

Everett Smelter Cleanup - Frequently Asked Questions



WEBSITE

www.ecy.wa.gov/programs/tcp/sites_brochure/asarco/es_main.html

INFORMATION HOTLINE

(425) 446-1024

This is a local number and will be answered 24 hours a day.

Special accommodations

To request ADA accommodation for disabilities, or printed materials in a format for the visually impaired, call Ecology at 425-649-7000 or visit <http://www.ecy.wa.gov/accessibility.html>.

Persons with impaired hearing may call Washington Relay Service at 711.

Persons with speech disability may call TTY at 877-833-6341.

Cleanup Site ID #4298

Facility Site ID #2744

Ecology cleans up arsenic and lead in Everett

The Washington Department of Ecology (Ecology) is cleaning up arsenic and lead contamination left behind by the Asarco smelter, in residential and industrial areas of northeast Everett.

We have now completed cleanup on more than half of the approximately 700 homes in the cleanup area, as well as American Legion Memorial Park.

The Asarco smelter operated from 1893-1912, and contamination was discovered in 1990. Ecology managed the cleanup of the most highly contaminated properties from 1999 to 2007.

In 2009, Ecology received funding through a bankruptcy settlement with Asarco to continue with cleanup efforts. We have spent most of the settlement on residential cleanup and investigation of the industrial area. We are working with property owners to continue cleanup as funding allows.

Frequently Asked Questions

1. Where was the smelter located?

The smelter facility was located in northeast Everett at what is now the interchange of East Marine View Drive and State Route 529. See Figure 1 (on page 2) for the approximate location.

2. How did you determine the site boundary?

Ecology used soil data from several years of environmental studies to determine the site boundary (see Figure 1). The site is the area where contamination is known to exist or suspected to exist. It includes the former smelter facility and about 1.1 square miles of the surrounding area.

How big is the cleanup area?

The total cleanup area is 1.1 square miles and is divided into two sections:

- Uplands—residential properties, 0.7 square miles.
- Lowlands—mostly industrial properties, 0.4 square miles.

CLEANUP QUESTIONS

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Figure 1. Everett Smelter Cleanup Site



The cleanup site is divided into Upland (residential) and Lowland (industrial/commercial) cleanup areas. The two areas are on different cleanup schedules.

3. What type of contamination is there?

On the former smelter facility:

Smelter operations contaminated the soil with high levels of arsenic and lead. Contamination also included lower levels of other toxic metals—cadmium, antimony, mercury, and thallium. In the area of the facility where arsenic trioxide was processed, high levels of contamination were found at depths down to 15 feet.

When the facility was demolished, highly contaminated dust, bricks, and wood scraps were left behind. All of this contamination, except what was buried under roadways, was removed between 1999 and 2005.

In the area surrounding the former smelter facility:

Smokestacks spread arsenic and lead particles over the Upland area, resulting in widespread soil contamination. Groundwater in the Upland area does not appear to be impacted by the contamination in the soil.

Learn more about health impacts from:

Arsenic

www.doh.wa.gov/CommunityandEnvironment/Contaminants/Arsenic

Lead

www.doh.wa.gov/CommunityandEnvironment/Contaminants/Lead

Healthy Habits



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 fruits and vegetables grown at home before eating them to remove soil that may be on the surface. Grow vegetables in raised beds.

Arsenic is the main contaminant of concern because it spread much further than the other metals. Some lead was found along with the arsenic, generally in lower amounts. When we clean up arsenic-contaminated soil, any lead or other metals will also be removed.

Slag, a smelter by-product, was dumped downhill onto the Lowland area. Waste debris from the facility operation remains on site. This contamination impacted groundwater and soil in the Lowland area.

4. How can I be exposed to arsenic and lead? How could it affect my health?

The main route of exposure is swallowing or inhaling contaminated soil. Arsenic and lead are not easily absorbed through skin.

Young children are more vulnerable than adults. They normally put their fingers and other things in their mouths, even if they are dirty or dusty. Because children are still growing, they are more sensitive than adults to contamination.

Ecology worked with the Washington Department of Health and the Snohomish Health District to evaluate health risks from the smelter. Arsenic and lead in soil do not pose an immediate health risk. However, exposure over time may increase your risk of long-term health effects.

Arsenic can cause cancer and other health problems, including heart disease and diabetes. Lead can cause behavioral problems, learning disabilities, and reduced physical growth in young children.

