

# Frequently Asked Questions

## Tacoma Smelter Plume

September 2014

## Buying and Selling Real Estate in the Tacoma Smelter Plume

### For real estate professionals, sellers, and buyers

The Tacoma Smelter Plume is a 1,000-square-mile area contaminated with arsenic and lead (map on back). For over 100 years, Asarco's former copper smelter in north Tacoma released arsenic, lead, and other heavy metals into the air. The wind carried these pollutants and they settled on surface soils across parts of King, Pierce, Thurston, and Kitsap counties.

### Why It Matters

There are legal, ethical, and business reasons to learn more about this issue. All people have a right to know about dangers in their environment, including home buyers. Plus, homeowners may be eligible for free services, such as:

- Soil testing.
- Soil removal and replacement.
- Education about lowering exposure to soils, including nailbrushes, damp dusting cloths, and other materials.

### Arsenic and Lead in Soil and Risks

#### Q: What is the state doing about this issue?

**A:** We are testing soils across a wide area and offering free soil removal for yards with the highest levels of arsenic and lead. We are also cleaning up play areas at schools, parks, and childcares. We cannot clean up all of the soil, so we are also raising awareness and teaching people how to lower their exposure to soils.

Soil cleanup and simple "healthy actions" can greatly reduce exposure. Healthy actions include washing hands after contact with soil, taking off shoes at the door, and keeping the home and children's toys clean.

### MORE INFORMATION

#### Smelter Search

Check if a home is in an affected area and what services are available: <http://fortress.wa.gov/ecy/smeltersearch>

#### Arsenic in Soils Database

Search for soil testing results and soil removal information: <http://fortress.wa.gov/ecy/areispublic>

#### Local Dirt Alert Programs

Health questions, free soil testing



Tacoma-Pierce  
County Health Dept.

Greg Tanbara, (253) 798-4784

E-mail: [DirtAlert@tpchd.org](mailto:DirtAlert@tpchd.org)

Website: [www.tpchd.org/DirtAlert](http://www.tpchd.org/DirtAlert)

Public Health—Seattle & King County

Denise Sharify, (206) 477-DIRT

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Website:

[www.kingcounty.gov/health/tsp](http://www.kingcounty.gov/health/tsp)

#### Department of Ecology

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**Q: Are risks from Asarco contamination decreasing over time?**

**A:** Yes, after the smelter closed, studies showed decreased levels of arsenic in people living nearby. Over the past 20 years, most of the highest levels were cleaned up. Now, we are working on cleaning up the next highest levels. Progress depends on homeowners being aware of this issue and signing up for soil sampling and soil removal.

**Q: Will the Tacoma Smelter Plume ever be completely cleaned up?**

**A:** No, the state does not have enough resources to clean up all the Asarco contamination. Arsenic and lead can remain in surface soils for thousands of years. The only feasible cleanup methods are removing it, covering it, or diluting it by mixing it with clean soil.

**Q: What are the health effects of arsenic and lead?**

**A:** Scientists have linked long-term exposure to arsenic to heart disease, diabetes, and cancer of the bladder, lung, skin, kidney, liver, and prostate. Lead is especially harmful to children. It can cause behavioral problems, permanent learning difficulties, and reduced physical growth.

**Q: How much of a risk do arsenic and lead in soils pose?**

**A:** Arsenic and lead from the Tacoma Smelter Plume pose a small, long-term risk. However, some people may be at a much higher risk than others. The main risk is from swallowing contaminated soils. The level of risk depends on:

- The levels of arsenic and lead in soil.
- How much soil you swallow.

