

# Tacoma Smelter Plume Interim Action Plan

**Toxics Cleanup Program**



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

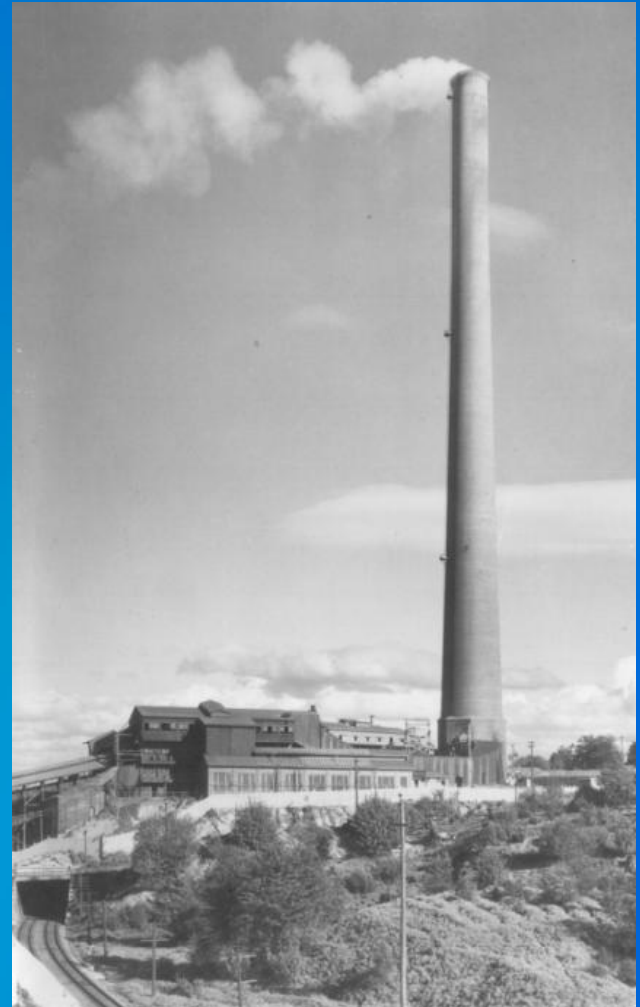
# Why are we here?

