



Arsenic and Lead In the Soil - King County

Protect Your Family!

July 2011



Arsenic and Lead in King County

For almost 100 years, arsenic and lead were blown from a smoke stack at the ASARCO copper smelter in Ruston, Washington. Arsenic and lead landed on soils throughout Pierce and King counties. The smelter closed in 1986, but arsenic and lead remain in the soil and will continue to be a health risk for years to come.

Department of Ecology (Ecology) is managing cleanup of the Tacoma Smelter Plume. The area is too large to dig up all the contaminated soils. Instead, Ecology is using a combination of cleanup and education. See page 2 for more information about Ecology's cleanup work and plans for the future.

King County communities most affected are:

- Vashon-Maury Island
- Federal Way
- Des Moines
- Kent
- SeaTac
- Normandy Park
- Burien
- Tukwila
- West Seattle

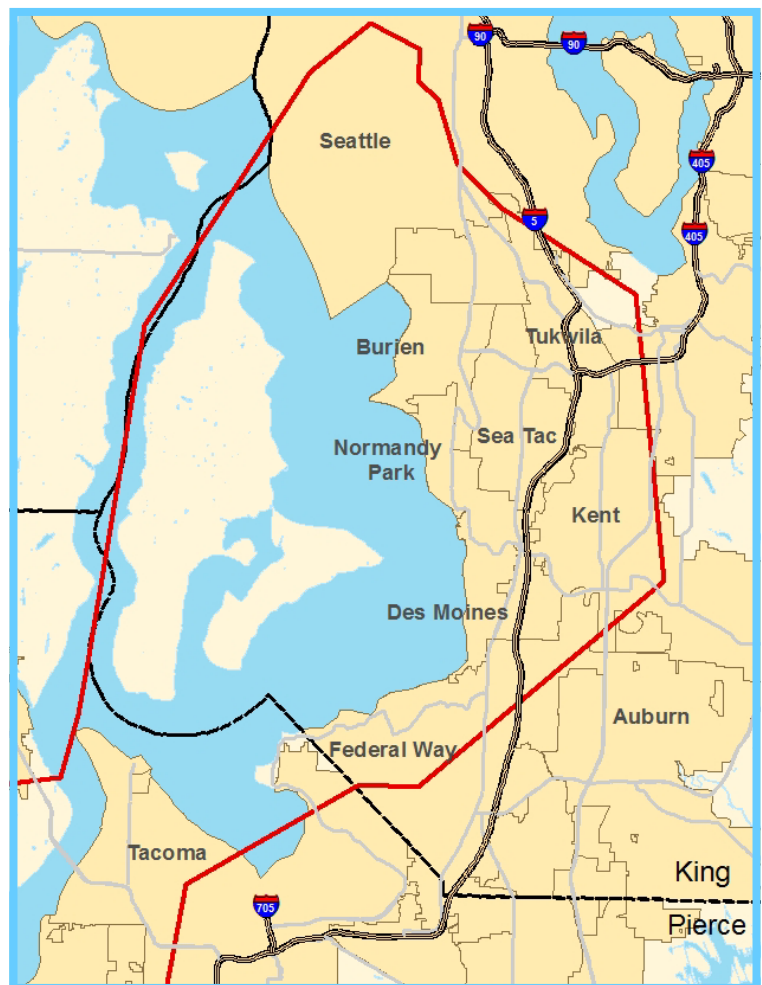
Why does it matter?

Arsenic and lead can harm your health. They are especially harmful to children. See page 2 for more information about health risks.

What can I do about it?

You can start taking healthy actions now! See page 3 for a list of healthy actions to reduce your exposure to contaminated soils.

Use Ecology's soil sampling brochures to test your own soil. See page 2 for more information.



Soil Safety Service Area

Arsenic and Lead in Soil - King County

The Risk to Human Health

Eating soil and breathing dust that contains arsenic and lead can contribute to poor health, especially in young children.

- Lead is linked to developmental disabilities in children and may affect I.Q.
- Arsenic may cause cancer later on in life and may also contribute to heart disease, diabetes, and other health problems.
- Children under the age of 6 are at greatest risk because they put things into their mouths. Dust can be inhaled and is eaten when it falls on food or anything they put in their mouths.

Contact Your Health Care Provider

If you are concerned about exposure to arsenic, lead, or other contaminants, contact your health care provider for more information.

Finding Out What's In Your Soil

Ecology has brochures on how to sample your own soil. Soil sampling can be done without special tools. The main cost is lab analysis, which may be \$30-40.

Brochures are available on Ecology's website or contact us to have them mailed to you (see back page for website and contact information).

Cleanup Information

Ecology's Soil Safety Program samples and cleans up play areas at schools, childcares, and parks. Most schools and childcares have been tested and cleaned up already. Park cleanups are scheduled for 2011-2012. **Ecology does not currently have a program to sample and clean up residential yards.**

Future Cleanup Plans

Ecology does have some funding for cleanup, from a settlement with Asarco. The money will mainly fund sampling and cleanup in the most contaminated parts of the plume. In King County, this is Vashon-Maury Island.

In the fall of 2011, Ecology is putting a cleanup plan out for public comment. This plan includes cleaning up soil in residential yards, and continuing the Soil Safety Program and outreach. To join our mailing list for the public comment period, please contact Hannah Aoyagi at Hannah.Aoyagi@ecy.wa.gov or (360) 407-6790.

Is it safe to garden?

