

Tacoma Smelter Plume Interim Action Plan

November 9, 2011
Toxics Cleanup Program



DEPARTMENT OF
ECOLOGY
State of Washington

Why are we here?

- To share Ecology's cleanup plan for the Tacoma Smelter Plume.
- To get your input and answer your questions.



What are we going to cover?

- History of contamination
- The cleanup plan
- What happens next
- How to comment



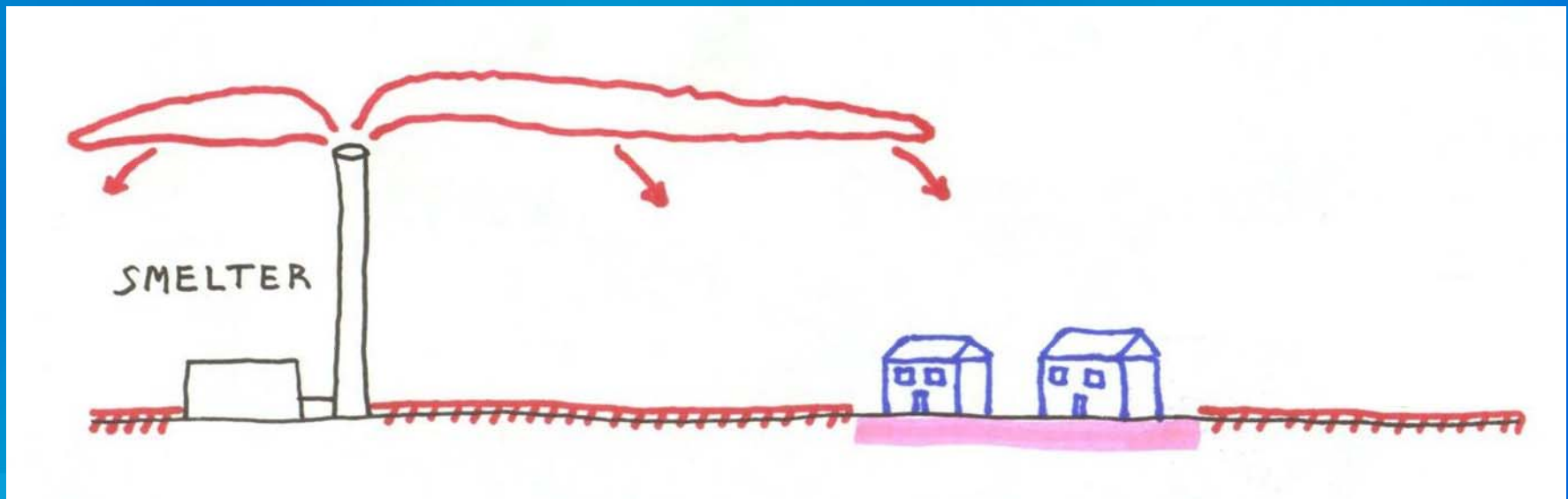
Asarco Smelter History

- **1890-1986** - Smelted lead, copper, and high arsenic ores
- **1983** - Became a Superfund site
- **1993** – Yard cleanups began in Ruston and north Tacoma