- 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



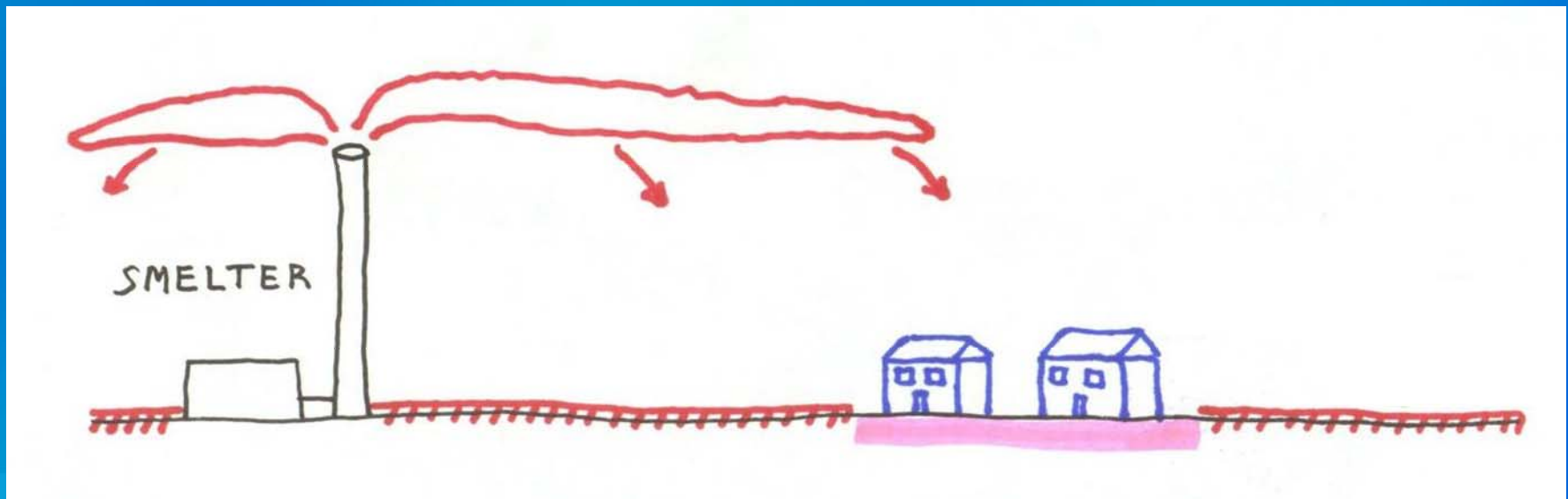
# Asarco Smelter History

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



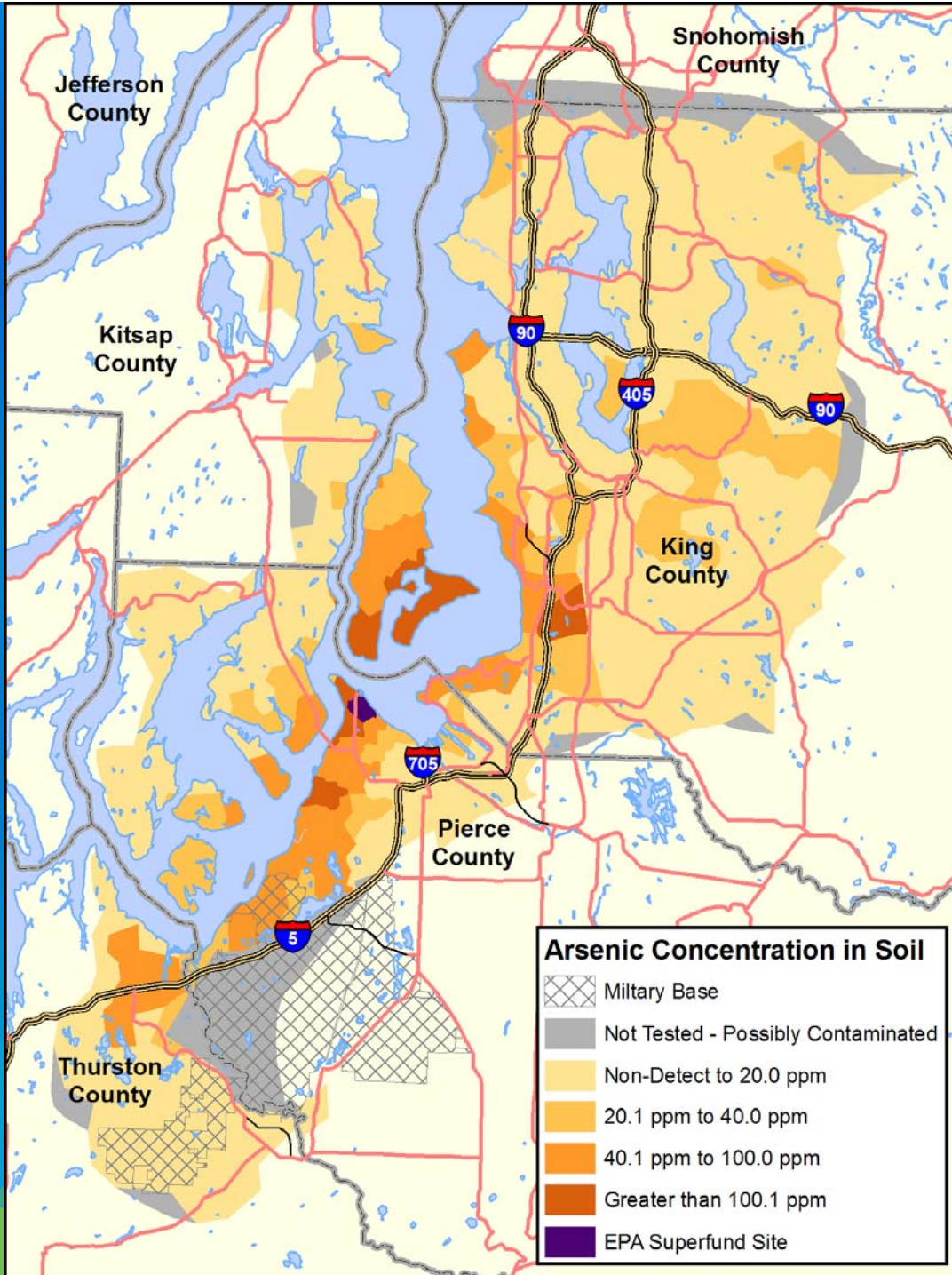