Some vegetables and fruits may take up small amounts of arsenic into their roots or leaves. However, there may be a greater risk from unwashed fruits and vegetables that have small amounts of contaminated soil on them. Wash fruits and vegetables before eating them.

You can take healthy actions like wearing gloves and washing your hands after gardening. We also recommend building raised garden beds.



Healthy Actions are simple things you and your family can do to reduce contact with arsenic and lead in dirt. Even small changes can help everyone to reduce their risk of contact with arsenic, lead, or other harmful chemicals.

Kick Off Your Shoes

Dust and dirt are tracked inside on shoes

- **Leave** shoes at the door or use a wipe-off mat to reduce dirt and dust that gets into your home.
- **Provide** a shoe rack or have an area for shoes at your door.

Use Plenty of Soap and Water

Dirt is found on hands, toys, shoes, clothing, and pets. Washing dirt off is a healthy thing to do. (Hand sanitizers do not remove arsenic and lead from hands.)

- **Wash** your hands well before eating and after working or playing in the soil. Use a scrub brush to clean dirt from under your nails.
- **Wash** heavily soiled clothing separately from other laundry.
- **Wash** children's toys, bedding, and pacifiers often.

Keep Pets Clean

Pets walk, roll and lie down in dirt. When pets come into the house, their fur and paws bring in dirt.

- **Wipe** off all dirt and mud before your pet comes into your home. Brush and bathe your pet often.
- **Give** pets their own bed or place in your home.

Mop, Dust and Vacuum

People and pets track in dirt or it can enter your home in the form of small dust particles through windows and doors. Dust and dirt settles on carpeting, rugs, curtains, upholstered furniture, as well as windowsills and bookcases.

- **Damp-dusting** and vacuuming at least once a week decreases the amount of dust and dirt in your home.
- **Always** use a damp-mop or damp-cloth to dust.

Maintain Your Home and Yard

Covering bare patches and keeping up with maintenance keeps harmful dirt away from your family.

- **Cover** bare patches in your yard with grass, gravel, wood/mulch product or native plants — they require less watering and maintenance.
- **Maintain** the painted surfaces of your home. Homes built before 1978 may have been painted with paint containing lead. When lead-paint chips or wears away, it becomes a major source of lead, both inside and outside the home.
- **Test** your soil (contact Ecology for help).

Eat a Healthy Diet

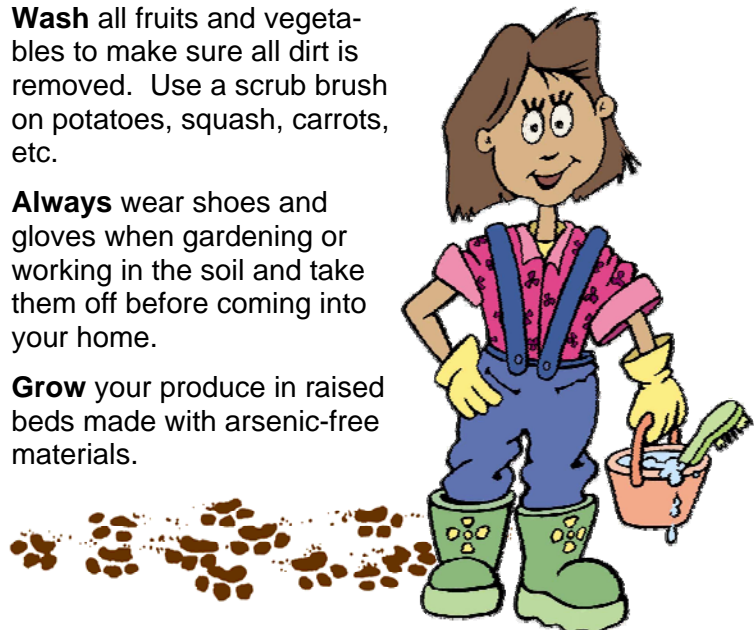
Iron, calcium and vitamin C help to decrease absorption of lead.

- **Eat** a diet rich with these nutrients. Include foods like broccoli, spinach, potatoes, dairy products and citrus fruits.

Wash Fruits and Vegetables

Arsenic and lead may be in dust and dirt found on the surface of fruits and vegetables. There is a slight chance that leafy vegetables, like lettuce or kale, grown in contaminated soil may absorb very small amounts of contaminants.

- **Wash** all fruits and vegetables to make sure all dirt is removed. Use a scrub brush on potatoes, squash, carrots, etc.
- **Always** wear shoes and gloves when gardening or working in the soil and take them off before coming into your home.
- **Grow** your produce in raised beds made with arsenic-free materials.






DEPARTMENT OF
ECOLOGY
State of Washington

PO Box 47775

Olympia, WA 98504-7775



 Please recycle.

Tacoma Smelter Plume Information for King County Residents Asarco Tacoma Smelter Site

Facility Site ID #: 89267963

If you need this publication in an alternative format, call reception at (360) 407-6300. Persons with hearing loss, call 711 for Washington Relay Service. Persons with speech disability call 877-833-6341.

**Public Health—Seattle & King County has discontinued its
Dirt Alert program.**

Please contact **Department of Ecology** for Dirt Alert information:
Hannah Aoyagi, 360-407-6790, Hannah.Aoyagi@ecy.wa.gov or visit
<http://www.ecy.wa.gov/toxics/tacoma-smelter.html>



DEPARTMENT OF
ECOLOGY
State of Washington