Many factors influence the types of health problems that may occur, such as:

- the amount of the metal to which a person is exposed,
- the length of time exposure occurs, and
- an individual's sensitivity to the harmful effects of the metal.

5. How can I reduce my family's exposure to the contamination?

Practicing the Healthy Habits listed throughout this brochure will reduce your exposure to contaminated soil.

6. What is the cleanup level for arsenic and how was it set?

The cleanup level for arsenic on the Everett Smelter site is 20 parts per million in the top 12 inches of soil. This is considered the "urban background" level for Washington soils. We use the guidelines in Table 1 (on page 4) for soils deeper than 12 inches.

Ecology calculates and sets cleanup levels based on risk of impacts and exposure according to state law (WAC173-340 Model Toxics Control Act).

Table 1. Cleanup levels for Everett Smelter Site

Depth of Soil	Average Arsenic Level	Maximum Arsenic Level (at one sample point)
0-12 inches	20 ppm	40 ppm
12-24 inches	60 ppm	150 ppm
24-36 inches	150 ppm	500 ppm

ppm = parts per million

7. How much soil will you remove as a part of the cleanup?

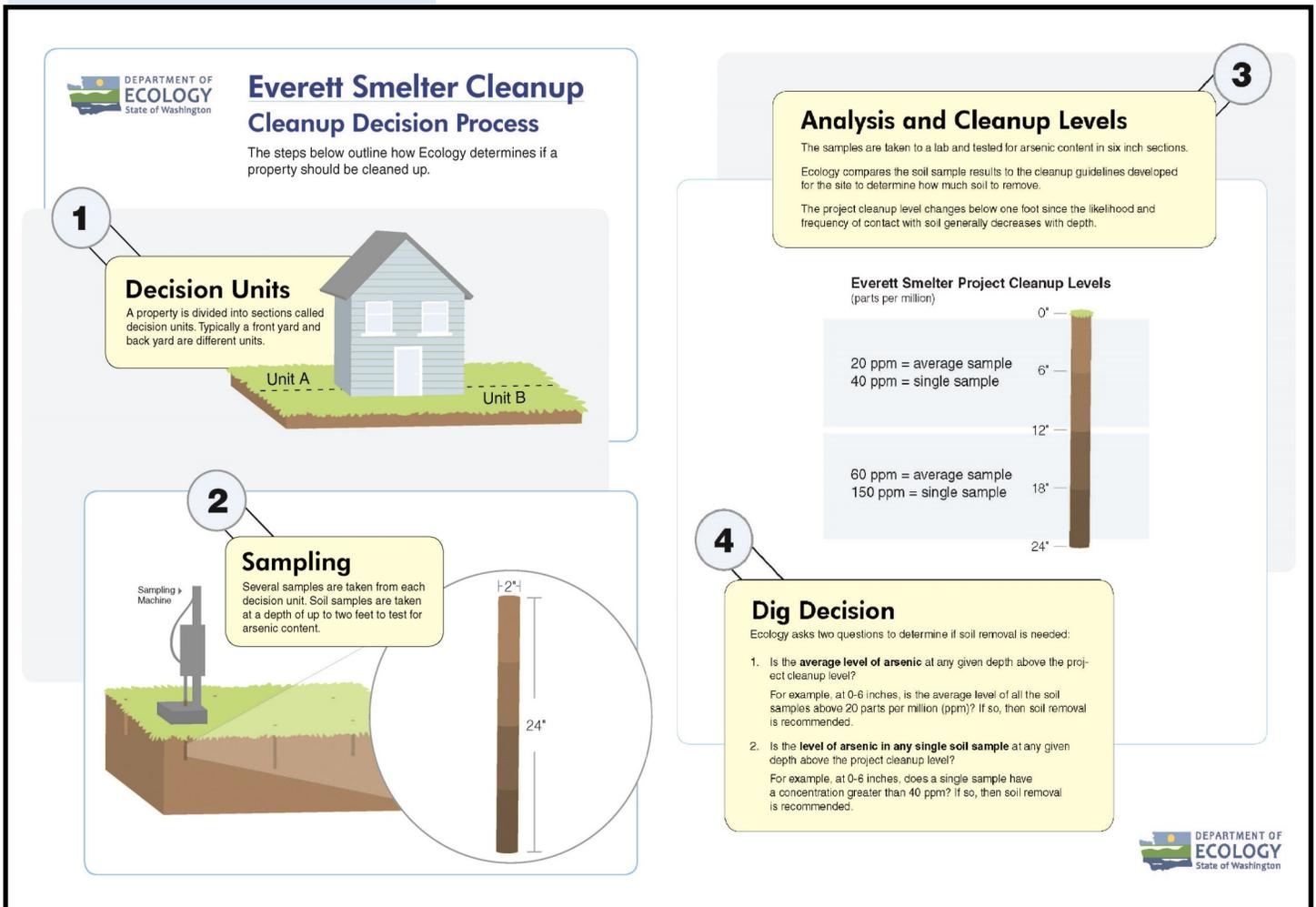
Ecology developed a framework for soil removal decisions, based on public input when the cleanup action plan was developed in 1991.