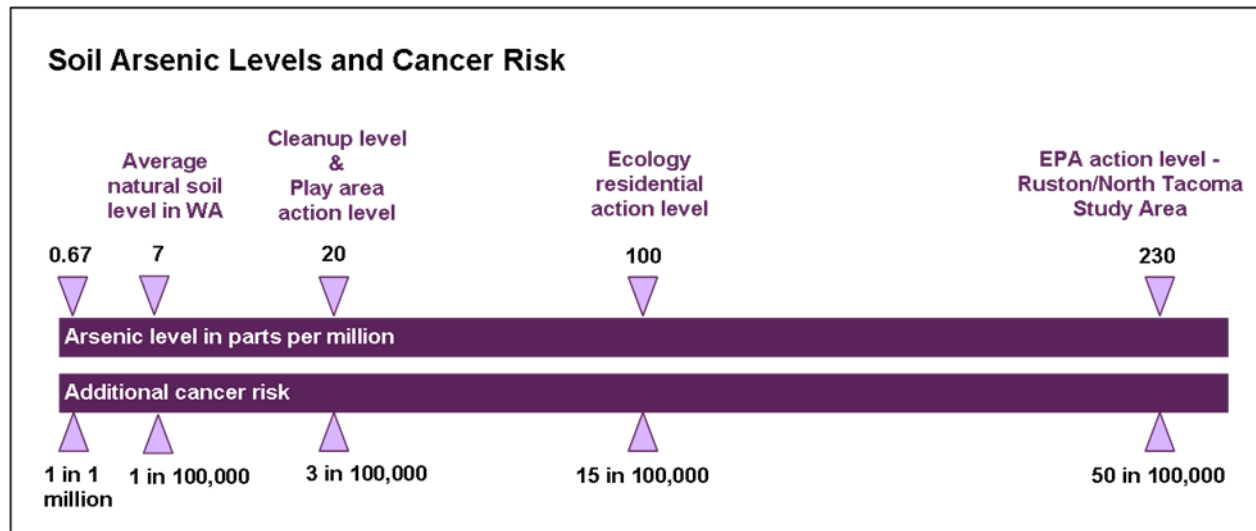
**Q: What is the level of cancer risk from arsenic?**

**A:** At the state cleanup level of 20 parts per million (ppm), the cancer risk is 30 in one million. That means in a population of one million, there may be 30 cases above the background cancer rate. In other words, there would be 30 more cases of cancer than if there were no arsenic in soil.

For many toxins, the state cleanup level is set at a one-in-a-million risk. However, “background” (the average natural soil arsenic level) is already above this level (chart on page 3).

**Q: What is the level of health risk from lead?**

**A:** At the state cleanup level of 250 ppm lead, 99% of children should have blood lead levels under 15 micrograms per liter (ug/L). This threshold was set in 1991, but today we know levels above 5 ug/L can harm children.



**Q: Who are we trying to protect from arsenic and lead?**

**A:** State law requires us to protect the most vulnerable people, like the very young, not the average healthy adult. Children and babies' growing bodies are sensitive to toxins and they tend to play on the ground and put dirty hands in their mouths.

Our arsenic risk calculations are based on a child's lifetime cancer risk from exposure to contamination. Lead risk is also based on impacts to children.

**Q: Are there any studies that prove Asarco contamination is causing cancer?**

**A:** No, the few studies we know of did not show a statistically significant link between Asarco contamination and cancer or deaths. At the levels we typically see in the Tacoma Smelter Plume, you would need a very large study to see an increase in cancers.

We do know that arsenic is a potent cancer-causing agent, based on thousands of scientific studies. We also know that arsenic can easily make its way from soil into the human body.

**Soil Contamination and Real Estate**

**Q: How can a buyer find out if a property has this contamination?**

**A:** Start by checking the Arsenic in Soils Database at <https://fortress.wa.gov/ecy/areispublic/>. If there is no record, we recommend asking the seller if they had sampling done or took their own samples. If you need help interpreting the results, contact your local Dirt Alert program (page 1).

Depending on the neighborhood, the homeowner may qualify for free soil sampling through their local Dirt Alert program. [DirtAlert.info](http://DirtAlert.info) also has contact information for Pierce and King County Dirt Alert. Buyers can also sign up for soil sampling once they own the property.

