THE COLLABORATIVE ON HEALTH AND THE ENVIRONMENT - WASHINGTON

RESEARCH AND INFORMATION WORKING GROUP

CONTAMINATED SITES

FACT SHEETS ON HEALTH AND ENVIRONMENT IN WASHINGTON

INTRODUCTION

There are almost 10,000 sites in Washington state contaminated with toxic chemicals, heavy metals, oil, gasoline and other pollutants. About 6,000 of these sites are underground storage tanks that have contaminated the surrounding soil and groundwater. Other types of contaminated sites include polluted sediments in rivers and other water bodies.[1]

The contamination at each site is unique and depends on the type of toxics and the nature and extent of contamination. Because the health and environmental risks depend on the nature of the contamination, the precise health risks are also unique to each site. However, common health risks associated with contaminated sites include:

- Children can ingest contaminated soil and dust because they often play close to the ground and put objects in their mouths. These behaviors can result in significant exposures to contaminated soil and dust;
- Contaminated soil and dust can become airborne, so that local residents can inhale contaminated particles;
- Fish and shellfish intended for human consumption can become contaminated from sediments and water containing toxic chemicals; and
- Contaminated groundwater can be a health risk for people who depend on this type of water source for drinking, cooking, bathing and other uses.

CONTAMINATED SITES IN WASHINGTON STATE

- There are 47 sites in Washington on the National Priorities List as part of the Superfund program to clean up hazardous waste. Most of these sites are found in Benton, Clark, King, Kitsap, Pierce and Spokane counties.[2]
- Approximately 487,000 acres in Washington state have been contaminated with lead and arsenic from metal smelters in Tacoma, Everett, Harbor Island and Northport, Washington and Trail, British Columbia. In addition, 187,500 acres of orchard land have been affected by pesticides containing arsenic and/or lead.[3]

- Health Risk Assessments are performed at Superfund sites to help the US Environmental Protection Agency (EPA) decide whether long-term cleanup is needed, and if so, which methods should be used.[4]

- The Washington State Department of Ecology maintains a Hazardous Sites List. It lists more than 1,000 sites by county.[5] Nearly every county in the state has one or more sites on the list. Most are in the more populous counties in the western part of the state, where there has traditionally been more industry. Sites are ranked on a scale of one to five using the Washington Ranking Method (WARM). A score of one indicates the highest level of concern for environmental health.

- During the years 1944-1972 radioactive iodine (I-131) was released into the air from the Hanford Nuclear Reservation as a result of plutonium production for nuclear weapons. Children in Adams, Benton and Franklin counties were exposed to the highest doses of I-131 through food and milk.[6]

- The Asarco smelter in Tacoma operated for almost 100 years and polluted the air of more than 1,000 square miles in the Puget Sound Basin. Soil in the region still contains arsenic, lead and other heavy metals that contaminated the ground before the smelter closed in 1986.[7,8]

- About 10% of children's play areas (including parks, schools and child care centers) studied in mainland King County in 2004 had arsenic levels higher than the state arsenic standard of 20 parts per million.[9] The study was conducted to assess the effects of air pollution from the Asarco smelter in Tacoma.

COMPARING WASHINGTON STATE NATIONALLY

- In 2005, Washington had the seventh highest number of Superfund sites in the country (46), behind New Jersey (113), Pennsylvania (94), California (93), New York (86), Michigan (66), and Florida (50).

- Nationwide, the Environmental Protection Agency chose 50 Underground Storage Tank (UST) fields contaminated with petroleum to undergo cleanup. Eleven of the sites were in the Northwest, the most of any region in the country.[10]

SOURCES

1 http://www.ecy.wa.gov/programs/tcp/cleanup.html
2 http://oaspub.epa.gov/oerrpage/advquery
3 http://www.ecy/wa/gov/programs/tcp/area_wide/Final-Report/PDF/TF-Report-final.pdf
4 http://www.epa.gov/superfund/tools/today/risk.pdf
5 http://www.ecy.wa.gov/pubs/0609041dd.pdf
6 http://www.atsdr.cdc.gov/hanford/index.html
7 http://www.ecy.wa.gov/programs/tcp/sites/tacoma_smelter/ts_hp.htm
8 http://www.ecy.wa.gov/pubs/0309036.pdf
9 http://www.ecy.wa.gov/programs/tcp/sites/tacoma_smelter/tsp_King_county_studies/King_county_studies.htm
10 http://www.epa.gov/oust/rags/ustfield.htm