

Reduce Toxic Threats GMAP



1. Focus:
 - Reducing Toxics Threats Initiative Focus on Prevention: Project Updates

2. Follow-up:
 - Assignments from the May 2008 GMAP

3. Performance Measurements:
 - Reducing Toxic Threats Measures

Reduce Toxic Threats GMAP



Purpose

Foster development of prevention strategies throughout the agency as the smartest, cheapest and healthiest approach.

Long Term Goals

- Exposure and waste are considered and minimized before products are manufactured or sold
- Toxic pollutants are prevented from being introduced into the ecosystem
- Federal toxics policy works

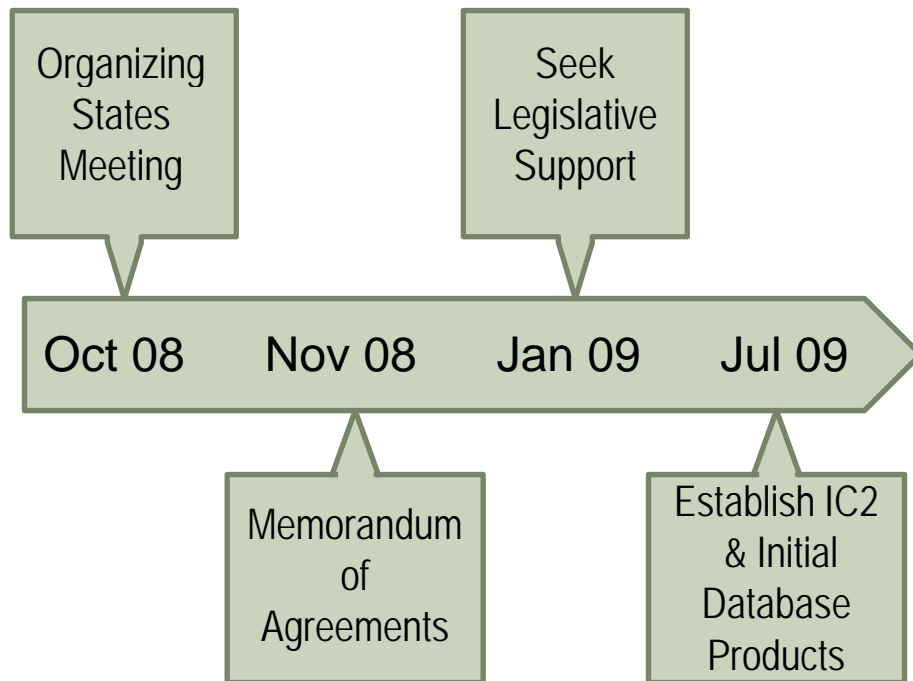
Follow up from May GMAP- Can Washington enact a State Toxics Substance Control Act?

- A state level TSCA is possible but it would only apply to the subset of chemicals that EPA does not address. To date, EPA has addressed only 5 chemicals.

A Proposal for the Formation & Governance of an Interstate Chemicals Clearinghouse (IC2)



A states partnership on chemicals data, information, and assessment methods



Goals:

1. Avoid duplication of effort through collaboration.
2. Build states capacity on safer chemicals alternatives.
3. Provide ready access to high quality chemicals information.

Clearinghouse Functions:

- Support the development of alternatives assessment methods and identification of safer alternatives.
- Share data and information on use, hazard, exposure, and alternatives.
- Share strategies and outcomes on chemicals prioritization initiatives.

Next Steps Action Plan	WHO	WHEN	STATUS
Sign IC2 Memorandum of Agreement	Jay Manning	Jan. 09	Draft Ready
Establish West Coast Governor’s Chemicals Policy Initiative to focus on policy reform.	Jay Manning	June 09	States meeting held in July 2008
Participate on IC2 States planning workgroup	Ken Zarker	Ongoing	Monthly meetings

