

# Residential Yard Sampling and Cleanup Program (“Yard Program”)

The Department of Ecology (Ecology) is cleaning up the most contaminated yards in the Tacoma Smelter Plume under the Residential Yard Sampling and Cleanup Program (Yard Program). The plume is a 1,000 square mile area of arsenic and lead soil contamination from the former Asarco smelter in Ruston and North Tacoma.

## Purpose of this FAQ

This fact sheet explains how the Yard Program works and what happens during soil sampling and cleanup. One section covers how Ecology will address yards in the Ruston/North Tacoma EPA Study Area (or Study Area).

The neighborhoods closest to the former smelter are part of a federal Superfund cleanup site. Since 1993, the U.S. Environmental Protection Agency (EPA) has been cleaning up yards in the Study Area.

## Yard Program Service Area

### Q: How did Ecology set the service area?

**A:** To set the service area (page 2), we included areas where we predicted at least 10% of yards have arsenic over our threshold of 100 parts per million (ppm). We used past sampling data, distance from the former smelter, wind direction, and other factors to predict these areas.

### Q: Am I required to participate if I live in the service area?

**A:** No, this is a voluntary program and you may opt out when we contact you. However, we strongly encourage you to participate because you could have high levels of arsenic and lead in your yard.

## TOPICS

- Purpose of the FAQ
- Service area and sequence
- Ruston/N. Tacoma Study Area
- Soil sampling and results
- Cleanup and yard restoration

## MORE INFORMATION

### Cleanup Manager

Amy Hargrove  
(360) 407-6262  
[Amy.Hargrove@ecy.wa.gov](mailto:Amy.Hargrove@ecy.wa.gov)

### Outreach Coordinator

Crescent Calimpong  
Phone: (360) 407-6790  
[Crescent.Calimpong@ecy.wa.gov](mailto:Crescent.Calimpong@ecy.wa.gov)

### Ecology’s website

<http://www.ecy.wa.gov/toxics/tacoma-smelter.html>

### Sampling results

<https://fortress.wa.gov/ecy/areispublic/>

## HEALTH QUESTIONS

Tacoma-Pierce  
County Health  
Department  
<http://dirtalert.info/>

Public Health—Seattle & King  
County  
<http://www.kingcounty.gov/health/tsp>



**Q: Can I decline the program now and join later?**

**A:** No, if you decline or fail to respond now, you will not be able to join the program later.

**Q: How much advance notice will I receive before sampling and cleanup?**

**A:** We will contact you a month or two before sampling. We will contact you one year in advance to start planning for cleanup work.

**Yard Program Service Area Map**

Ecology is offering soil sampling to around 4,600 homes in the **service area** (orange), except in the EPA Study Area.

Inside the **EPA Study Area**, we already have soil sampling results from the Superfund cleanup that happened there. We are offering cleanup to around 700 homes in this area.

