

Toxics Cleanup Program

July 2017

Cleanup Underway on Residential Yards

Ecology is using the majority of a \$94.6 million settlement from Asarco to clean up residential yards in Pierce and King counties. The goal is to reduce human health risk by cleaning up the most contaminated areas of the plume—Ruston, north and west Tacoma, and southern Vashon-Maury Island.

We partnered with Tacoma-Pierce County Health Department (TPCHD) to sample yards in Tacoma. TPCHD has sampled over 2,936 yards. Of those sampled, we found 415 that qualify for cleanup. Overall, there are 1,176 yards slated for soil replacement in the program (page 2). So far, we have replaced soil on 207 yards in the Tacoma area (page 3). In 2017, we plan to clean up 44 more yards in Tacoma.

Protecting Children Where They Play

The Soil Safety Program provides free soil sampling and cleanup for child play areas at schools, parks, and childcares. Created through 2005 legislation, the program has addressed over 100 play areas and sampled more than 1,000.

Forty-six cleanups were within the Tacoma area. In early 2016, we replaced soil at Fort Nisqually at Point Defiance Park.

Funding Local Health Department Outreach

TPCHD receives \$1 million per biennium from Ecology to run the "Dirt Alert" program. The program raises awareness and promotes behaviors that reduce soil exposure, such as hand-washing, taking off shoes and covering bare patches of dirt in the yard. TPCHD initiatives include childcare provider trainings, events, and free home soil testing.

In 2017, the TPCHD is piloting a soil disposal voucher program in the EPA Study Area. This voucher covers the cost to dispose limited amounts of residential soil from the Tacoma Smelter Plume at the Tacoma Recovery & Transfer Center. The homeowner must transport the soil on their own to the transfer station.

Encouraging Voluntary Cleanup

Property development presents a good opportunity to clean up soil contamination. Ecology is working with Tacoma and Ruston city planners to educate permit applicants and encourage soil replacement during development.

In 2016, a developer cleaned up 0.22 acres during development of the Warner Street Property. Ecology also provided an opinion letter during the nearshore habitat restoration project in Titlow Park.

About the Tacoma Smelter Plume

Asarco's former copper smelter in north Tacoma emitted arsenic, lead, and other heavy metals. These pollutants were carried by the wind and settled on surface soils, creating the Tacoma Smelter Plume (page 5).

The Asarco Settlement: In 2009, the State of Washington received a settlement from Asarco for environmental damages. Ecology plans to use \$94.6 million over 10 years to manage risks from the Tacoma Smelter Plume through cleanup and outreach.

Federal, State, and Local Agencies Working Together

Since 1993, the U.S. Environmental Protection Agency (EPA) has overseen the Superfund cleanup of thousands of residential yards in Ruston and north Tacoma, as well as the smelter property itself.

In 2013, Ecology began cleaning up yards that did not qualify for EPA's cleanup. Remaining contamination poses a risk to residents. Ecology and the Tacoma-Pierce County Health Department took over outreach work in the community.

Cleanup database: Residents can go online to find out if their yards were part of the Superfund or Ecology sampling and cleanup work.

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

Tacoma Smelter Plume website:

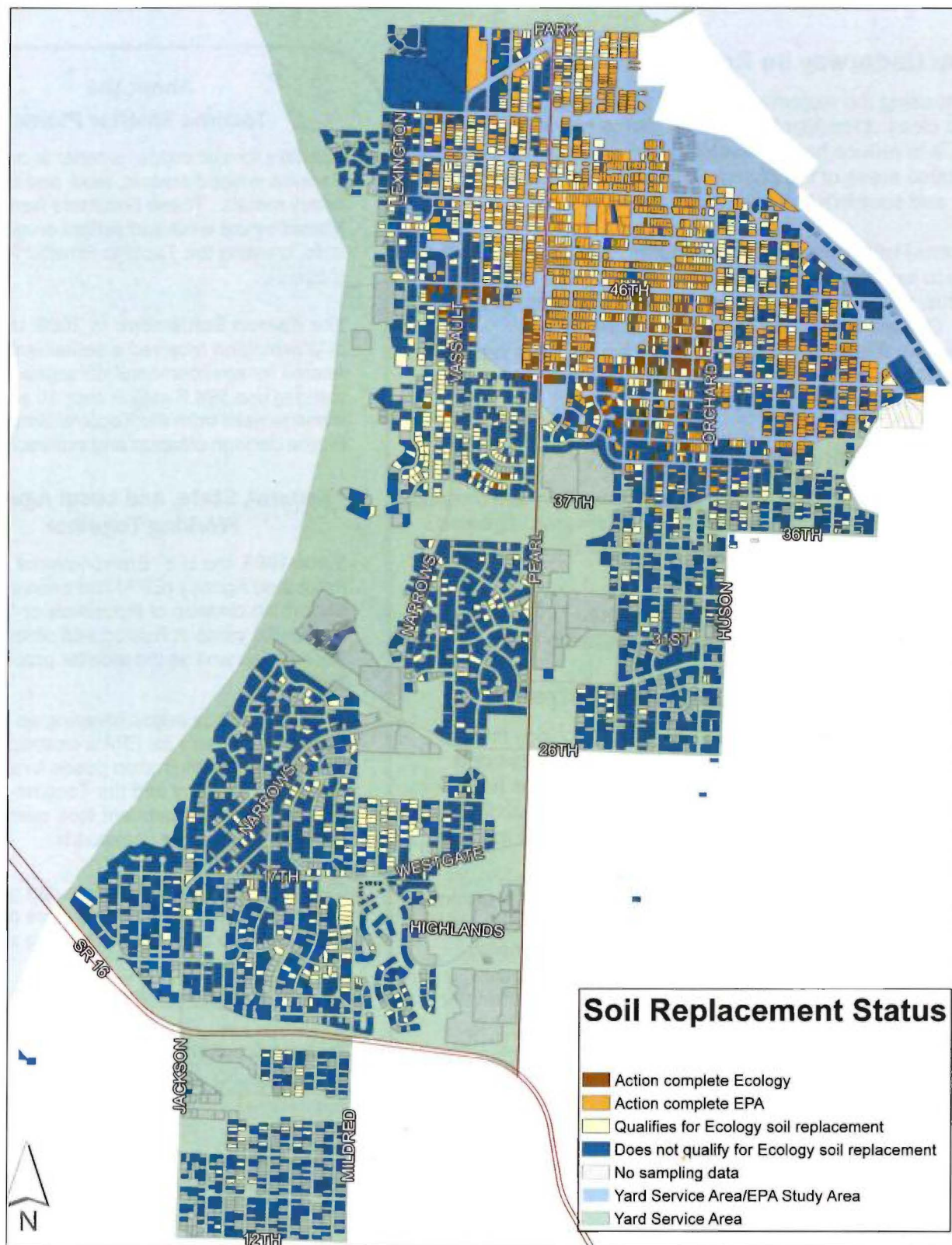
<http://www.ecy.wa.gov/toxics/tacoma-smelter.html>

Yard Cleanup Video:

<http://youtu.be/Vk-i6odjHyM>

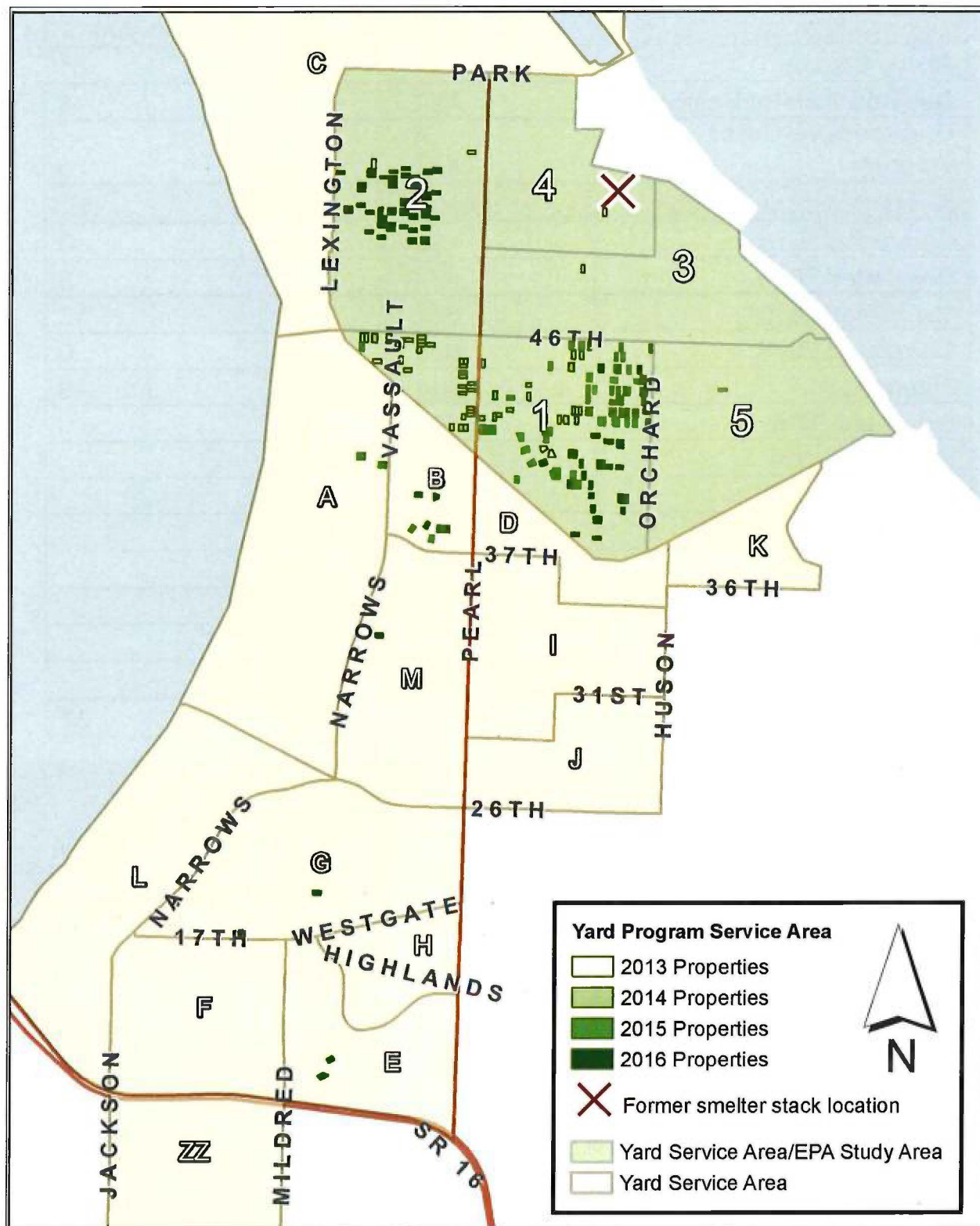
Contact: Marian Abbett
(360) 407-6257
Marian.Abbett@ecy.wa.gov

Yard Program — Sampling and Soil Replacement Progress



**Properties marked "Qualifies for Ecology soil replacement" include those with average arsenic or lead above the action levels. Ecology's action level for arsenic is 100 parts per million (ppm) or above; and lead 500 ppm or above. There are 1,176 yards slated for soil replacement in the program. This map was created in April 2017.

Yard Program — Soil Replacement Progress in Tacoma



**The Study Area is where the Environmental Protection Agency oversaw the Superfund cleanup of thousands of residential yards in Ruston and north Tacoma (green area on map). The Study Area is where most of Ecology's current work has occurred. This map was created in June 2017.

Yard Program — Soil Replacement Progress in Tacoma

	Study Area	Tacoma	Vashon Maury
Above Criteria	710	415	51
Declined Soil Replacement	42	9	8
Unresponsive/Out of Program	43	4	6
Remaining as of 7/1/2017	625	402	37
Completed 2013	8	0	0
Completed 2014	48	0	6
Completed 2015	65	6	15
Completed 2016	69	11	0
Planned 2017	44	8	16
Estimated 2018	50	50	
Estimated 2019	50	50	
Estimated 2020	50	50	
Estimated 2021	50	50	
Estimated 2022	50	50	
Estimated 2023	50	50	
Estimated 2024	50	50	
Estimated 2025	41	27	
Total	625	402	37

Yard Program Sequence

We are completing soil replacement on 50-100 homes each year. In 2018, we will begin working outside of the study area (page 3). In the future, we plan to work on 30-50 yards outside of the study area, and 30-50 yards inside the study area each year.