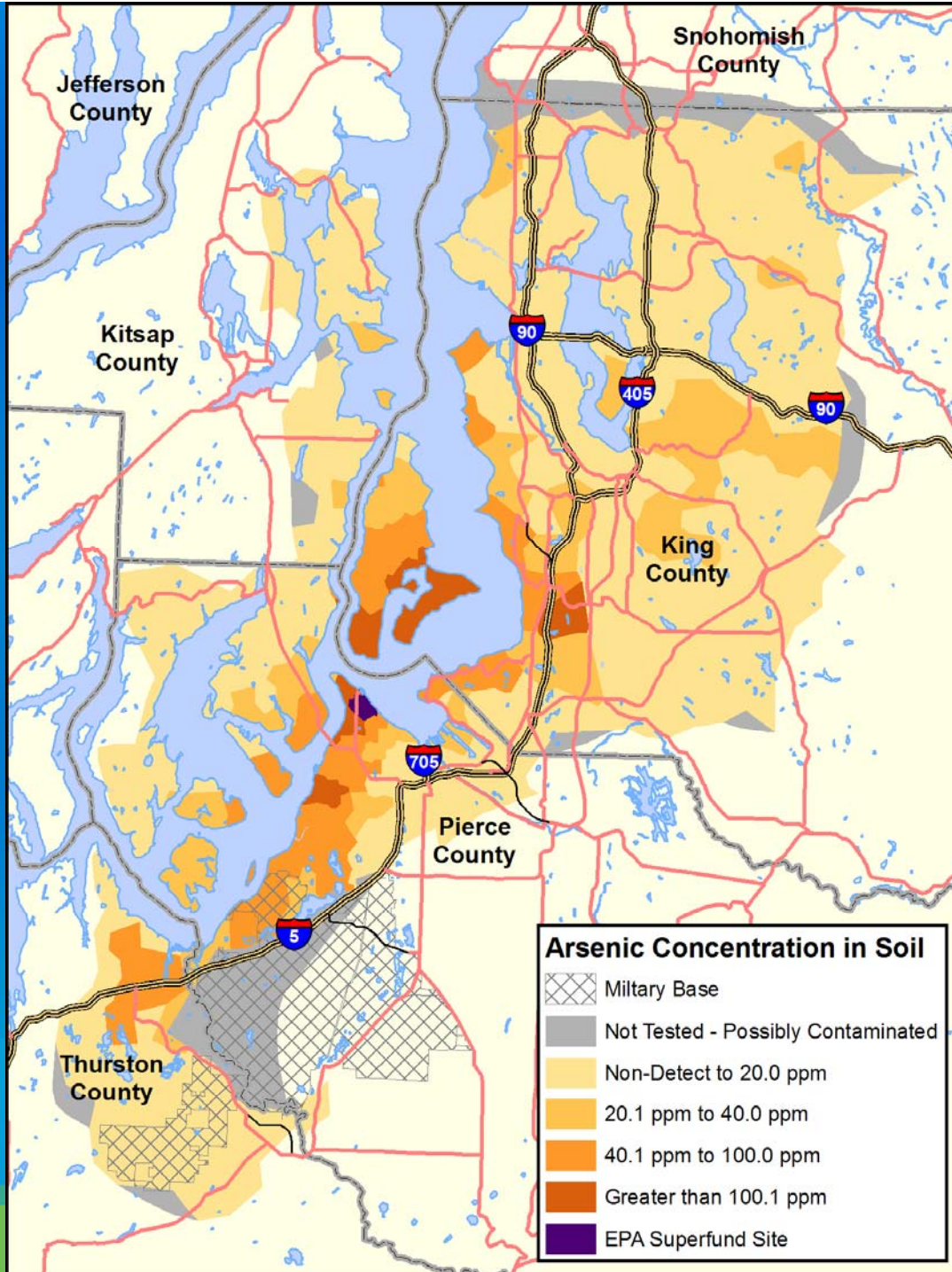


Tacoma Smelter Plume

- Arsenic, lead, other heavy metals
- Settled on surface soils



Tacoma Smelter Plume



State cleanup levels

Arsenic = 20 ppm

Lead = 250 ppm

Why It Matters

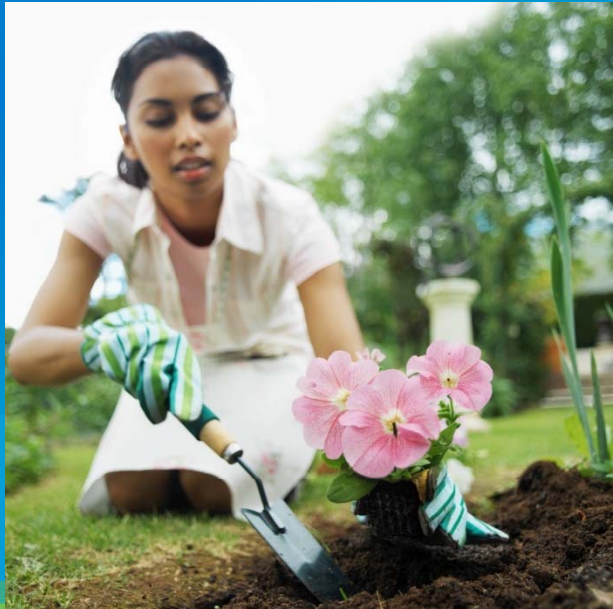