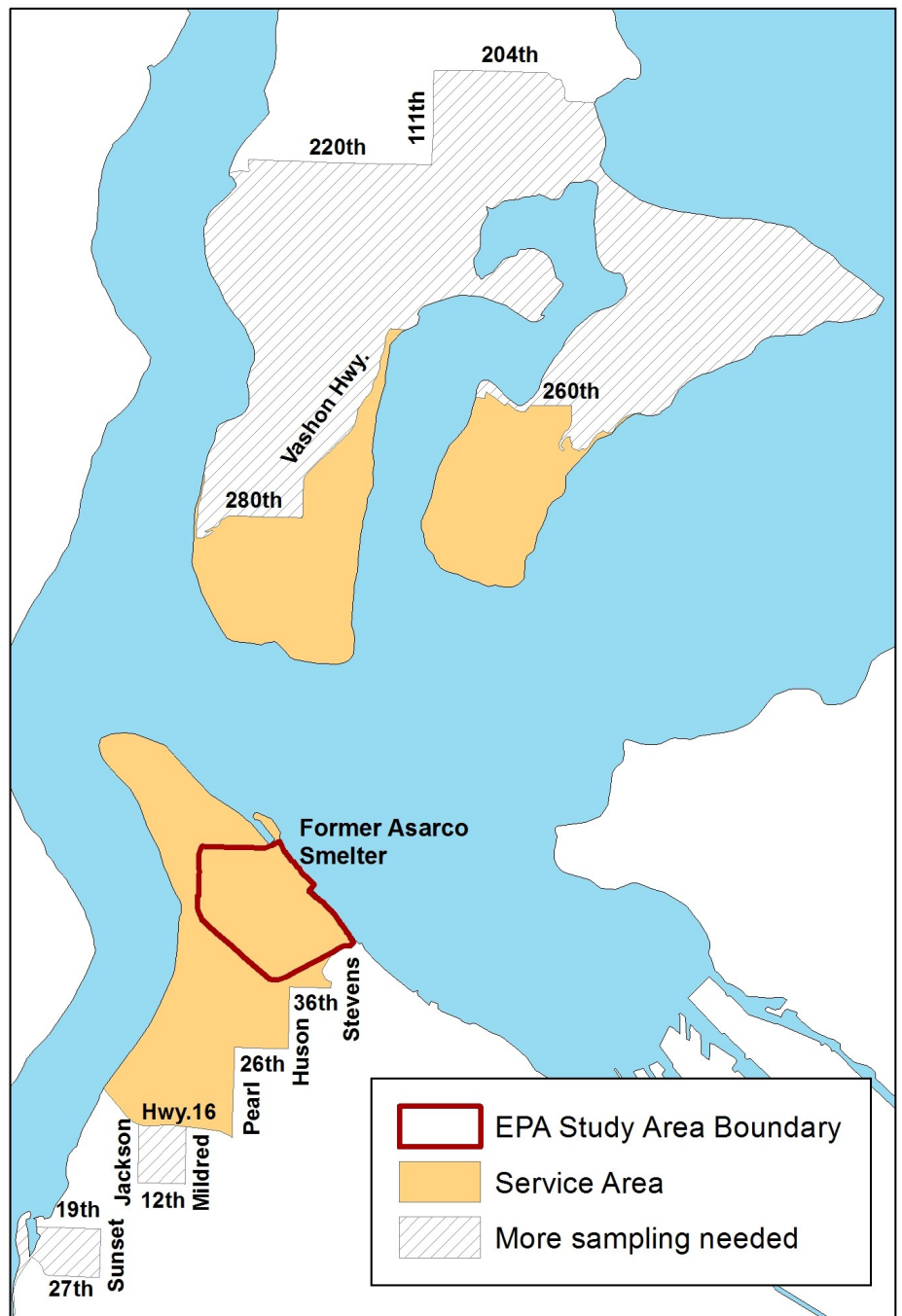
We **need more soil samples** from the hatched areas. We don't have enough data to either add them to the service area or exclude them.

