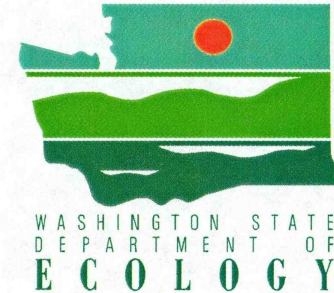
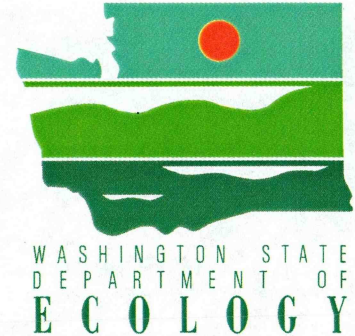


Tacoma Smelter Plume Project



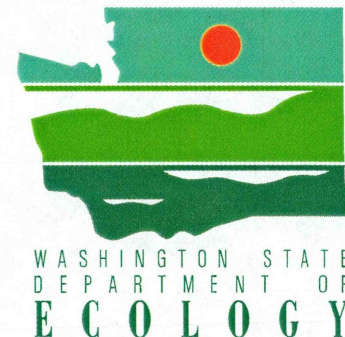
- Safety and health of people are primary concerns
- Highly complex and interdependent issues
- Local government support is crucial to successful outcomes

Tacoma Smelter Plume Purpose



- Investigation of soil contamination resulting from air emissions from the old Asarco smelter.
- Protect human health and the environment from risk associated with low-level area-wide contamination.
- Keep local governments and citizens informed about project status
- Long term - Develop solutions to manage contamination over time.

Area Wide Contamination Strategy



- The State is developing a strategy for area-wide sites through a legislatively funded project known as the Area-wide Contamination Strategy.
-
- Other area-wide sites
 - Everett Smelter Site
 - Mining Lands
 - Former orchard and agricultural lands developed for other purposes

Area Wide Contamination Strategy

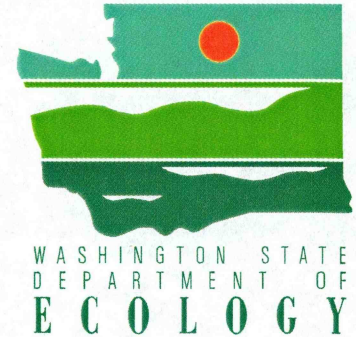


Sponsored by Departments of Ecology, Agriculture, Health, and Office of Community Development

Task force and work groups made up of local government, elected officials, agriculture, environment, business, financial institutions, education interests

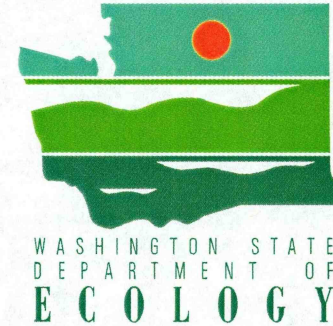
- Nature and extent of contamination
- Protective measures
- Legal and institutional structures – laws, regulations, land use policies
- Sampling Guidance

History



- 1890-1986 - Copper smelter operated from 1890-1986 (1905-1985 by Asarco)
- 1992 - EPA Superfund Cleanup of Ruston site begins
- 1998 - Maury Island Gravel Pit Study
- 1999 - Area Background Study in University Place – Tacoma Water Department
- 1999 - Ecology issues Site Hazard Assessment grant to King County
- 2001 - Ecology conducts study of residential soils in University Place
- 2001 - Ecology issues Site Hazard Assessment grant to Pierce County

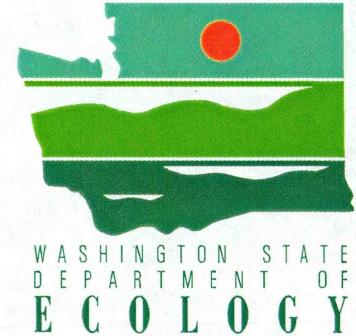
What is a Site Hazard Assessment?