# Tacoma Smelter Plume

- 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

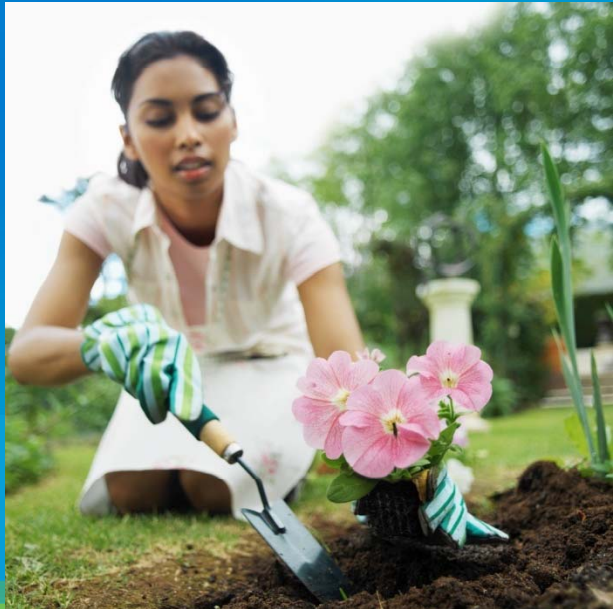
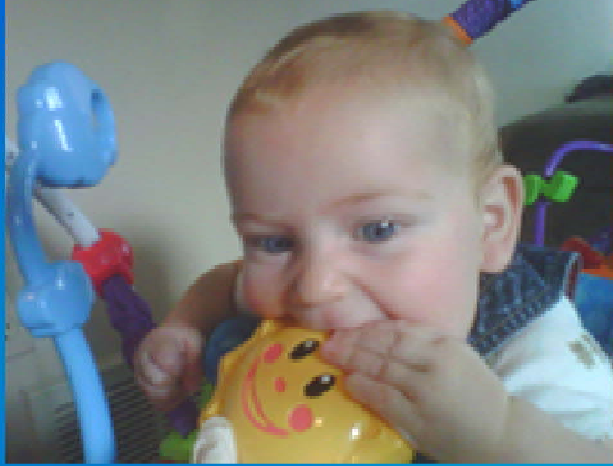
**Risk = Toxicity x Exposure**