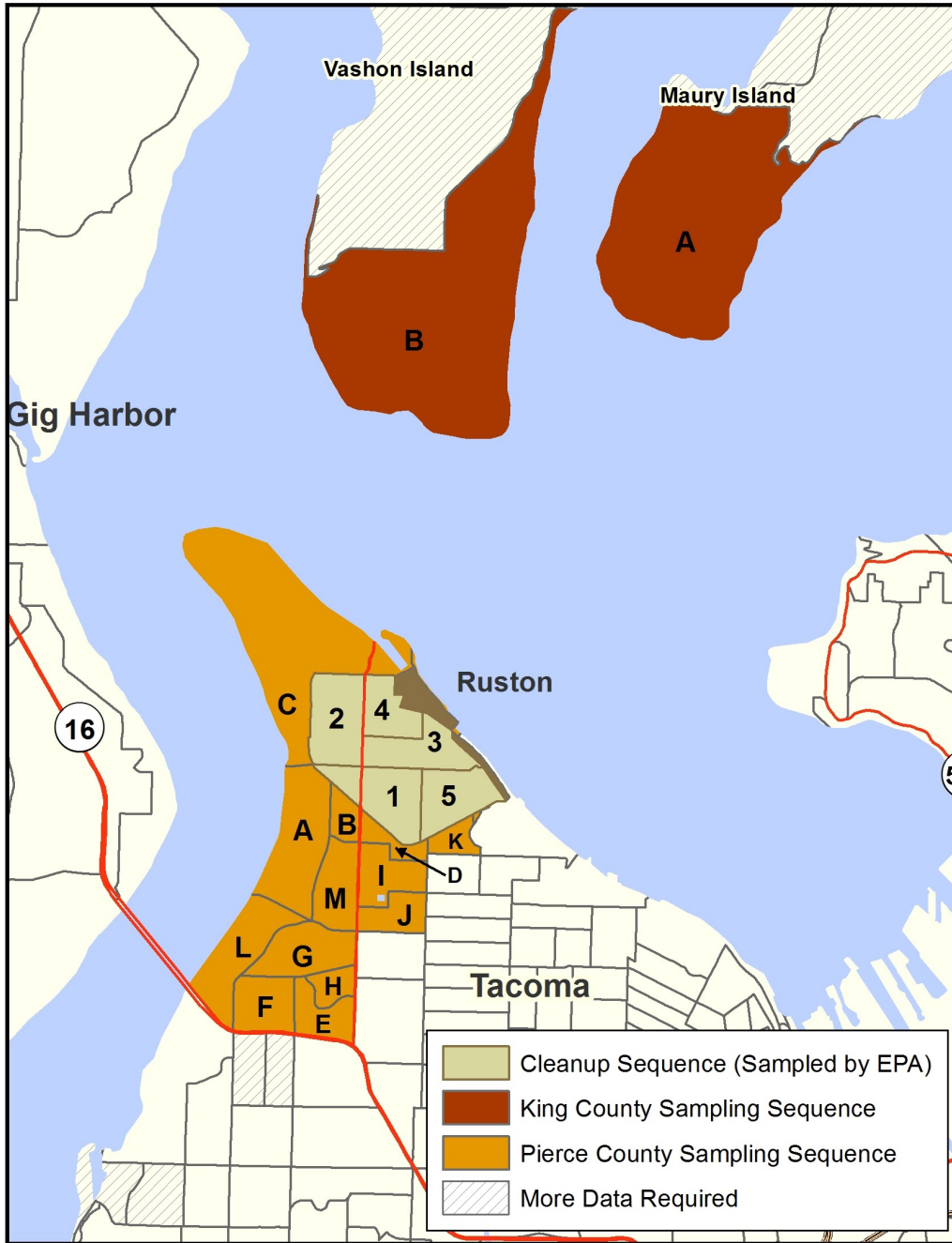
**Map method**

This map shows areas where we expect 10% or more yards to have arsenic over 100 parts per million (ppm).

We used past sampling data, distance from the former smelter, wind direction, and other factors to predict these areas.

Every 2 years, we use new data to update the map. The more data, the better our predictions.





**Yard Program Sequencing Map**

**1. Ruston/N. Tacoma Cleanup began in 2013**

This area already had sampling results from the Superfund cleanup.

Ecology started contacting homes in area 1 in 2013. We are currently working in Areas 1 and 2, and will continue to work over the next several years through areas 1 to 5.

**2. Vashon-Maury Island Sampling began in 2013**

Ecology completed sampling on 324 homes in the fall of 2013.

In summer 2016, we plan to complete sampling on the island .

**3. Tacoma Sampling 2013 or 2014**

We are offering sampling to 100 homes at a time. As of spring 2016, we completed sampling in areas A-K.

Cleanup will begin in 2017.

We continue to sample the areas where more data are needed (hatched areas).

**Q: Some neighborhoods are marked “more data required”—what would prompt Ecology to add those areas to the program?**

**A:** We plan to collect more samples, especially from older homes, which are more likely to have high levels. We will use the same process we used to create the service area map, adding in the new data. If the percent of yards predicted to be over 100 ppm increases, we might offer sampling for more yards in that area.

## Program Sequence

### **Q: Where and when did the program begin?**

**A:** In 2013, we began cleanup on a group of 8 homes in the EPA Study Area (area 1 shown in the map on page 3). Late in 2013, we began soil sampling on Maury Island and in areas of Tacoma outside the EPA Study Area.

### **Q: When will you reach my neighborhood?**

**A:** We do not know how long it will take to sample and clean up each neighborhood. To learn more about our planned work, please visit <http://www.ecy.wa.gov/toxics/tacoma-smelter.html>. To receive regular email updates on our schedule, please contact Crescent Calimpong at [Crescent.Calimpong@ecy.wa.gov](mailto:Crescent.Calimpong@ecy.wa.gov).