Safer Chemicals



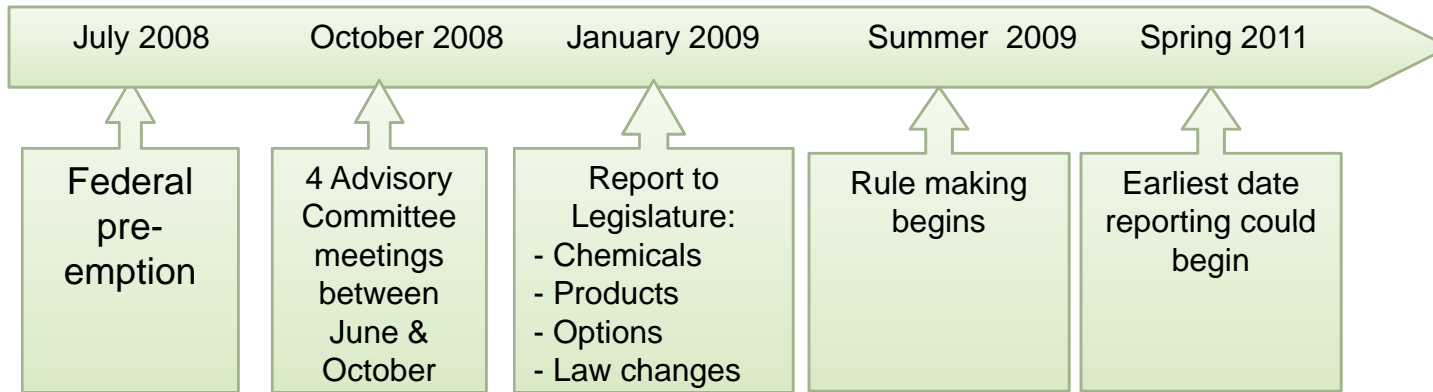
Chemical Assessment

Grade A	<u>PREFERRED</u>		
	A: Chemical has desired qualities & sufficient toxicity info. to determine it has minimal, long-term impact on human health & environment		
Grade B	<u>USE BUT STILL OPPORTUNITY FOR IMPROVEMENT</u>		
	B2: Chemical has many desirable qualities but still has some toxicity	or	B2: Lacks some toxicity data to conduct a complete evaluation
Grade C	<u>USE BUT SEARCH FOR SAFER SUBSTITUTES</u>		
	C3: Chemical is of lower concern	or	C3: Lacks enough toxicity data to conduct a complete evaluation
Grade F	<u>AVOID</u>		
	F4: Chemical is of high concern	or	F4: Lacks too much toxicity data to conduct a complete evaluation

- Lack of toxicity data a major obstacle to implementation.
- We will work with developers of Green Screen to address some shortfalls in the current method.
- We will work with other states to develop a more complete methodology.
 - The Chemical Assessment will be used as the foundation but will extend into other areas:
 - Identify Chemicals of Concern
 - Identify Alternatives
 - Prescreen Alternatives
 - Assess Alternatives
 - Analyze
 - Implement
 - Conclusions
- The Chemical Assessment process was tested as a tool to help prioritize chemicals for Children’s Safe Product Act
 - Identified 11 from possible High Priority Chemicals
 - Subjected to Chemical Assessment process
 - This was labor intensive : evaluator needs chemistry and toxicology background to use

WHAT	WHO	WHEN	STATUS
Work with developers of Green Screen on an updated version	Alex Stone	1/15/2009	Not started yet
Work with multi-state group to expand upon Safer Chemical Alternative methodology	Alex Stone	3/30/2009	Not started yet other than meeting
Work with interested states to finalize methodology and reach agreement for implementation	Multi-state members	6/30/2009	Not started yet

Children's Safe Products Act (aka. Toxic Toys)



Challenges/Issue to come:

- Controversial rule making
- Staff shortage
- Data base and on-line reporting system needed
- How to use the reported information still undetermined

Legislative Report Requirements:

- List of chemicals of high concern.
Status: draft list available
- Products and product types likely to contain the chemicals.
Status: In Development
- Policy options to address these products.
Status: In Development
- Reporting/testing Challenges
Status: In development