The Site Hazard Assessment is designed to:

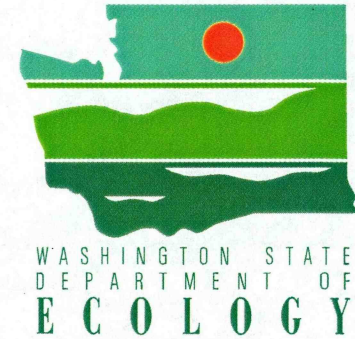
- Define the general extent of contamination, where hazardous substances are known or suspected to be = Footprint investigation
- Evaluate potential threats to human health and the environment
- Evaluate contaminants entering and moving through the environment

The Plume



- Arsenic is primary contaminant
- Lead is of lesser concern
- Not a public health emergency – such as a hepatitis or E Coli outbreak
- Closer to smelter is more contaminated
- Contamination follows wind patterns

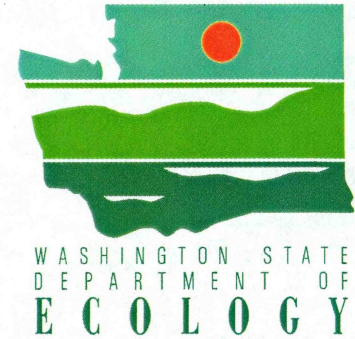
The Plume



-
- Undisturbed soils most contaminated
 - Topography affects contamination (slopes/floodplains)
 - Contamination can be variable within a small area
 - Contamination in top 1-2 feet of soil

Boundary of contamination is not known

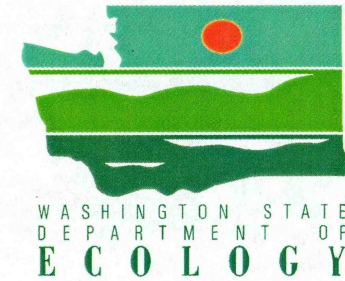
MTCA Cleanup Levels



Arsenic - 20 parts per million

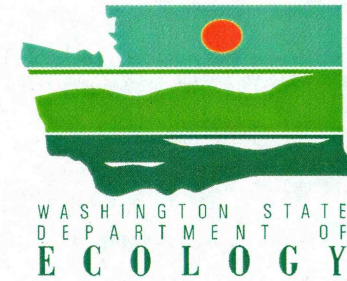
Lead - 250 parts per million

What levels of Arsenic have been found in the TSP area?



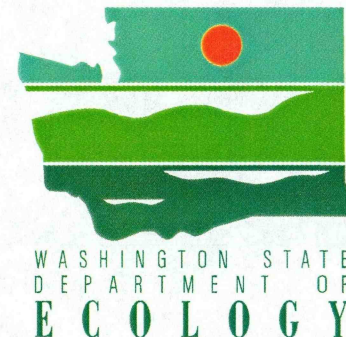
	<u>Averages</u>	<u>Maximum</u>
UP Undeveloped Properties	90 – 170 ppm	281 ppm
VMI-Phase 1 Study	85 ppm (South Vashon)	460 ppm
VMI-Child Use Areas	4 - 50 ppm	130 ppm
UP Residential	26 ppm	163 ppm
King Co. Mainland	Due Summer, 2002	
• Ruston	350 ppm	2100 ppm
• Everett	25 – 900 ppm	8000 ppm

What levels of Lead have been found in the TSP area?



	<u>Averages</u>	<u>Maximum</u>
• UP Undeveloped Properties	170 – 589 ppm	1175 ppm
• VMI-Phase 1 Study		1300 ppm
• VMI-Child Use Areas	8 – 180 ppm	900 ppm
• UP Residential		227 ppm