Because the soil contamination came from smokestack emissions, it is found mostly in the top 1-2 feet of soil. This is also where people are most likely to have direct contact with soil. Ecology will not dig below two feet on any properties outside the area immediately adjacent to the former smelter footprint.

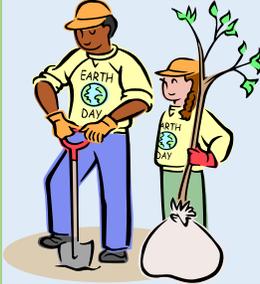
For soil deeper than 12 inches, we use the concentrations in Table 1 to determine whether soil needs to be removed. Higher levels are allowed at greater depths, because it is less likely that people will come in contact with this soil. See Figure 2 for an explanation of our decision process.

On some properties, Ecology has removed up to two feet of soil. On other properties, less soil needed to be removed. There will be areas where no soil removal is required, especially as we move further away from the former smelter facility.

Figure 2: Dig Decision Diagram



Healthy Habits



Use caution if working with soil. Wear gloves and wash dirty clothes separately.



Mop, damp dust and vacuum often to remove dirt tracked in from outside.

8. When will you clean up my property?

Ecology will continue to clean up residential properties over the next several years as funding is available.

We started with properties closest to the former smelter facility, which had higher levels of contamination. We're moving outwards to the site boundary, where contamination is generally lower.

We will contact you a month or two before sampling. We will contact you at least a year in advance to start planning for cleanup.

9. Can I decline the program now and join later?

Generally, no. It's simplest and most cost effective to sample and clean up properties in groups based on location. If you decline sampling or cleanup with your group, you will most likely not be able to participate.

10. Will my whole property be included in the cleanup? Will you dig under my house or driveway?

We only remove soil from areas where people may come into contact with it. We do not dig underneath houses, permanent sheds and other buildings, permanent planters, sidewalks, or driveways.

Exceptions are sometimes made in cases of sidewalks or damaged driveways that do not survive the removal of soil around them. In such cases, the sidewalk or driveway is replaced during cleanup.

11. Will the cleanup remove all the arsenic contamination from my property?

We will only dig up the top 1-2 feet of soil during cleanup. Arsenic contamination may remain below.

After our contractors remove contaminated soil, they put down a geotextile fabric before placing clean soil. This fabric is an indicator to future owners that the soil below may contain higher levels of arsenic. Take precautions to limit your exposure to contamination if you must disturb soil below the fabric.

12. Will arsenic from the street or other areas that have not been cleaned up recontaminate my property?

We take steps to prevent recontamination of a property that has been cleaned up. Once the contaminated soil is removed, a geotextile fabric will be placed at the bottom and sides of the dig area. This will help to keep the clean soil in place and prevent soil from adjoining properties from moving into cleaned up areas.

Ecology's contractors are required to follow best management practices to reduce the spread of contaminated soil during removal.

Figure 3. Removing Contaminated Soil



These practices include dust control, load covering, and regular street sweeping with a vacuum truck.

13. How will Ecology ensure the quality of replacement soil?

Soil mixes specified in the project manual for the contractor will have high organic content to keep landscaping healthy.

We require test results from soil suppliers showing that the soil is free of large rocks, metals and other toxins. We visually inspect the soil prior to installation.

14. How do you ensure the quality of new landscaping installed after cleanup?

We warranty the contractor's work and products for one year after the landscape restoration work is complete.

Any work that is not completed according to project specifications will be repaired within the warranty period. We will replace any plants, shrubs or grasses that do not survive the first year after cleanup as a result of poor work by the contractor.