**Toxicity** = how dangerous?

**Exposure** = how much contact?

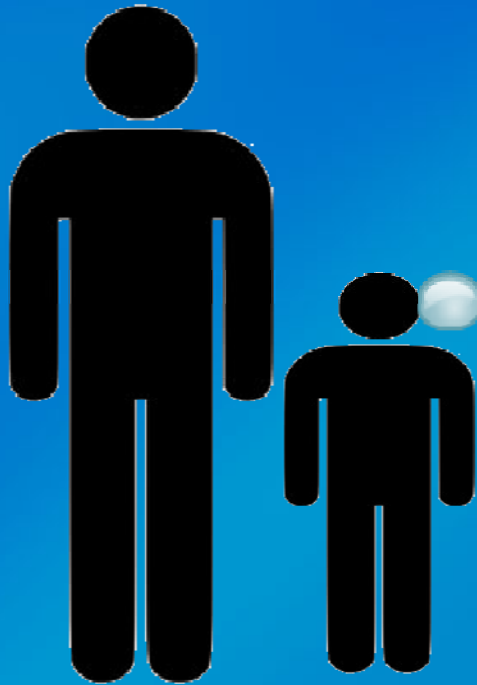


# Ways People Can Be Exposed





# Children are at greater risk

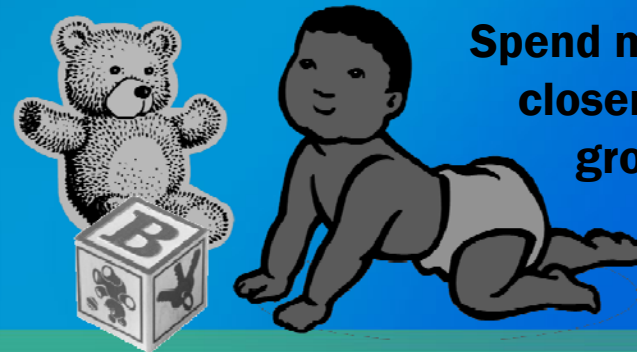


Breathe and eat more for their body size



Are still growing and developing

Put dirty toys and hands in their mouths



Spend more time closer to the ground

# Cleanup Plans – Phase One

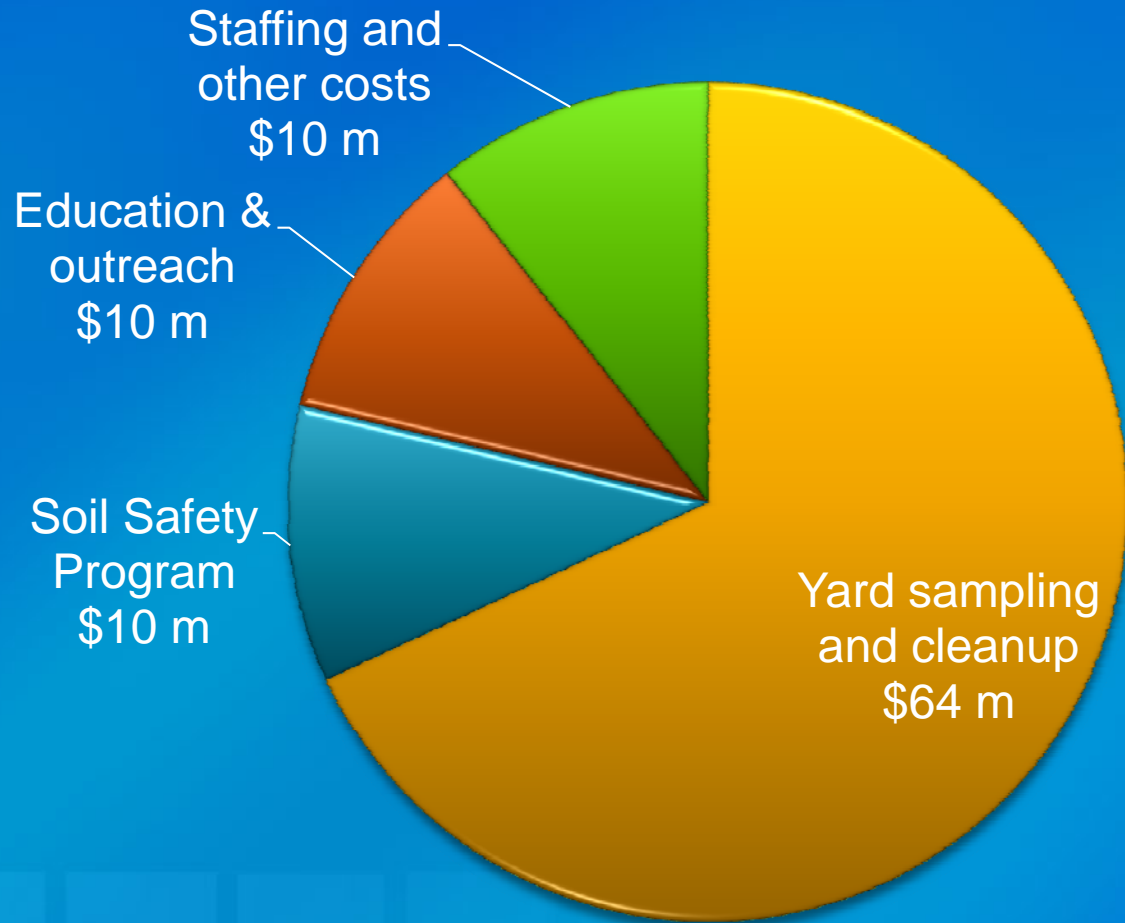
Ongoing education and outreach

Encourage voluntary cleanup

Continue the Soil Safety Program

