDR has been unable to secure funding for either program from the Department of Energy, the subcommittee has steadfastly maintained its two highest priorities: the implementation of a medical monitoring program for Hanford downwinders to include a medical evaluation for thyroid and parathyroid disease, and the establishment of an iodine-131 exposure subregistry.

**Hanford Infant Mortality and Fetal Death Analysis** – The HHES recommended that ATSDR undertake this study following unpublished reports of an increased infant mortality rate during 1945 in counties receiving high doses of iodine-131 from Hanford. This study evaluated the rates of infant mortality and fetal death in eight southeastern **Washington** counties during the years 1940 through 1952. Infant and fetal mortality rates were analyzed by geographic region, level of exposure to radionuclides, time period of exposure, and maternal and infant risk factors. Study findings suggest that residence of the mother in a geographic area with relatively high estimated iodine-131 exposure in the year of the largest iodine-131 releases at Hanford may have resulted in preterm birth.

**Hanford Medical Monitoring Program (HMMP)** - In 1997, pursuant to a unanimous recommendation from the HHES and the Hanford American Indian tribes, the Administrator of ATSDR authorized the establishment of a medical monitoring program for an estimated 14,000 people who lived downwind of the HNR between 1944 and 1951. The program would target people who, as children, were exposed to sufficient amounts of iodine-131 to be at increased risk of developing thyroid and parathyroid disease. The program would provide education, periodic medical evaluations for thyroid and parathyroid conditions, including thyroid cancer, and referral of positive findings for treatment. A recent survey of 500 Hanford downwinders showed that 84% would utilize this thyroid examination service if it were available. The program has been on hold since 1997 due to a lack of funding from the Department of Energy. The HMMP remains the highest priority activity recommended by the Hanford Health Effects Subcommittee.

**Hanford Community Health Project (HCHP)** – In 1999, ATSDR initiated a program focused on outreach, education, and risk communication for people exposed to iodine-131 releases from Hanford, and for their health care providers. A survey of 500 Hanford downwinders was completed in 2001. Important findings from this survey included:

- 91% were aware of past releases of iodine-131 from Hanford;
- 46% felt their health care professional knew little about Hanford health issues;
- 81% would like more information about radioactive iodine and thyroid disease; and
- 84% would use a thyroid examination service if it were available free of charge.

The HCHP's focus is to act as a clearinghouse for education and risk communication material concerning iodine-131 exposure and thyroid disease. A Web page is under development and a growing list of materials is being accumulated for distribution to those who request it.

**Hanford Birth Cohort: a Study of Adverse Autoimmune Function and Cardiovascular Disease** - The purpose of this study is to (1) explore the potential relationship of radioactive releases, mainly iodine-131, into the environment and the prevalence of autoimmune diseases within the affected area; (2) explore the potential relationship of radioactive releases, mainly iodine-131, into the environment and the prevalence of cardiovascular diseases within the affected area; and (3) conduct comparative analyses with selected controls from same area. ATSDR will randomly choose 2,000 persons from the six counties to participate in the study. Data collection is scheduled to begin in fall 2002.

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## **Additional Health Studies**

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**Health studies** are conducted to determine the relationship between exposures to hazardous substances and adverse health effects and to define health problems that require further investigation. In addition to activities at Hanford, the following are examples of health studies or investigations conducted in **Washington**.

ATSDR provided technical assistance to the **Puyallup Tribe** in **Tacoma** to assess causes of death among registered tribal members who lived near the **Commencement Bay** site (1991). ATSDR awarded a grant to the **Washington Department of Health** to conduct a mortality study of children who lived near the American Smelting and Refining Company (ASARCO) copper smelter in Ruston (1994).

The **Hazardous Substances Emergency Events Surveillance System (HSEES)** was established by ATSDR in 1990 to collect and analyze information about releases of hazardous substances that need to be cleaned up or neutralized according to federal, state, or local law, as well as threatened releases that result in a public health action, such as an evacuation. The goal of HSEES is to reduce the morbidity and mortality experienced by first responders, employees, and the general public resulting from hazardous substances emergencies. A total of 16 state health departments were awarded cooperative agreements, including **Washington**. The HSEES system is used to generate information for use by states to conduct activities to support this goal. HSEES captures data on more than 5,000 events annually.

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## **Brownfields Initiative**

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Brownfields are abandoned, idled, or underused industrial and commercial properties where expansion or redevelopment is complicated by real or perceived contamination. In 1997, the **Brownfields National Partnership**, a collaboration of 17 federal agencies, was formed to assist local remediation and redevelopment in a coordinated manner. ATSDR is among the participating agencies. As part of ATSDR's efforts in this area, the agency entered into a cooperative agreement in 1998 with **Seattle-King County Public Health Department** to enhance their participation in brownfields decisions and activities. The funding helped the local health department develop and implement strategies that ensure remediation and redevelopment efforts will not create environmental health hazards in communities. Another project involved participation in efforts by the National Association of City and County Health Officials to develop a national protocol for conducting community environmental health assessments.

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## **Toxicological Profiles**

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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. Since 1995, more than **1,750** 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 **Washington**.

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**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>**

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