Protecting Health



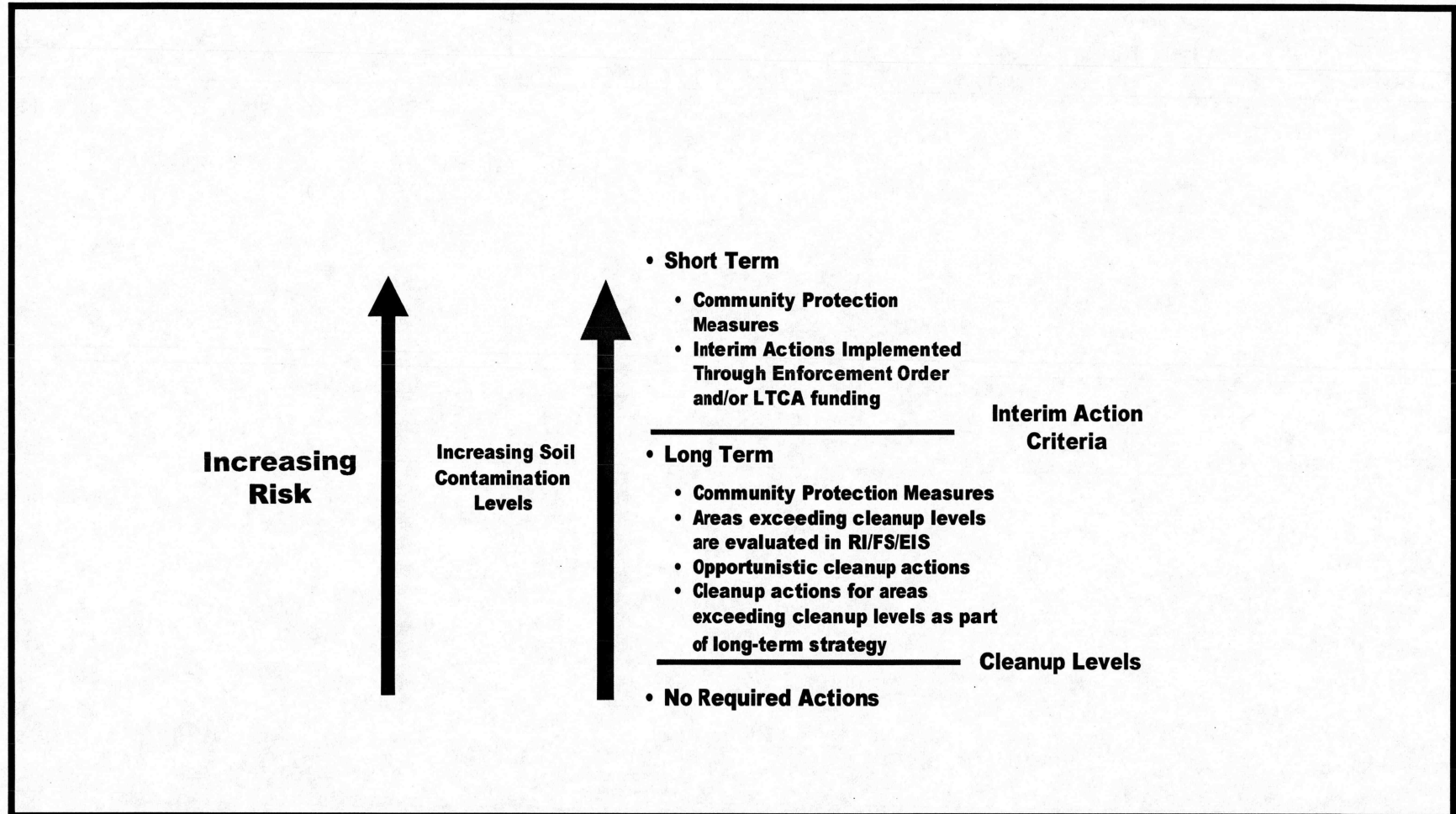
■ Community Protection Measures

- Common sense actions to prevent exposure to contaminated soils, as well as other environmental health hazards