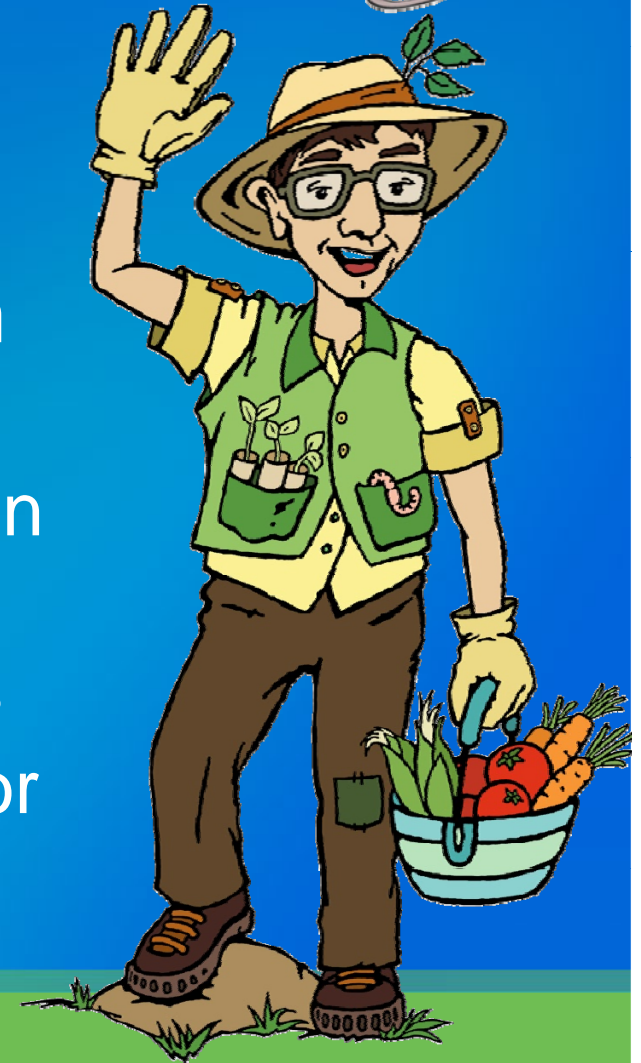
**Yard sampling and cleanup  
program**

# Asarco Settlement Spending



# Education and Outreach

- Raises awareness
- Encourages “healthy actions”
- Tacoma-Pierce County Health Department offers:
  - Home soil testing and advice on healthy actions
  - Nailbrushes and dusting cloths
  - Presentations for your school or organization





# 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

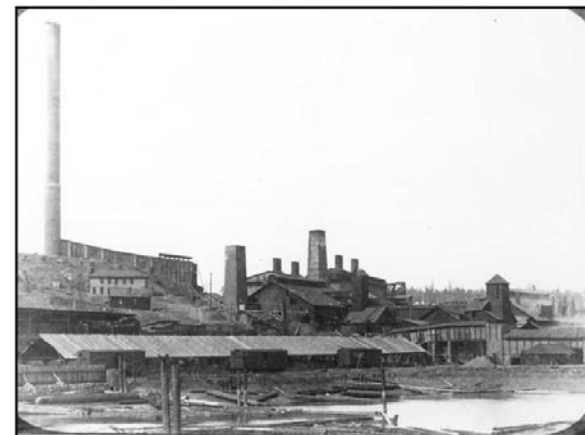
Sampling and cleanup of arsenic and lead contaminated soils