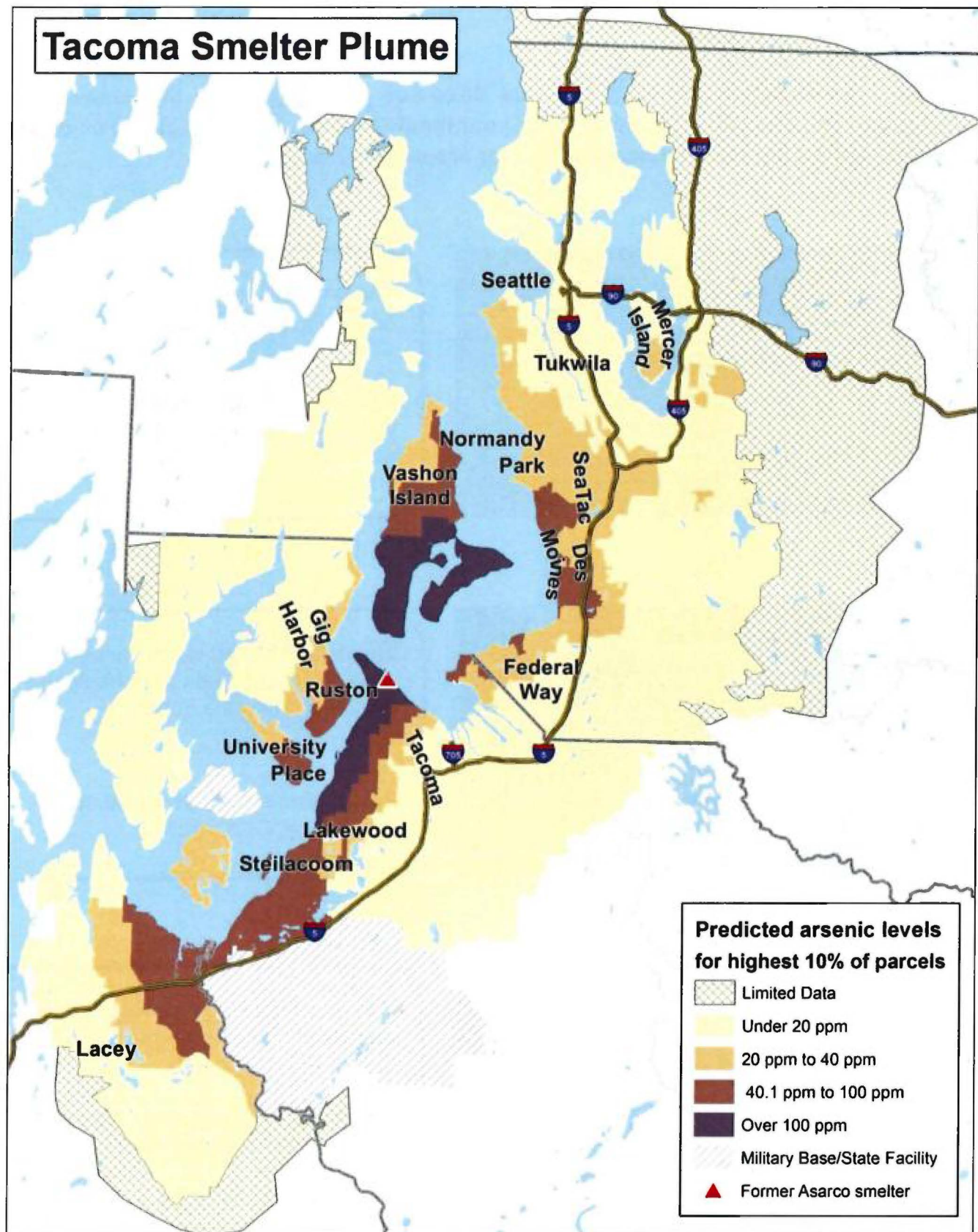
Our soil replacement program is sequenced. Inside the study area, our sequence is based on the highest remaining soil contamination, and properties that had no previous EPA soil replacement action.

Outside the study area the sequence is based on the percentage of properties that qualify with arsenic over 100 ppm, geographic proximity, and total number of properties in a group.

Upper: A fenced yard ready for construction.

Lower: A yard post soil replacement.





With 90% certainty, at least 1 in 10 parcels will have arsenic in soil at or above levels shown. Predictions are based on distance and direction from the former Asarco smelter, and on sampling data from forested and other soils undisturbed by development. Actual arsenic levels may vary greatly from parcel to parcel. Arsenic levels are shown in parts per million (ppm).

Dirt Alert Videos

The Tacoma Smelter Plume project has three new [Dirt Alert videos](#) that show simple actions you can take to keep you and your family healthy. You can also pick up some great gardening and landscaping tips for around the home.



The gardening video provides handy tips on how to garden safely.

Gardening: <https://www.youtube.com/watch?v=IV4YUdCHJjE>



The pets video provides handy tips on ways to prevent pets from tracking in excess dirt into the home.

Pets: <https://www.youtube.com/watch?v=j7GXIONzGU>



The mulching video provides handy tips on ways to cover bare patches of soil.

Mulching: <https://www.youtube.com/watch?v=EKSU8vWfdOU>

www.dirtalert.info