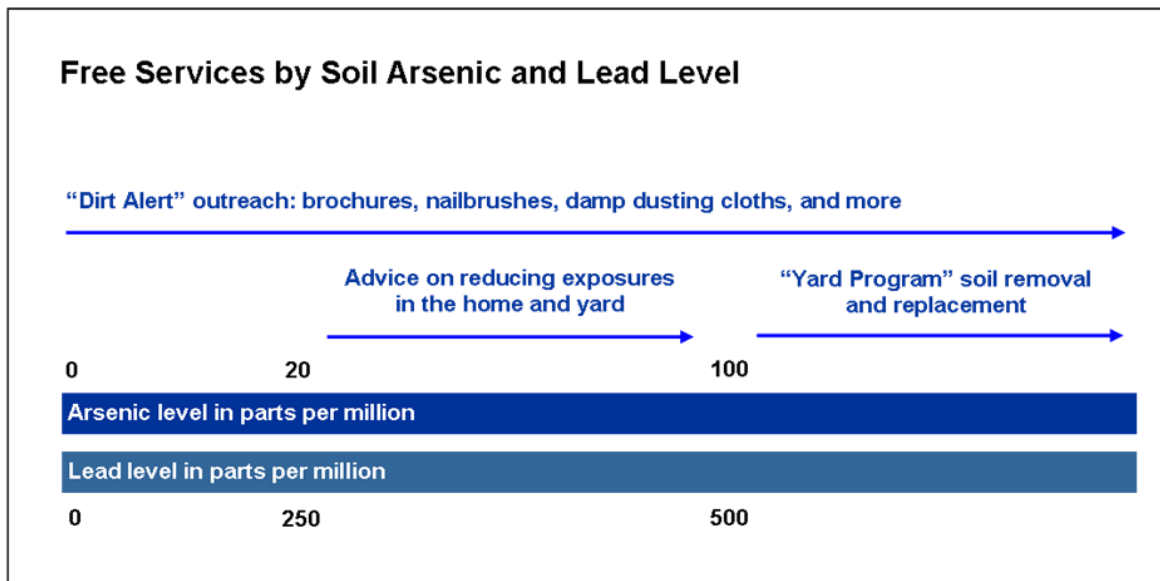
### Q: What must sellers disclose?

**A:** Sellers of real estate are subject to [Chapter 64.06 RCW](#). This law creates seller disclosure forms with specific questions about the property being sold. Sellers must also disclose “adverse material defects,” which could include soil contamination. However, each situation is very fact specific, and so sellers and their real estate brokers should consult legal counsel about disclosure obligations.

**Note:** Arsenic and lead levels vary greatly throughout the Tacoma Smelter Plume. Being inside the plume area does not mean a property has contamination. Soil sampling is the only way to know for certain.

### Q: What should a buyer know when purchasing a contaminated property?

**A:** Arsenic and lead from the Tacoma Smelter Plume pose a small, long-term risk, so we recommend finding out what’s in the soil. Depending on the arsenic and lead levels in your yard, you may qualify for free services in the chart below. Contact your local Dirt Alert program (page 1) to learn more.



### Q: Will Ecology ever require a homeowner to get their yard cleaned up?

**A:** Probably not. Our free services are all voluntary, but Ecology does have the legal authority to require action if there is a serious, immediate threat to public health. We would still pay for the cleanup, as long as it is Tacoma Smelter Plume contamination.

Home buyers planning to open a licensed childcare business must contact Ecology for free soil sampling. They should check with the Department of Early Learning for a full list of licensing requirements.