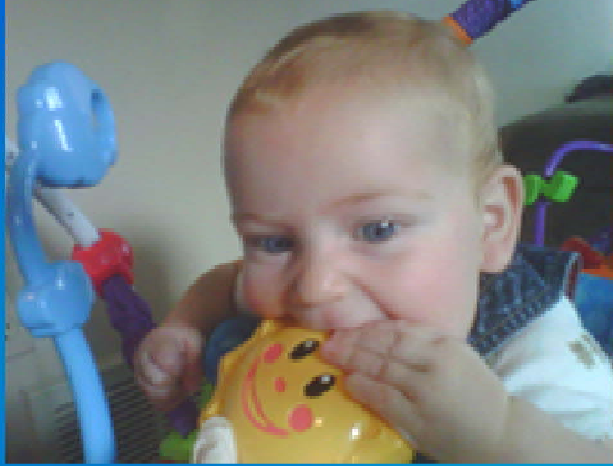
- **Arsenic** – heart disease, diabetes, cancers
- **Lead** – developmental delays, behavioral problems

Risk = Toxicity x Exposure

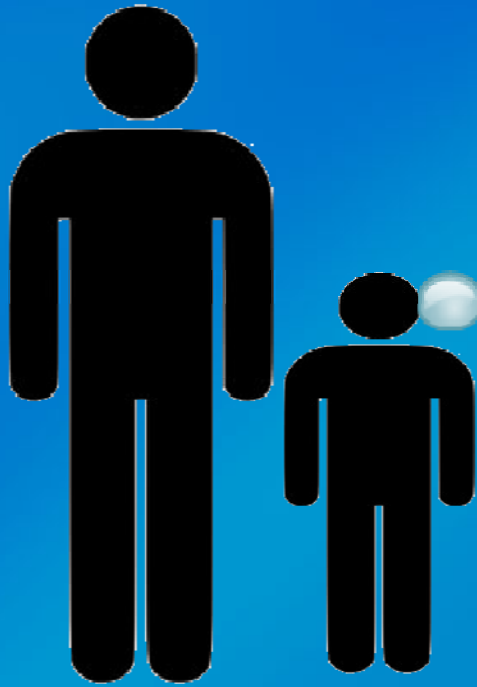
Toxicity = how dangerous?

Exposure = how much contact?