### **Q: Can I sign up for soil sampling now?**

**A:** Yes, you can sign an access agreement for sampling at any time! Visit our website for an access agreement or call to have one mailed to you. Contact Crescent Calimpong at [Crescent.Calimpong@ecy.wa.gov](mailto:Crescent.Calimpong@ecy.wa.gov) or 360-407-6790 for help or to submit a signed agreement. **If you do not want to sign up now, we will contact you when we reach your neighborhood.**

## Ruston/North Tacoma Study Area (Superfund Cleanup Area)

### **Q: Why is Ecology doing cleanup in the Ruston/North Tacoma Study Area?**

**A:** EPA has cleaned up the worst contamination—arsenic levels of 230 ppm and above. However, Ecology has a lower action level of 100 ppm. We are offering cleanup for yards where the property has average arsenic between 100 and 230 ppm.

### **Q: Where can I find my soil sampling results?**

**A:** Visit the Dirt Alert-Arsenic in Soil (AREIS) database at <https://fortress.wa.gov/ecy/areispublic/>. If you need help accessing the data, please contact (360) 407-7688, press 2 for Tacoma Smelter Plume.

### **Q: How will I know if I qualify for cleanup?**

**A:** We will send you a letter once we start cleanup in your neighborhood. The cleanup decision is based on your existing sampling results and any cleanup already done. We will look at whether:

- The top 12 inches of soil across the whole parcel has 100 ppm arsenic or higher.
- The top 12 inches of soil across the whole parcel has 500 ppm lead or higher.
- Any single “subunit” has over 200 ppm arsenic.
- Any single subunit has over 1,000 ppm lead.

We will only offer cleanup for subunits with arsenic 100 ppm or higher or lead 500 ppm or higher. Drain fields, steep slopes, wetlands, and other similar areas will not qualify for cleanup. In some cases, EPA has already placed a thick enough protective layer of new soil over the arsenic contamination and further cleanup is not needed.

You can look at your soil results now to see if you might qualify. Note: Sometimes, the maps and data can be hard to understand. If you need help, please contact:

- Amy Hargrove at [Amy.Hargrove@ecy.wa.gov](mailto:Amy.Hargrove@ecy.wa.gov) or 360-407-6262; or
- Glenn Rollins at [DirtAlert@tpchd.org](mailto:DirtAlert@tpchd.org) or 253-798-3503.

## Soil Sampling and Interpreting the Results (Tacoma and Vashon)

### Q: What is the process for soil sampling?

**A:** Before we can sample, the homeowner must sign a form that gives us permission to access the yard. Sampling involves boring small holes with a 1-inch soil probe (first photo) and removing soil samples from the tool (second photo).

Each yard will be divided into 1 to 4 units. For lots over a quarter acre, we will work with you to identify the areas you use the most—"high use areas." These may include a play area, lawn, or garden bed.



1. Boring a hole with a sampling tool



2. Taking the soil sample out of the tool.

**Q: What results will qualify my yard for cleanup?**

**A:** Ecology will look at all units with arsenic 100 ppm or higher or lead 500 ppm or higher.

**Q: What if arsenic is over the cleanup level of 20 ppm but below 100 ppm?**

**A:** In this case, your yard would not be eligible for the state-funded soil removal program. We would advise you on how to reduce contact with soil.

We also recommend healthy actions such as washing hands, taking shoes off at the door, regular vacuuming, and dusting with a damp cloth.

**Q: Should I clean up my own soil? Will Ecology reimburse me for cleanup?**

**A:** We don't recommend doing your own soil cleanup unless you are planning a major landscaping or building project that involves moving soils.

We cannot reimburse you for any costs, but we can provide guidance. For advice on your soil moving project, contact us at (360) 407-7688, press 2 for Tacoma Smelter Plume.

**Q: Will having data about contamination hurt my property value?**

**A:** We do not know how contamination impacts property values. Hundreds of thousands of properties in the plume could have contamination, but only a few thousand have been sampled. Some homebuyers are already aware of the plume and may want to see sampling results. We can work with sellers and their real estate agents to put sampling results in context. We can also advise on ideas for reducing possible contact with contamination by covering bare soils.

**Q: Do I have to disclose my results if I sell my home?**

**A:** The Seller's Disclosure Statement (Form 17) does ask about soil contamination on the property. We recommend consulting with a real estate professional if you have questions about disclosure. Keep in mind that all yard sampling and cleanup data will be available on Ecology's public database.

