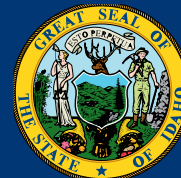




# Activities in Idaho



## ATSDR in Partnership With Idaho

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 and other grantees to further investigate environmental health concerns and to educate communities. From **fiscal years 1986 through 2003**, ATSDR awarded more than **\$4.4 million**—more than **\$760,000** in the last 2 years—in direct funds and services to **Idaho** for comprehensive support of its environmental health unit. 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 a significant threat to public health might exist. **Thirteen** sites have been designated to the NPL in **Idaho**.

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 **Idaho**, has conducted **16** health assessments in the state, including the following recent examples.

*ATSDR awarded more than \$760,000 in the last 2 years in direct funds and services to Idaho.*

- **Coeur d'Alene Basin**—ATSDR is evaluating information about and environmental data collected within the **Coeur d'Alene River Basin** to determine whether people were exposed in the past or are currently being exposed to contaminants from former mining operations in the basin at levels that could be harmful to their health. The health assessment is scheduled to be released in December 2003.
- **Poles, Incorporated**—Poles is an active pole-peeling and storage treatment facility that treated poles onsite with pentachlorophenol. The site is in **Oldtown** and is bordered by the Pend Oreille River to the north and the **Idaho Hill Elementary School** to the south. In the fall of 2000, school staff members and a concerned citizen contacted the **Idaho Division of Health (IDOH**, part of the **Idaho Division of Health and Welfare [IDHW])** and other agencies with a request to investigate the potential exposures and health effects of penta and penta-associated impurities. Community members were concerned about what was perceived as an elevated cancer rate among current and former schoolteachers at Idaho Hill Elementary.

In response to these concerns, the IDOH **Bureau of Community and Environmental Health (BCEH)**, formerly the Bureau of Environmental Health and Safety, prepared several health consultations and a health assessment under a

cooperative agreement with ATSDR. BCEH categorized Poles, Inc. as no apparent public health hazard and recommended that site access be restricted by placing obvious “no trespassing” signs to prevent the public, especially elementary-school students, from entering the site.

As part of the health assessment, BCEH evaluated health data in conjunction with the **Cancer Data Registry of Idaho (CDRI)**. The overall cancer incidence in the combined area of Oldtown and **Priest River**, Idaho, and Newport, Washington, between 1992 and 1999 was within the expected range when compared with the remainder of the state of Idaho. **CDRI** did find an increased rate of sarcoma cancer in the same three-zip-code area, which prompted BCEH and CDRI to continue cancer surveillance. BCEH and CDRI were not able to determine whether the sarcoma cases were related to the past exposures to contaminants associated with the Oldtown site. Cancer surveillance is ongoing.

- **Stibnite/Yellow Pine Mining Area**—The Stibnite Mine Area is 14 miles southeast of **Yellow Pine**. Past mining activities have deposited metals, spent and neutralized ore, waste rock, and mine tailings over approximately 50% of the 3,000-acre site.

In 2002, **BCEH** reviewed available environmental data, health information, and community health concerns while conducting a health assessment. Exposure pathways related to surface soil and sediment, airborne particulates, surface waters, and fish were categorized as no apparent public health hazard. However, the public health hazard posed by the consumption of biota (other than fish) could not be evaluated because of a lack of data and information and is therefore categorized as an indeterminate public health hazard. BCEH recommended that site access should be restricted by placing obvious “no trespassing” signs to prevent the public from entering the site, especially in the hot-spot areas, and further sampling of biota (other than fish) to determine uptake of metals from site soils and surface water.



***Storage rack for treated poles at the Poles, Incorporated site in Oldtown.***

- **Eastern Michaud Flats**—The Eastern Michaud Flats Contamination NPL site is west of **Pocatello**. Two manufacturing facilities, FMC Elemental Phosphorus Plant and Simplot Don Plant, are at the site. Elemental phosphorus production at the FMC facility and superphosphate fertilizer production at the Simplot facility has contributed to soil, groundwater, surface water and sediment, and air contamination in and around the site.

In 1998 and 2001, ATSDR developed several health consultations that address the potential for human exposures (past, present, and future) to site-related contaminants in the

groundwater, surface water and sediment, surface soil, and ambient air. ATSDR had previously evaluated the potential for human exposures to site-related contaminants in the 1990 preliminary health assessment for the site.

In conjunction with ATSDR, BCEH is preparing a comprehensive health assessment for the EMF site that will incorporate past health consultations and additional environmental data. The comprehensive health assessment is scheduled for initial release in January 2004.

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, **71** documented health consultations have been conducted at **20** sites in **Idaho**, including the following recent examples.

- **Lake Coeur d’Alene**—ATSDR and **IDOH** jointly prepared a health consultation to evaluate metals data reported for fish samples collected in 2002. Analysis of metals was completed in early 2003 and final results were reported in May 2003. In addition, a fish consumption advisory for **Lake Coeur d’Alene** was issued jointly by **IDOH** and the **Coeur d’Alene Tribe** in June 2003. ATSDR supports the issuance of the advisory.

In 2002, fish were collected from areas used by tribal and recreational fishers and were tested

for 18 metals. Fillet and gutted whole-carcass samples were used to estimate subsistence and sport/recreational exposures. Three fish species were selected for sampling and analysis on the basis of use by tribal and sport/recreational fishers, ecological importance, relevance to other species, and patterns of exposure to chemicals: bass (mostly largemouth bass), bullhead (mostly brown bullhead), and kokanee.