Ways People Can Be Exposed



Children are at greater risk

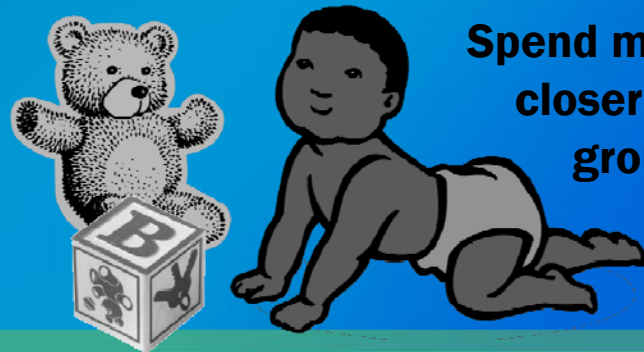


Breathe and eat more for their body size



Are still growing and developing

Put dirty toys and hands in their mouths



Spend more time closer to the ground

Cleanup Plans – Phase One

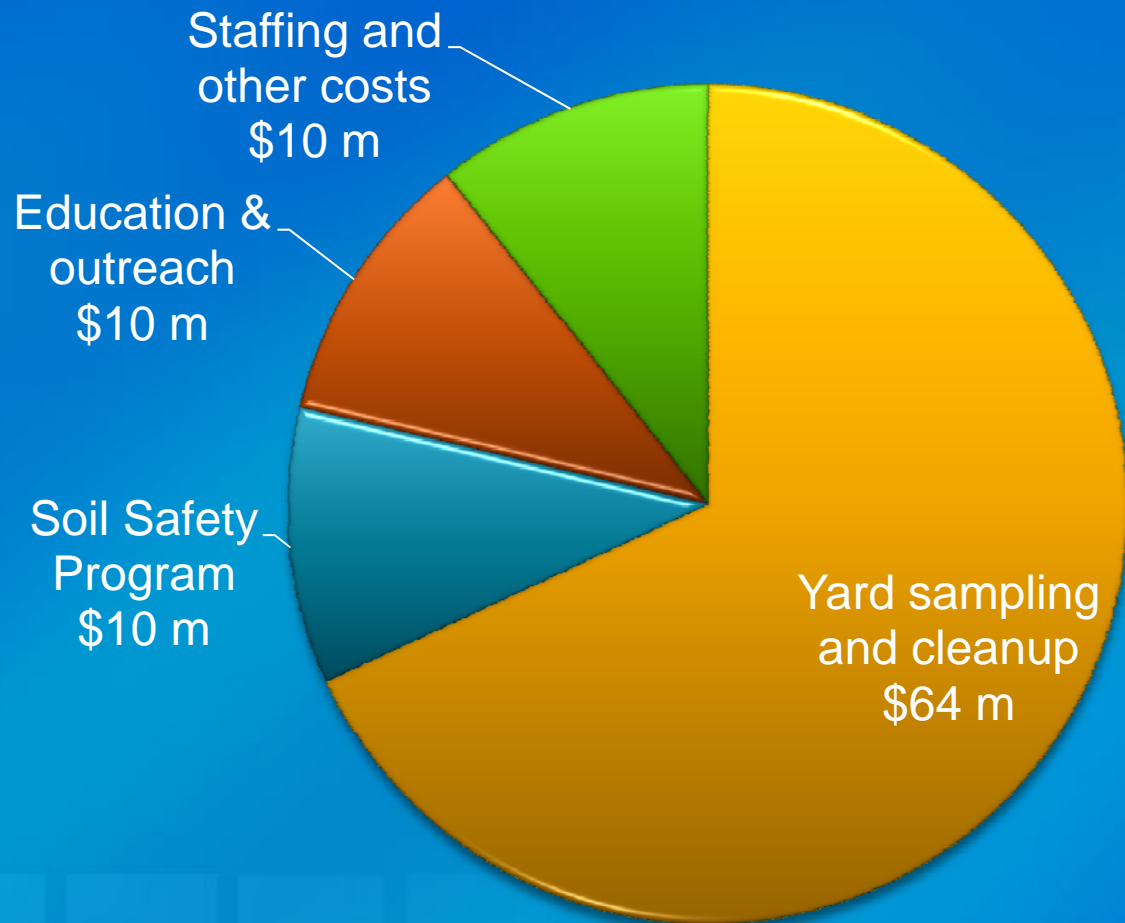
Ongoing education and outreach

Encourage voluntary cleanup

Continue the Soil Safety Program

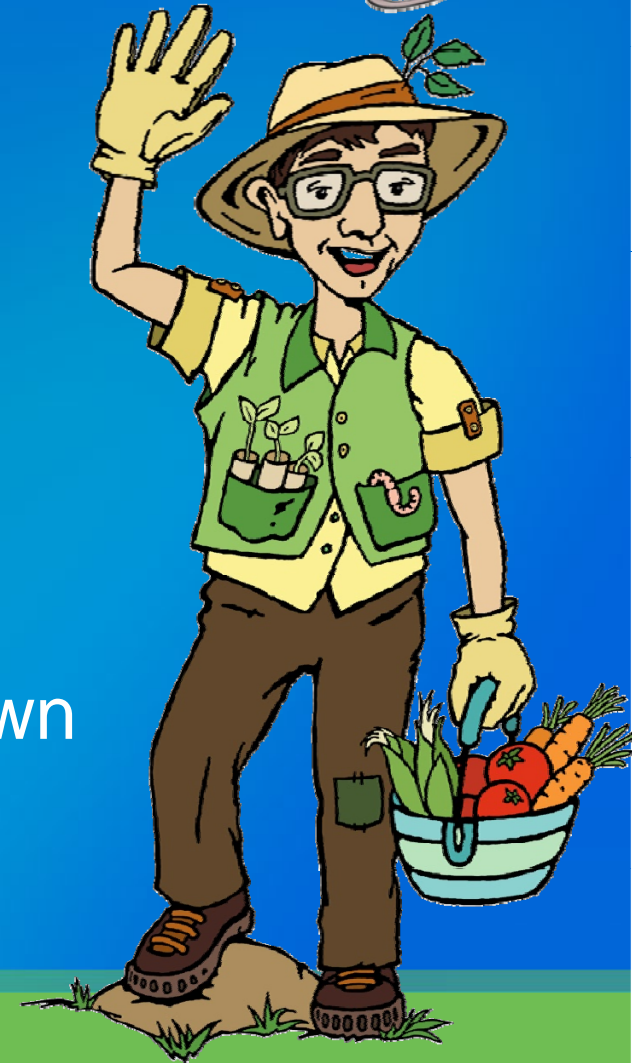
**Yard sampling and cleanup
program**

Asarco Settlement Spending



Education and Outreach

- Raises awareness
- Encourages “healthy actions”
- Ecology offers:
 - Advice on healthy actions