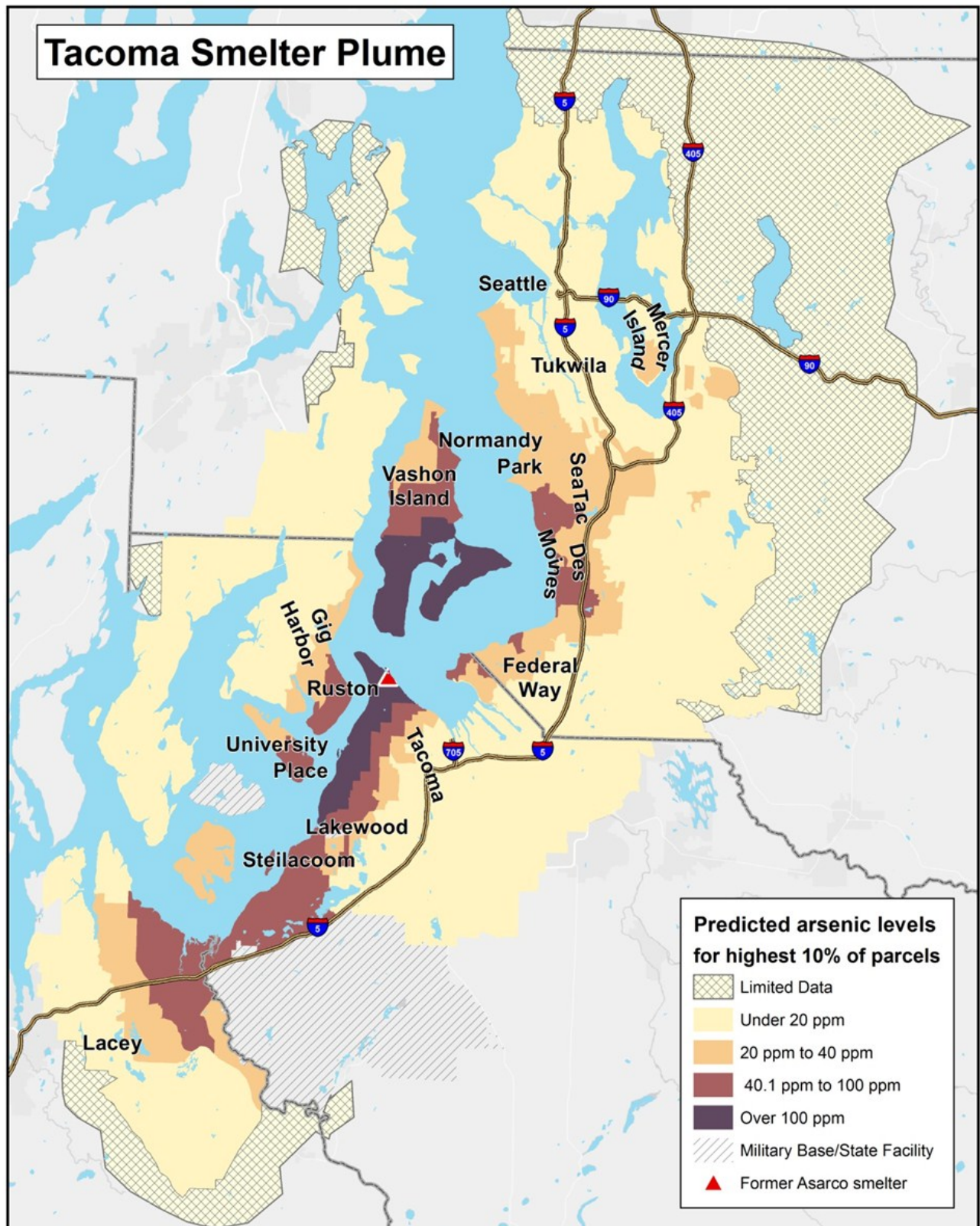
**Q: Is there any other kind of pollution liability for homeowners?**

**A:** Yes, homeowners can be liable for other types of pollution or other sources of arsenic and lead. Ecology does not typically enforce the state cleanup law against homeowners, except where there is a serious, immediate threat to public health.

**Also,** redevelopment and grading work may trigger local permit requirements for soil sampling, cleanup, storm water runoff control, and soil disposal. It depends on the city, town, or county.

We are not aware of federal cleanup liability. In the past, the U.S. Environmental Protection Agency (EPA) did require soil sampling in the neighborhoods near the former Asarco smelter. However, EPA has finished work in the neighborhoods and is now focusing on cleaning up the former Asarco property.





Areas impacted by arsenic and lead soil contamination from the former Asarco smelter.

If you need this fact sheet in another 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.