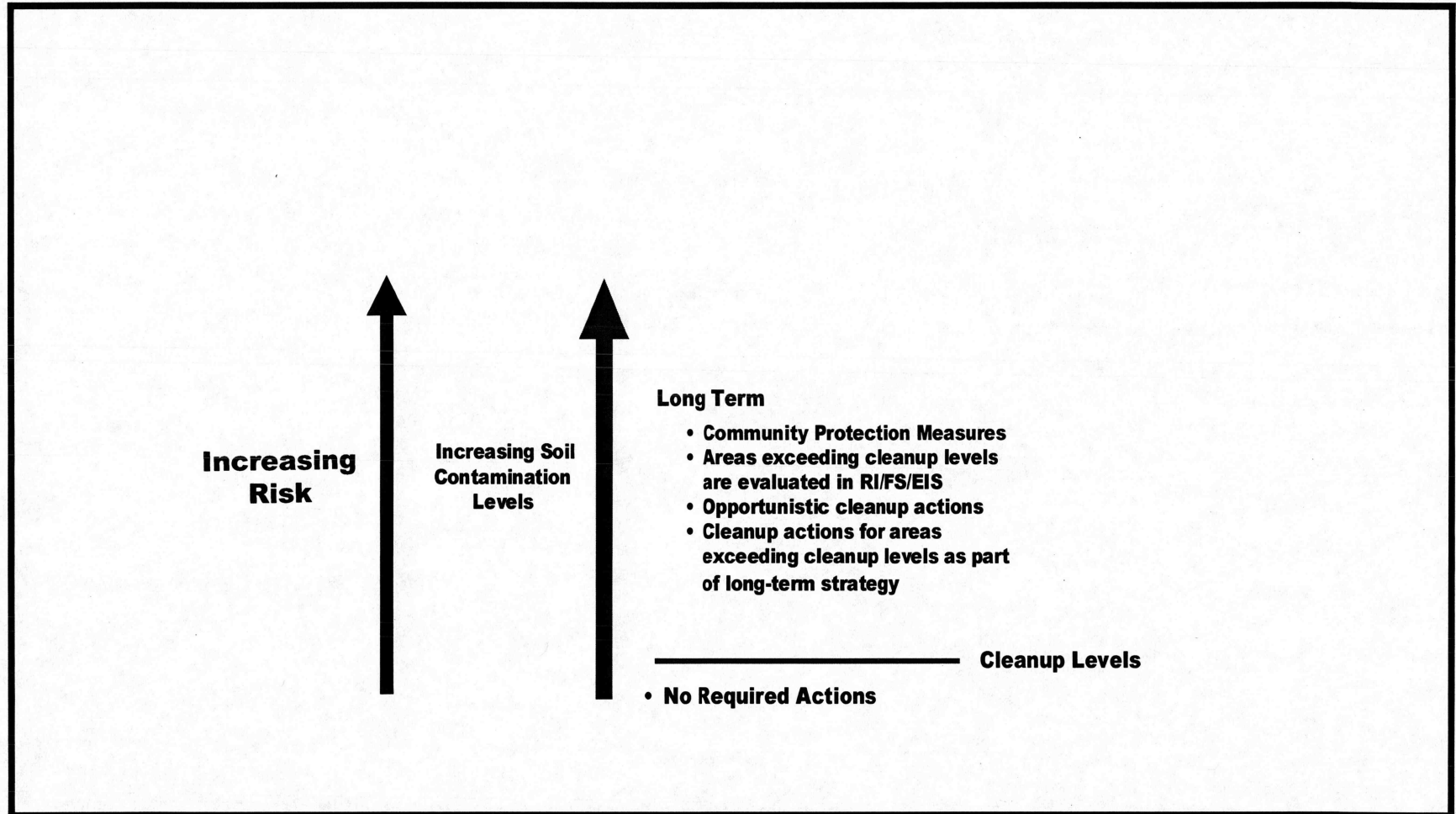
■ Child Use Area Interim Action Trigger Levels

- Cannot address all contamination at once
- Prioritize remediation at schools, daycares, parks, camps
- Contaminant level which triggers a remedial action

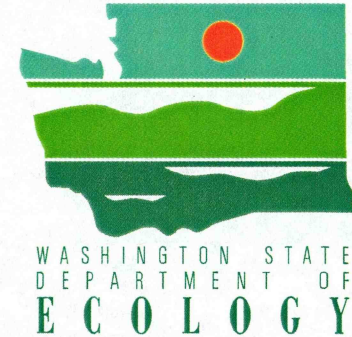
Agency Decision Framework for Child Use Areas



Agency Decision Framework for Other Properties

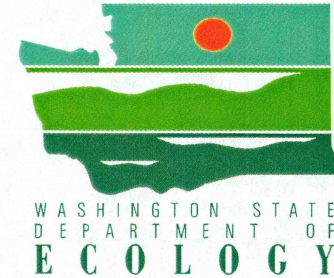


Remediation



- Remedial Action Grants for public property owners (50% match). Limited funds for this biennium. Apply now for June consideration.
- Voluntary Cleanup Program – fee based. Ecology provides technical assistance for site investigation/remediation.
- Consider addressing any arsenic/lead contamination as part of remediation for other contamination
- No public funding available for remediation of private properties

Where is funding coming from?



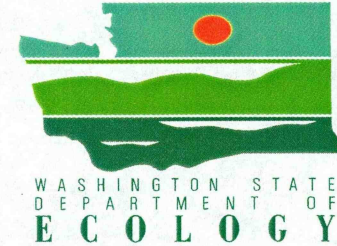
- For the Site Hazard Assessments - Ecology has provided funds (\$3.2 million so far) to the county health departments from the Local Toxics Control Account (generated by a tax on hazardous substances)

Funding (2)



- For the Area-Wide Contamination Strategy Project the legislature appropriated a one-time allotment of \$1.2 million
- Recommendations from the Area-Wide Task Force may result in further legislative funding. We are not certain how any remediation would be funded.