We will inspect your property once after cleanup is complete, and again one year after cleanup. After the inspection, we will address landscaping issues that remain.

Figure 4. Adding Clean Soil



15. What happens if my property is damaged during the cleanup?

The contractor hired by Ecology is responsible for any damage to your property that occurs as a result of the cleanup work.

Ecology provides oversight of the contractor during the work. We will work with each property owner to identify any damage that may have occurred. We will work with the contractor to make sure the damage is repaired.

Figure 5. Restoring Grass and Landscape Plants



16. Do I have a responsibility to tell my tenants, or a new owner, about the contamination?

Yes. If you rent your property, you should notify tenants so they can take healthy actions to reduce their exposure to contaminated soil. Ecology lets tenants know about the cleanup by mail. It is very important to share information about the cleanup with your tenants, because the work will impact them as well (see Figures 3 to 6).

If you sell your property, you are legally responsible to disclose all known information about contamination to potential buyers. (RCW 64.06.020 Improved Residential Real Property - Seller's Duty)

When cleanup is complete, you will receive a property record containing information about all work done on the property. It will also include details about where contamination remains.

Healthy Habits



Take your shoes off in the house so you don't track dirt in from outside.



Keep pets clean. Wipe off excess dirt and mud before your pet comes inside. Brush and bathe your pet often. Give pets their own beds.

We also provide property records to owners who declined cleanup, or whose property did not need cleanup. This record includes the soil data, and documentation that the owner declined to have Ecology clean up the property.

These records should be kept with the house. If you sell the house, this information should be passed on to the new owner.

17. What are my responsibilities as a homeowner during cleanup?

You must remove all personal items from the yard before work begins. We also need you to maintain your yard prior to the start of work. Remove large stumps or woody shrubs in areas you want cleaned up. Otherwise, we will remove soil as close as we can around them, leaving some contamination.

Please read all communications we send, and respond promptly.

After cleanup, water your yard regularly as recommended, and leave grass taller to help with root development. Our contractor will water and care for the new landscaping for 60 days after it is installed. After this, you must care for the new lawn and other plants to maintain your warranty rights.

18. How does the cleanup affect my property's resale value?

We do not know how the cleanup will impact the value of your home. We recommend that you contact a local real estate agent or your local tax assessor's office to find out more information about your property values and factors that may impact resale values.

19. Are there any costs to the homeowner?

A normal cleanup should not cost the homeowner anything. After cleanup, expenses may include extra watering or fertilizing of your new lawn and any extra landscaping you desire.

20. How can I find out if past work was done on my property?

You can visit our website or call the project hotline to find out if your property has already been cleaned up.

21. My property is on the boundary of the cleanup area. Can it be included in the cleanup?

We can only clean up properties inside the cleanup area boundary.

The boundary generally runs along property lines. We will be testing soil to the boundary. We will address arsenic contamination above the site cleanup levels along the boundary at that time. Generally, soil sampling data indicate that levels of contamination decrease as we get further from the former smelter facility.

Figure 6. Soil Sampling



22. My house is outside the cleanup area and I would like to have my soil tested. What are my options?

Ecology is not sampling properties outside the site boundary. Visit our website for guidance on soil sampling and disposal.

23. What is happening with the City Parks?

Ecology sampled Everett City Parks within the cleanup area in 2011 and 2012 (Figure 6). We worked with the City of Everett Parks Department to clean up American Legion Memorial Park in 2015-2016. Wiggums Hollow Park and Viola Oursler Viewpoint will be cleaned up as funding is available.

24. What about the Lowland area?

The Lowland area (Figure 7) is a mostly industrial area east of East Marine View Drive along the Snohomish River. This area was an undeveloped flood plain and tide flat when the smelter operated.

Ecology finalized the Cleanup Action Plan in November 2016. Soil, groundwater, surface water, and some areas of the river sediments are contaminated with arsenic, lead, and mercury.

We'll be cleaning up 14 different areas, in phases over the next several years. Cleanup methods will include soil removal, capping, institutional controls, and monitored natural attenuation.

The first phase is removing highly contaminated material that is buried under the intersection of East Marine View Drive and the northbound ramp to State Route 529. We must remove this material because it is polluting groundwater that travels into the Snohomish River.

Figure 7. Lowland Area