 - Nailbrushes and magnets
 - Classroom curriculums
 - Brochures for sampling your own soil



Encouraging Voluntary Cleanup

- Can be done during construction
- Protects future residents
- Ecology has **guidance** and is working with local permit offices

Dig up to make room for houses and landscaping

Landfill →

Contaminated surface soil

Cleaner, deeper soil



Model Remedies Guidance

- Soil sampling and cleanup guidance
- Tacoma Smelter Plume contamination only
- Available for comment

Tacoma Smelter Plume Model Remedies Guidance

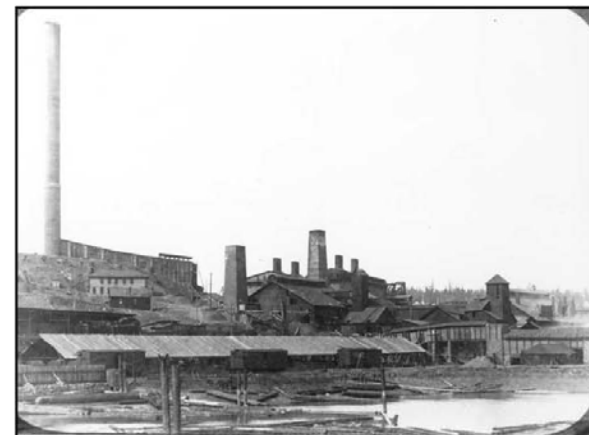
Sampling and cleanup of arsenic and lead contaminated soils

For:

Formal cleanup sites

Voluntary Cleanup Program

Properties under development

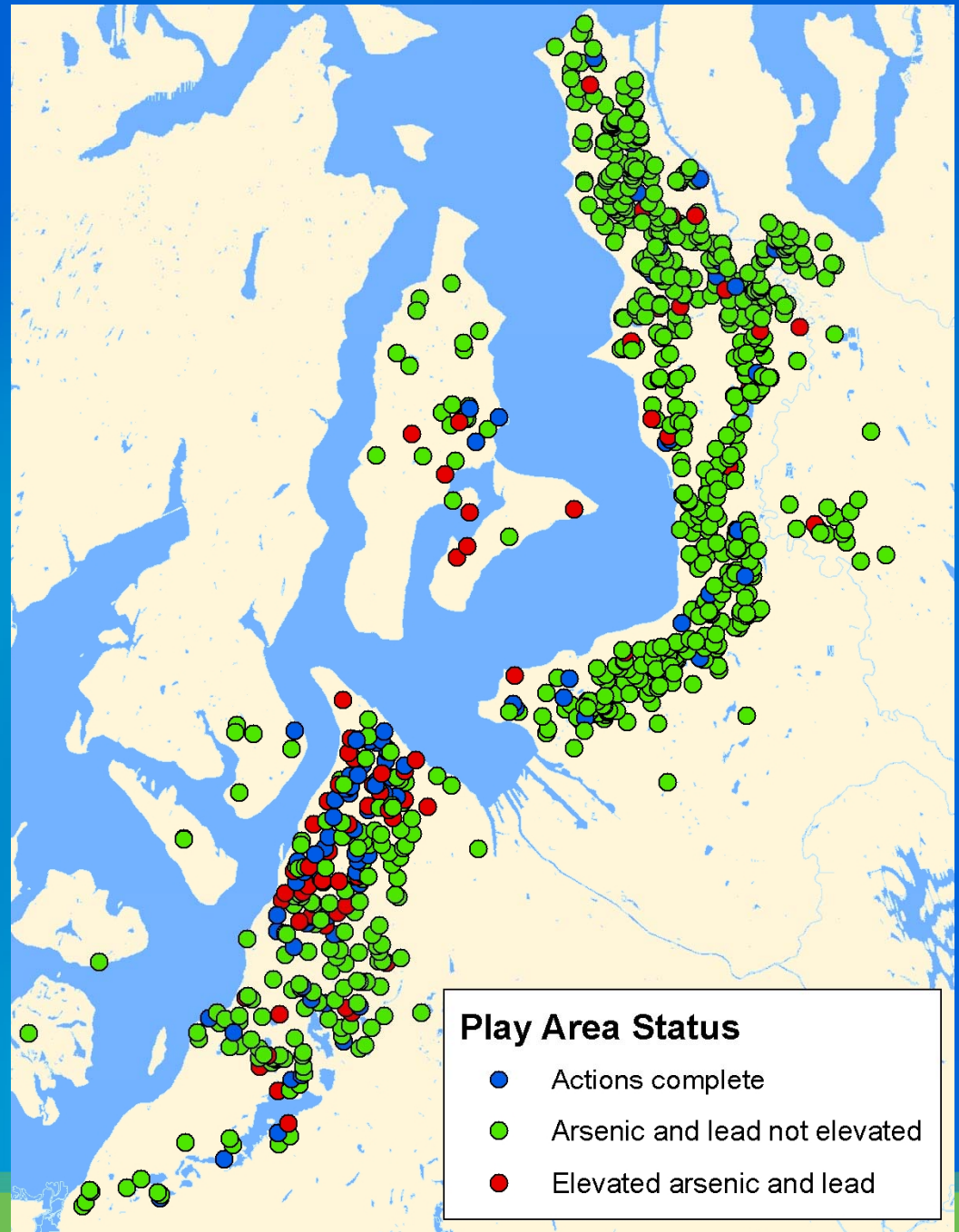


October 2011 Public Review Draft
Toxics Cleanup Program
Washington State Department of Ecology
Lacey, WA

Soil Safety Program

Play areas at existing:

- Schools
- Licensed childcares
- Parks
- Camps
- Multi-family public housing



Yard Sampling and Cleanup

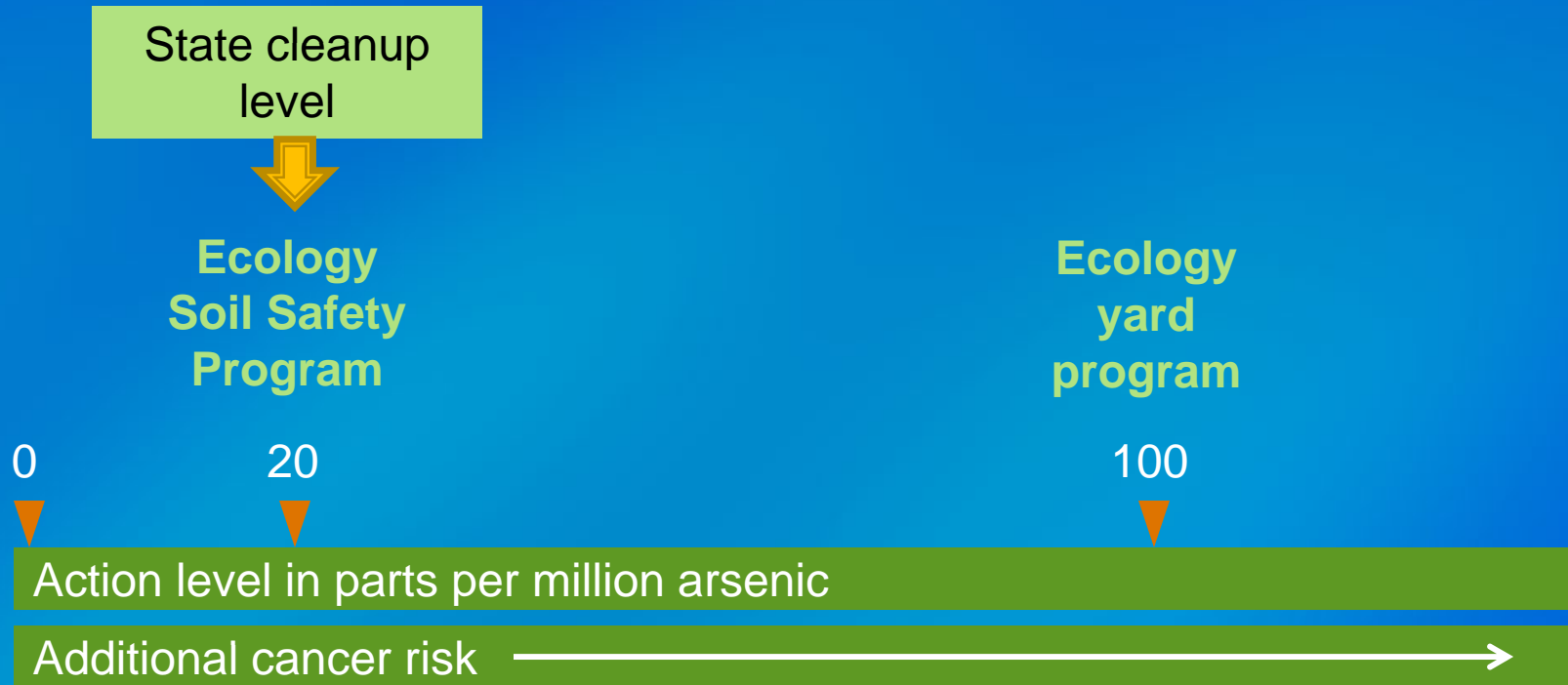
- Voluntary and free program
- Ten-year timeline
- Offers sampling for 17,000 parcels



What does sampling look like?



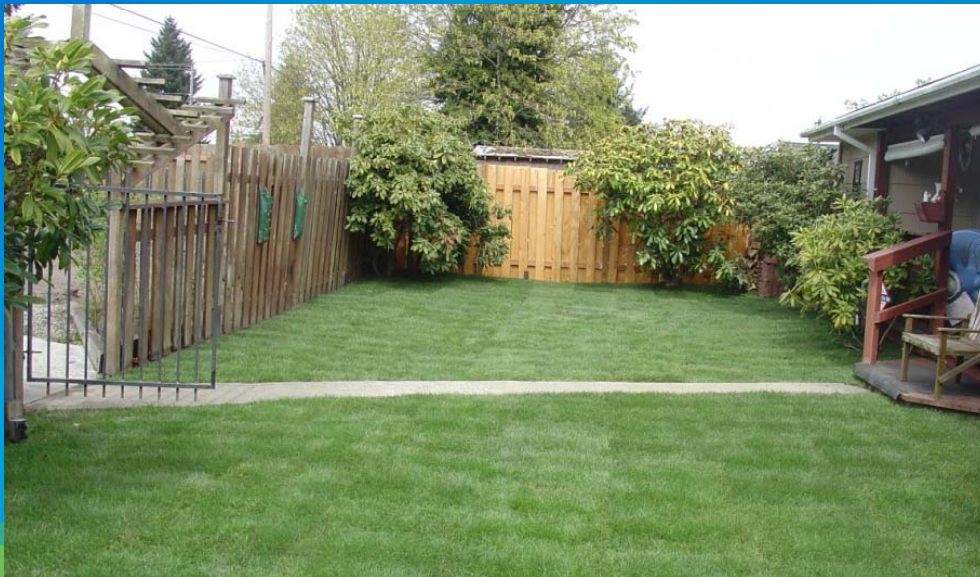
What levels Ecology will clean up



What does cleanup look like?