Funding (3)



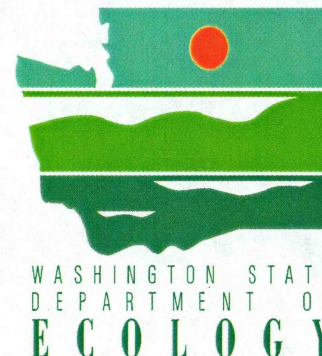
- For public property owners, Ecology can provide funds through the Remedial Action Grants. Get in the queue for the '03-'05 biennium: there may be funds available for Voluntary Cleanups in June, 2002. (This is a 50% match)
- Currently, there are no public funds available for remediation of private properties within TSP.

Funding (4)



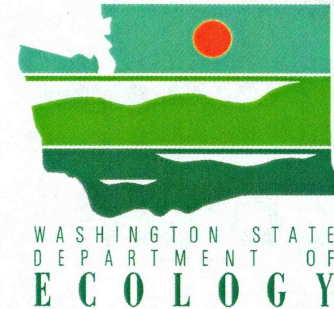
- TSP is one of many priorities w/in Program fiscal budget this fiscal biennium. We look next to:
 - legislature for the '03-'05 biennial budget
- Private right of action for recovery of remedial action costs from liable parties can be pursued under MTCA (RCW 70.105D.080)
 - Seek private counsel

When will data from the current King County study be available?



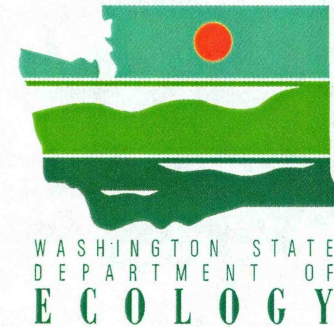
- Ecology, PHSKC and our consultant are reviewing the data now. We hope to present the results in context to you and your communities by June, 2002.
- Landowners will see draft data first

Will you sample child use areas in Mainland King County?



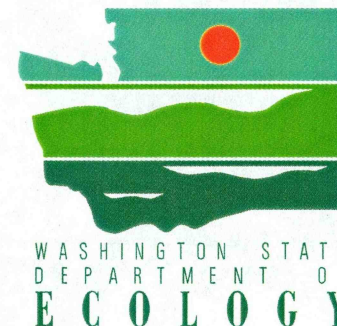
- Child use areas are our priority
- We sampled child use areas in what we believe is the highest contamination area of King County ⇒ Vashon-Maury Island
- We will sample some child use areas on Mainland King County. Scoping of the child use area sampling will take place after completion of the King County study (later this fall)

Future Child-Use Area Investigations



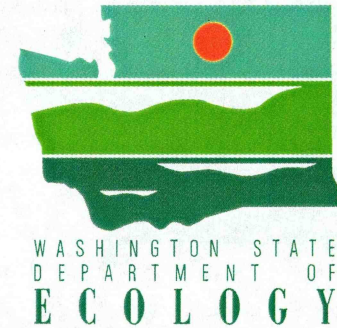
- Tacoma-Pierce County Health Department plans to sample child use sites in targeted areas of Pierce County in late 2002/2003, following initial investigative sampling.

Ecology's Role



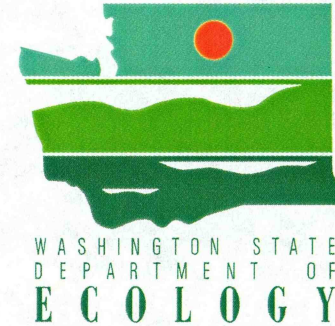
- Ecology is here to:
 - Discern whether or not action is needed
 - Provide technical advice and guidance
 - Work in cooperation with groups and individuals affected
- We can:
 - Identify investigative needs within your community
 - Provide you with information and referrals
 - Provide conduit to the Area-Wide Strategy Project with information, representation

Public Health's Role



- Public Health...
 - Provides expertise in public health, outreach & education
 - Builds networks and relationships with the King County communities to promote health messages
 - Serves as a health advocate for King County communities

Your Role



- Ecology can't "fix it"
- Reducing risk is something we will all have to play a part in.
- Advise of competing priorities, and your specific needs



Wind Directions at the ASARCO Smelter Site



Legend

Highways
Lakes & Puget Sound
Rivers
ASARCO Smelter

0 2.5 5 10 Miles

TOXICS CLEANUP PROGRAM,
GIS GROUP - FEBRUARY, 2002

WASHINGTON STATE
DEPARTMENT OF
ECOLOGY

Windrose

0.3-3.9 4.0-6.9 7.0-10.9 11.0-16.9 17.0-21.9
knots

The length of the vectors of the wind rose graph show the percentage of time the wind blew from each direction on a 16-point compass. Wind speed is delineated by color and width of the brackets.