

Working in Lead- and Arsenic-Contaminated Soil



More information

Dirt Alert Program:

<https://ecology.wa.gov/DirtAlert>

Former Orchard Lands:

<https://ecology.wa.gov/FormerOrchards>

Worker Safety & Health:

www.lni.wa.gov/safety/

Contact information

Department of Ecology
 Jeff Newschwander
 509-454-7842
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Department of Labor &
 Industries, Safety & Health
 1-800-423-7233

For construction workers, gardeners, landscapers, and their employers

The Washington Department of Ecology's goal is to protect people from health risks caused by exposure to lead and arsenic in soil.

From about 1905 through the 1940s, lead-arsenate pesticide was commonly used in central Washington orchards. That pesticide settled into the soil, leading to large areas of contamination (known as "area-wide" contamination) – mostly in Chelan, Douglas, Okanogan, Yakima, and parts of Benton counties. Lead- and arsenic-based pesticides remain in soil for a long time without breaking down into less harmful compounds.

Ecology's [Former Orchard Lands web page](#) includes maps of potentially affected areas based on land use and based on aerial photographs from 1947. You can also review property records to identify if your work site is in an area of potential contamination.

Workplace safety rules

The [Washington Department of Labor and Industries](#) (LNI) has rules to protect workers from arsenic and lead in the workplace. These apply to any employees exposed to soil within former orchard lands. Employers must comply with all workplace safety rules on toxic exposures, including:

- Arsenic, Chapter 296-848, Washington Administrative Code (WAC)
- Lead, Chapter 296-62, WAC

- Hazardous Waste Operations, Chapter 296-843, WAC

For help understanding and complying with these rules, please contact LNI Safety & Health at 1-800-423-7233. Why it matters

Arsenic and lead are toxic metals. Exposure can increase the risk of certain health problems. Arsenic and lead are not easily absorbed through the skin. However, working in soil can increase the risk of accidentally swallowing soil and breathing dust.

Protect yourself by reducing exposure

- Wear appropriate personal protection equipment to limit dust inhalation.
- Wash your hands with soap. After working in dirt, always wash your hands, especially before eating. Use plenty of soap and hot water — not hand sanitizer. Hand sanitizers don't remove dirt. Use a scrub brush to clean dirt from under your fingernails.
- Take your work boots off at the door. Use a "wipe-off" mat to reduce the amount of dirt and dust coming into your home.
- Dust yourself off outside and wash dirt-covered clothes separately.



Health effects of lead and arsenic

Lead and arsenic in soil do not pose an immediate health risk. However, long-term exposure increases the risk of certain health problems.

In children, lead can cause behavioral problems such as hyperactivity, permanent learning difficulties, and reduced physical growth. In adults, lead can increase blood pressure, affect memory, and contribute to other health problems.

Arsenic can cause a variety of health problems, including heart disease, diabetes, and cancer of the bladder, lung, skin, kidney, liver, and prostate.

Learn more on [Ecology's Dirt Alert – Health Effects web page](#) that includes links to more information from the Washington State Department of Health, Agency for Toxic Substances and Disease Registry, and other agencies.

Special accommodations

To request Americans with Disabilities Act (ADA) accommodation, or printed materials in a format for the visually impaired, contact the Ecology ADA Coordinator at 360-407-6831 or ecyadacoordinator@ecy.wa.gov, or visit ecology.wa.gov/accessibility. People with impaired hearing may call Washington Relay Service at 711. People with speech disability may call TTY at 877-833-6341.