**For:**

Formal cleanup sites

Voluntary Cleanup Program

Properties under development

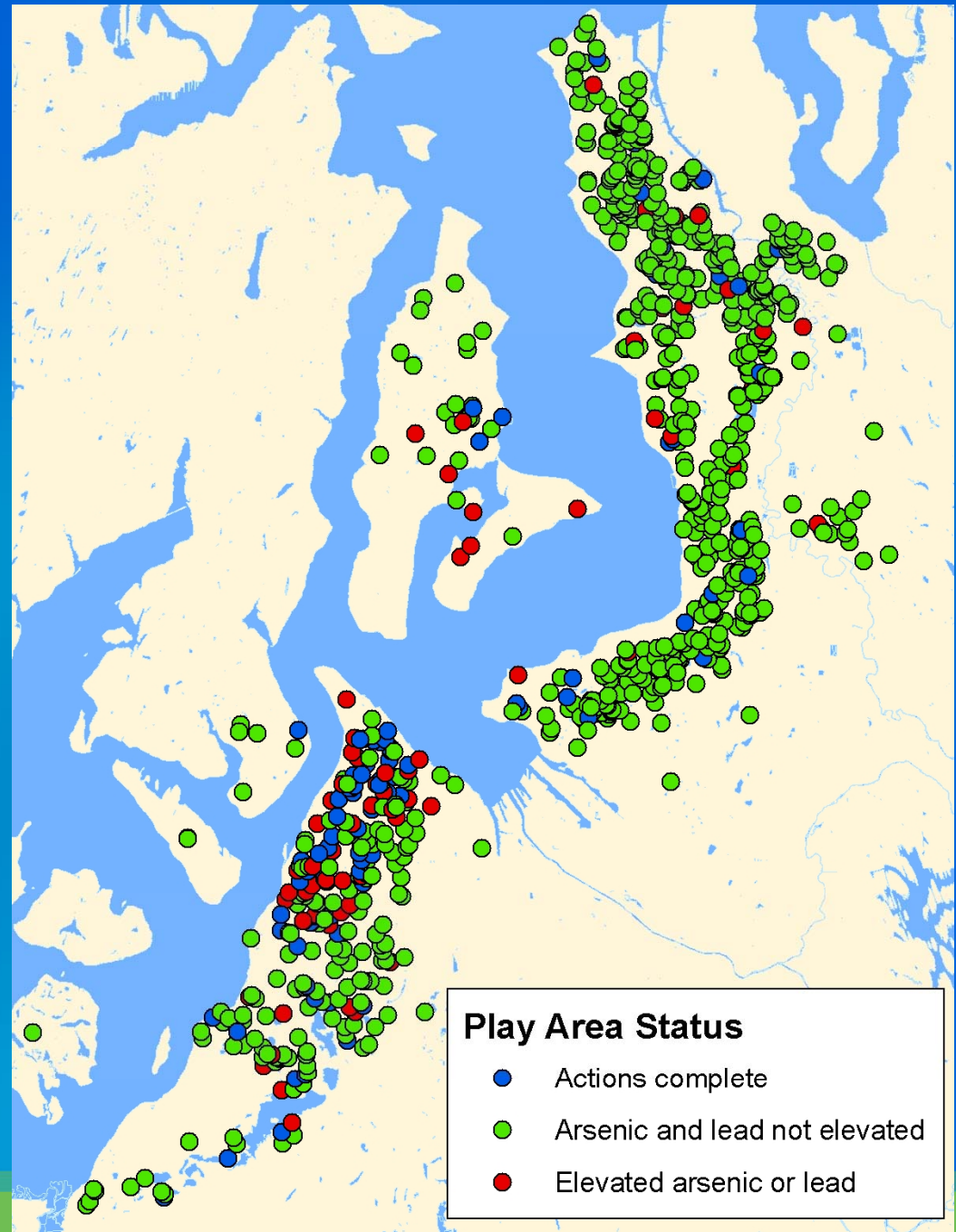


October 2011 Public Review Draft  
Toxics Cleanup Program  
Washington State Department of Ecology  
Lacey, WA