Excavation and
removal



What does cleanup look like?



Capping



The yard program is not designed yet

- How to track cleanups and educate future property owners.
- When to clean up whole properties vs. just high use areas.
- What neighborhoods to start in.

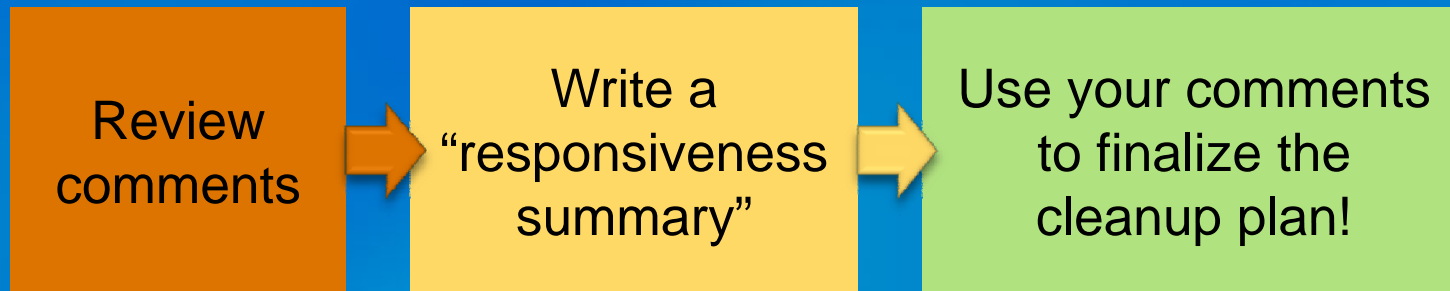
Phase Two Cleanup Plans

- Educating home buyers and real estate agents.
- Requiring sampling and cleanup:
 - Before real estate sales.
 - During construction or soil moving.
- Possible cleanup for areas not covered in Phase One.

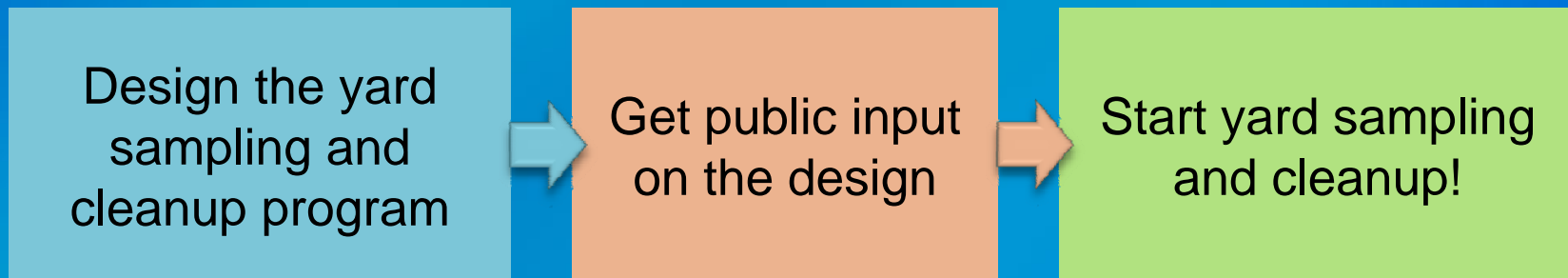


What happens next?

By early 2012



By the end of 2012



...Phase Two plan around 2014

What should I focus on?

- How to prioritize settlement funding.
- How to prioritize soil sampling and cleanup.
- How to expand and improve outreach.
- Whether to encourage or require soil sampling and cleanup during construction.
- How to notify and educate homebuyers.

Submitting Comments

- **Deadline:** December 20, 2011
- **Submit a comment tonight**
- **Write or e-mail:**

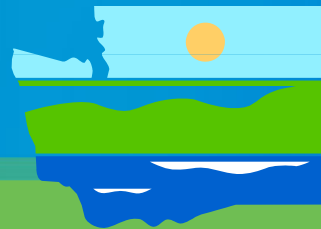
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