**Q: Can I get wooded areas sampled, even if Ecology cannot clean them up?**

**A:** Yes, we are offering up to two educational sampling for areas we cannot clean up. This may include woods or gardens the homeowner does not want dug up. Within reason, we will take extra samples from places you are most concerned about.

**ACTION LEVELS**

Arsenic = 100 ppm  
Lead = 500 ppm



If an area of a yard has these levels or higher, it qualifies for cleanup.

**THRESHOLD = 90 ppm arsenic**

Soil samples aren't a perfect measure of actual levels. To be surer of finding the yards over 100 ppm, we set a "threshold" of 90 ppm for deciding if a yard gets cleanup.

**CLEANUP LEVELS**

Arsenic = 20 parts per million (ppm)  
Lead = 250 ppm

Any areas we clean up must be below the state cleanup level for arsenic and lead.

**Q: Can I get sampled sooner? (I am planning a major landscaping project or I have young children I am concerned about.)**

**A:** Most of our sampling will follow the sequence shown in the map on page 3. In some cases, we may refer people to the Home Soil Testing outreach program for earlier sampling.

- King County residents: Denise Sharify at [DirtAlert@kingcounty.gov](mailto:DirtAlert@kingcounty.gov) or 206-477-DIRT.
- Pierce County residents: Glenn Rollins at [DirtAlert@tpchd.org](mailto:DirtAlert@tpchd.org) or 253-798-3503.

**Q: What should I do to keep my family safe while I wait for cleanup?**

**A:** You can still use your backyard, but we recommend avoiding contact with contaminated soil. Wash hands after working or playing outside and take shoes off at the door. When you receive your sampling results, you can contact us for further advice.

**Cleanup and Yard Restoration****Q: What is the process for soil removal and replacement?**

**A:** Once we reach your neighborhood:

1. Our cleanup staff meet with you to explain cleanup and landscaping options.
2. We gather information about your yard and draft a cleanup plan.
3. We meet again to make any changes to the plan.
4. You sign the plan to give us permission to move forward with the work.
5. Once you sign the plan, we create construction documents, get permits, and go out to bid for a contractor.
6. In most cases, we dig up contaminated soils and take them to the landfill. We bring in new soil to backfill the area, then restore the landscaping.
7. We give you documentation of the soil removal work completed on your yard.



Digging out contaminated dirt from a yard

**Q: How will Ecology ensure the quality of replacement soil?**

**A:** Soil mixes 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.

**Q: How will you restore my landscaping?**

**A:** We will restore the yard based on measurements and photographs taken during cleanup plan development and contractor's surveying. The options for landscaping include:

1. Restore with the same landscaping as before.
2. Replace some of the lawn with mulched beds.

Some plants can be removed, transplanted or replaced with nursery plants. The contractor will use either sod or hydro seed to replace lawn areas. Immediately after installation, the contractor will maintain the new lawn for 60 days.



Sod is installed to replace the lawn area.

**Q: What areas will not be included in soil removal?**

**A:** We must work outside of the root zone of trees and large shrubs. We cannot remove soil under:

- Buildings with foundations.
- Low decks.
- Sidewalks, patios, or driveways with more than four inches of gravel.
- Walls, ponds, or pools.

We may place a covering of soil or other landscaping material in areas where we cannot remove soil. Ecology can provide advice on where to find low-cost plants, tree coupons, and free gardening advice.

**Q: What are my responsibilities as the homeowner?**

**A:** We can remove soil under small sheds or other moveable structures without foundations. However, the homeowner must empty the structure before work begins. We also need you to remove any overgrown vegetation, 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.

Our contractor will water and care for the new landscaping for an agreed-upon length of time. After this, you must care for the new lawn and other plants to maintain your warranty rights.

**Q: Are there any costs to the homeowner?**

**A:** A normal cleanup should not cost the homeowner anything. However, we will not pay to remove a large stump or large woody shrubs to reach the soils beneath. After cleanup, expenses may include watering your new landscaping and paying for any extra landscaping you want. We can help you find low-cost plants, tree coupons, and free gardening advice.

**To request materials in a format for the visually impaired, call Ecology at (360) 407-6790, Relay Service 711, or TTY (877) 833-6341.**