# 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

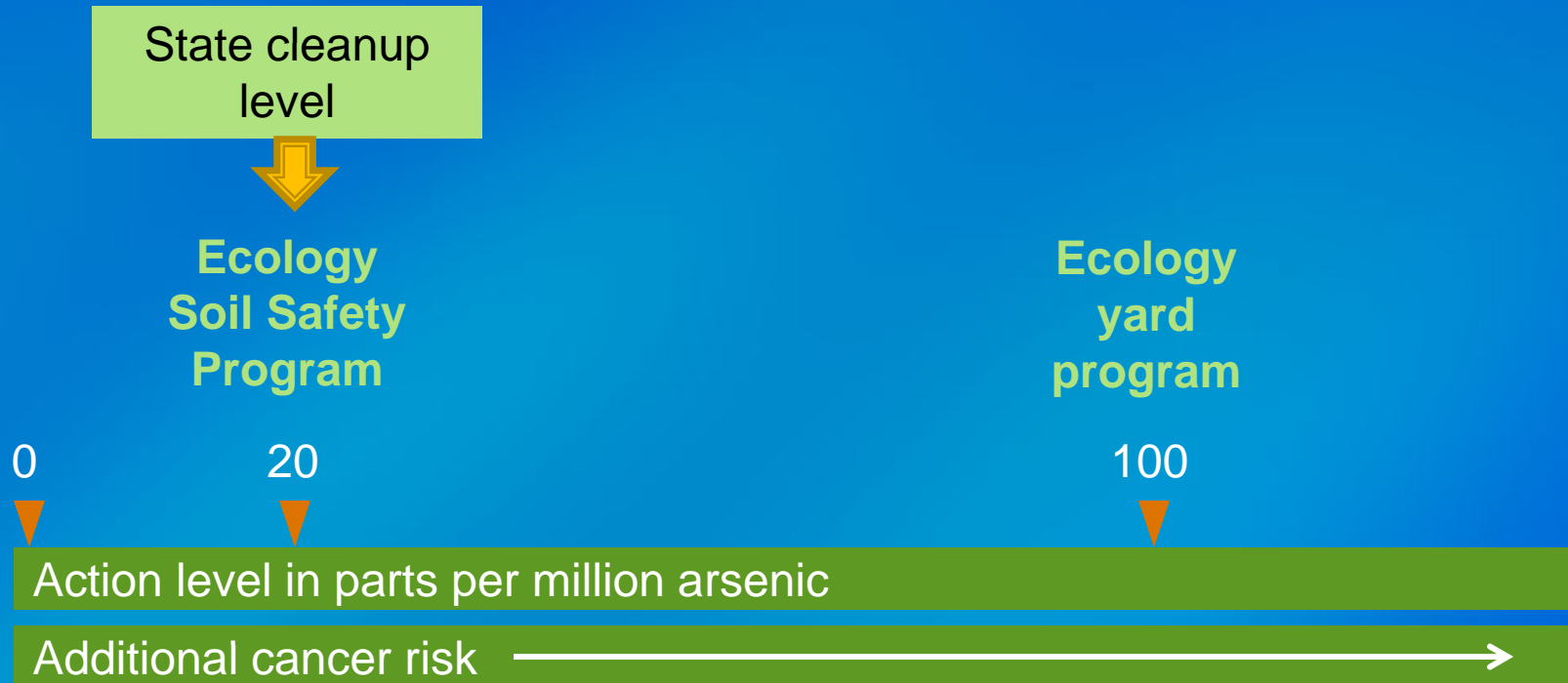




# What does sampling look like?



# What levels Ecology will clean up

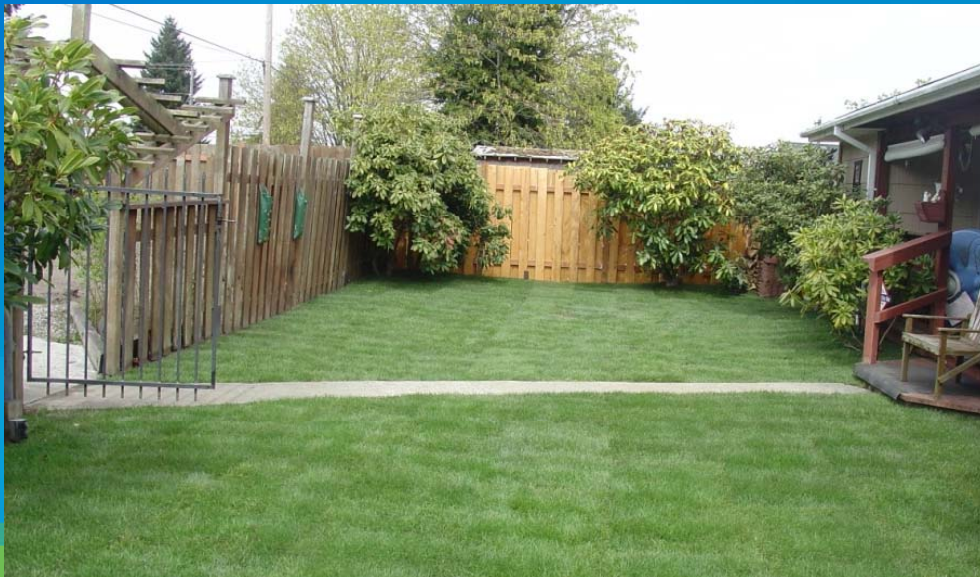




# What does cleanup look like?



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.