Three of the eighteen metals (arsenic, lead, and mercury) were present at varying degrees of public health concern depending on the amount, portion type (gutted carcass or fillet), and fish species eaten. Eating fish offers both benefits and risks, and fish consumption rates are an important factor in assessing exposures and the potential for adverse effects. A wide range of consumption rates (6.5 to 540 grams per day) and several exposure scenarios were included in this consultation. These rates were used to help gain a better idea about which fish consumption habits are more likely to result in adverse exposures.

- **Potlatch**—The Potlatch Corporation Pulp and Paper Mill site is an active mill northeast of **Lewiston**, on the bank of the Clearwater River. The past release of chloroform into the air through the mill's pulp-bleaching process and wastewater treatment system led **BCEH** to determine that the Potlatch site was a hazardous waste site of potential public health concern. **CDRI** investigated cancer rates for the Lewiston and Clarkston (Washington) areas and found that they were higher than expected. As a result, **BCEH** and **CDRI** prepared a health consultation sponsored by **ATSDR** to explore the possible link between the Potlatch site and increased cancer rates. The health consultation was finalized in September 2003. **BCEH** is currently evaluating indoor and outdoor exposures to benzene (not site-related). Once this evaluation is complete, **BCEH** will present the findings of both evaluations to the public in spring 2004.



*Homeowner, ATSDR officials, and state officials preparing for the Panther Creek exposure investigation.*

- **Southeast Idaho Phosphate Resource Area**—Since 1919, phosphate has been mined from the **Southeast Idaho Phosphate Resource Area (SEIPRA)** for use as elemental phosphorus and in phosphate fertilizer. Ten historic and four operating mines are currently in the 1,200-square-mile project area. A large portion of the area lies within the **Caribou National Forest** and the **Fort Hall Indian Reservation**. Some phosphate ore mined in Southeast Idaho contains high levels of selenium.

In 2001, **BCEH** prepared a health consultation on selenium exposure for the general public in response to questions about how site releases may affect human health. Concerns were then raised about health effects of selenium in the **Shoshone-Bannock Indian Tribe** because of different dietary patterns and the consumption of wild game and plants. In response to tribal concerns, a separate health consultation was prepared for Shoshone-Bannock Tribal members who hunt and consume wild elk. The health consultation will be released in early 2004.

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

- **Panther Creek (Blackbird Mine)**—In 2000, an exposure investigation was conducted in response to residents' concerns about arsenic exposures during the Blackbird Mine clean-up activities. The investigation entailed environmental sampling for eight toxic metals and biological sampling for arsenic in urine and hair from residents who spent time along Panther Creek or Panther Creek Road. Results of this investigation were used to identify and recommend follow-up health activities, specifically health education and health evaluations of individuals with elevated hair arsenic levels.



## Health Education and Community Activities

**Idaho** has been a participant in ATSDR's cooperative agreement program since 1992. Under this program, **IDHW** has received funding and technical assistance for the development of community education and activities associated with human exposure to hazardous substances in the environment. During FYs 2003 and 2004, 38 educational materials were developed in support of 47 different environmental health education seminars, workshops, or town meetings. More than 125 Idaho residents and American Indians attended these events, and more than 60,000 copies of the material were distributed. IDHW has developed on a wide range of environmental health topics for use by teachers in grades K–12 in public school districts, tribal education centers, and private schools throughout Idaho. BCEH's *Environmental Health Lesson Plans for Educators*, supported in whole by funds from ATSDR, won a National Health Information Award in 2003.

In conjunction with site assessment activities at the Poles site in **Oldtown**, IDHW sponsored a poster and essay contest for Idaho Hill Elementary School students on the linkage of health concerns and environmental exposures. Prizes donated by local businesses were distributed among the 120 participating students. This and other health education and promotion activities designed to raise community awareness of environmental issues reflect the strong collaborative effort between the community and IDHW.

In support of the Bunker Hill/Coeur d'Alene River Basin site, the **Panhandle Health District** conducted blood lead screening for children that was coupled with a lead health education curriculum for use in local schools.

## 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 or investigations that ATSDR conducted or supported in **Idaho**.

- **A Follow-Up Study of Female Former Smelter Workers: the Relationship Between Changes in Bone Density Over Time and a Woman's Lead Body Burden**—ATSDR located and

contacted former participants in the Study of Female Former Workers at a Lead Smelter: An Examination of the Possible Association of Lead Exposure and Decreased Bone Density and Other Health Outcomes. The current follow-up study was conducted to assess changes in bone mineral density over time in relation to lead body burden and to evaluate how vitamin D, calcium, and parathyroid hormone levels effect bone mineral density. Of the 108 women participants in the baseline study, 73 (68%) women were identified and willing to participate, 19 (17%) refused to participate, 3 (3%) were deceased, and 13 (12%) were never located. The study is completing the peer review process and is scheduled for release in spring 2004.

- **Coeur d'Alene River Basin Lead and Cadmium Biological Sampling Study**—**IDOH**, with funding and consultation from ATSDR, conducted biological sampling for lead and cadmium in the study population, which was identified through a human census in the **Coeur d'Alene River Basin** study area. The region is characterized by communities that developed at or near old mine portals and ore milling sites or adjacent to mining wastes. In this region, lead and cadmium have been identified as significant environmental contaminants of human health concern. The data collection for this study was conducted during the summer of 1996. Sampling was offered to the entire basin population. A questionnaire was administered to consenting participants through face-to-face interviews and biological samples were collected at the time of the interviews. Public meetings and availability sessions were held to keep interested persons aware of study progress. Participant blood lead and urine cadmium levels were determined using the data collected. Health risks and odds ratios were assessed using approved methods. The final report was released in August 2000.

*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](http://www.atsdr.cdc.gov).*