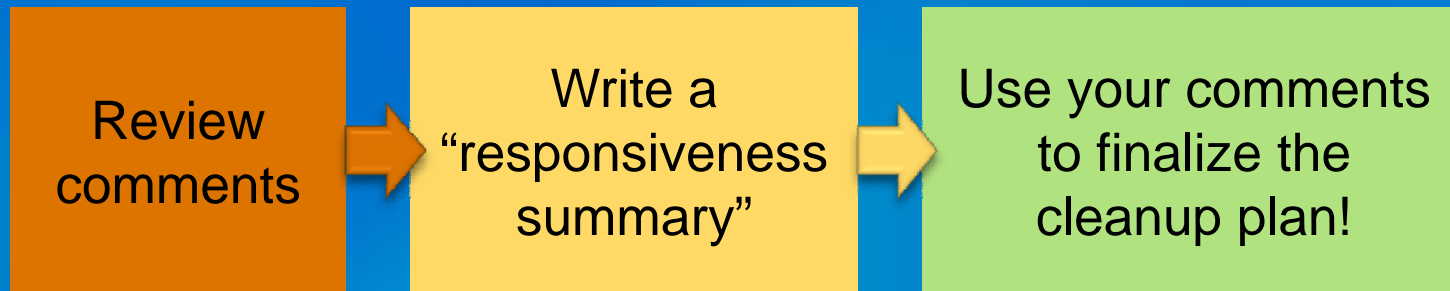
# Phase Two Cleanup Plans

- 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.

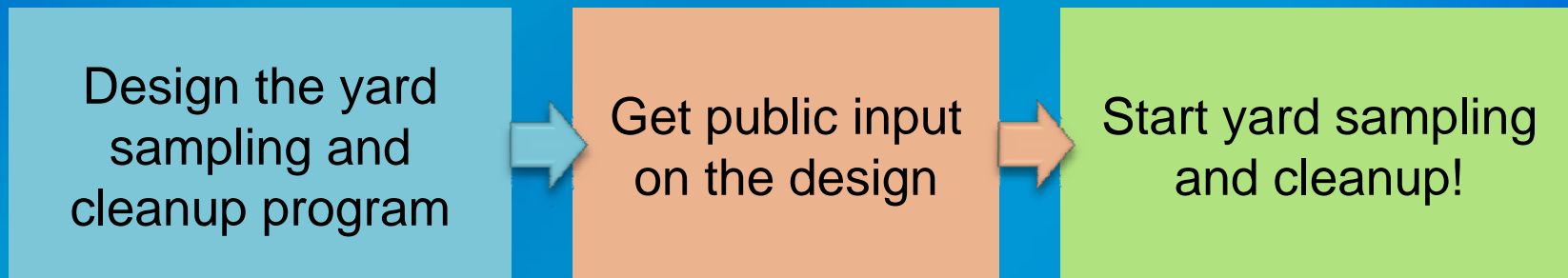


# What happens next?

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 development.
- How to notify and educate homebuyers.



# Submitting Comments

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

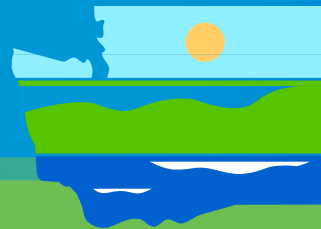
Cynthia Walker

Department of Ecology

P.O. Box 47775

Olympia, WA 98504-7775

[Cynthia.Walker@ecy.wa.gov](mailto:Cynthia.Walker@ecy.wa.gov)



DEPARTMENT OF  
**ECOLOGY**  
State of Washington