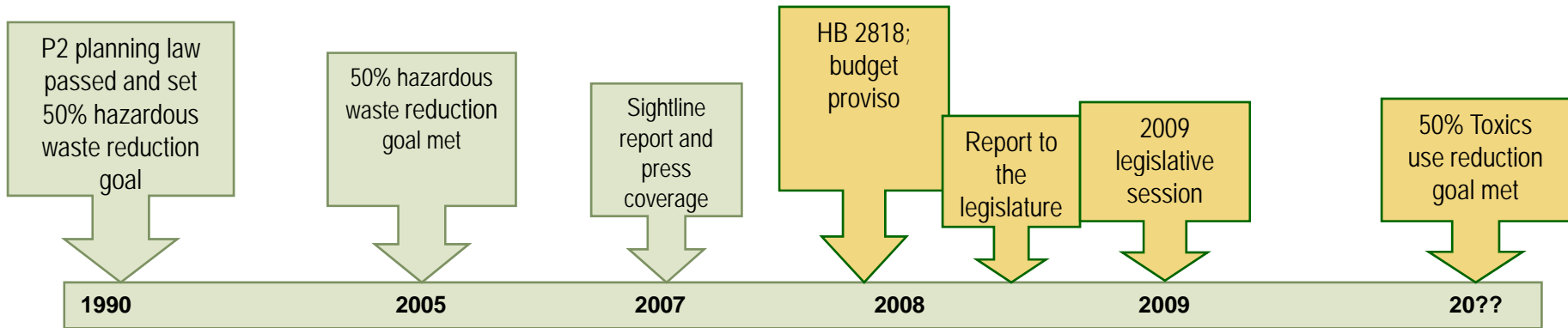
Next Steps Action Plan	WHO	WHEN	STATUS
Legislative Report	Carol Kraege et al.	1/1/09	A few weeks behind

Toxics Reduction Advisory Committee (TRAC)



Waste reduction then...

Toxics use reduction now...



Action Plan Status from the May 08 GMAP

- Four Toxics Reduction Advisory Committee meetings held.
- Final draft recommendations to legislature completed.

Key TRAC Themes

- Follow the threats from toxics
 - not just use of toxics
- Focus on the ‘worst of the worst’
- Research safer chemical alternatives

Key TRAC Recommendations

- Focus on high-priority hazardous substances (WA PBTs, metals of concern, and known human carcinogens)
 - Small users programs
 - Pollution prevention planners
 - Higher fees
- Strengthen research & development, and technical assistance
 - Interstate Chemicals Clearinghouse
 - Increased engineering technical assistance
 - Office of waste reduction expansion

Next Steps Action Plan	WHO	WHEN	STATUS
TRAC Findings and Recommendations to legislature	Darin Rice	November 30	In final draft form
Briefing to House ENVH Committee	Darin Rice	December 5	Scheduled

Chemical Action Plans



Lead

- **Status:** Comment period closed October 6th. Ecology received 1000 + comments. On track to complete by the end of the year,
- **Followup from May:** When lead standards are lowered, how do the lower standards impact cleanup sites that have already received a "no further action" status? Would we exempt past cleanups from the new standard?
 - **Status:** New standards do not effect sites where a NFA has already been issued unless the site requires periodic review and that review finds that the remedy is not protective.

PBDEs

- **Status:** Fire Safety Committee met November 7. Safer, technically feasible and fire safe alternatives for TVs, computers and furniture are available. The ban on manufacture of these items containing Deca will become effective January 1, 2011.

Mercury

- **Status:** Implementation of the Mercury Chemical Action Plan and Mercury Education and Reduction Act has resulted in 12,000+ pounds of mercury removed from the environment. There is some discussion about scaling back efforts to focus on other chemicals and strategies.

Next Steps	WHO	WHEN	STATUS
Run legislation to implement lead CAP	Holly Davies.	2010	Draft legislation 2009
PAH CAP	Holly Davies	2009	Delayed
PFOS CAP	Holly Davies	2010	Delayed

Electronic Product Recycling (a.k.a. E-Cycle Washington)



Producer Responsibility

A model program

Inadequate protections at the federal level resulted in Washington passing a state law.

The Electronic Product Recycling Program will:

- Begin as scheduled on Jan. 1, 2009, with approx. 200 collection sites across the state providing **free** recycling of computers, monitors and TVs.
- Safely recycle approx. 25,000,000 lbs of these products per year.
- Keep the lead, mercury cadmium and PBEs in these products out of landfills.
- Be financed by the manufacturers and free to the consumers.

Public Outreach:

Soft Launch: Local government., retailers, manufacturers, Ecology and media are promoting E-Cycle Washington.

“Flaws” in the Model?

- **Without a landfill ban the program is incomplete.**
- **How to allow, but regulate the reuse of equipment coming into the program was not addressed – and remains an issue.**



E-CYCLE
washington
ecyclewashington.org

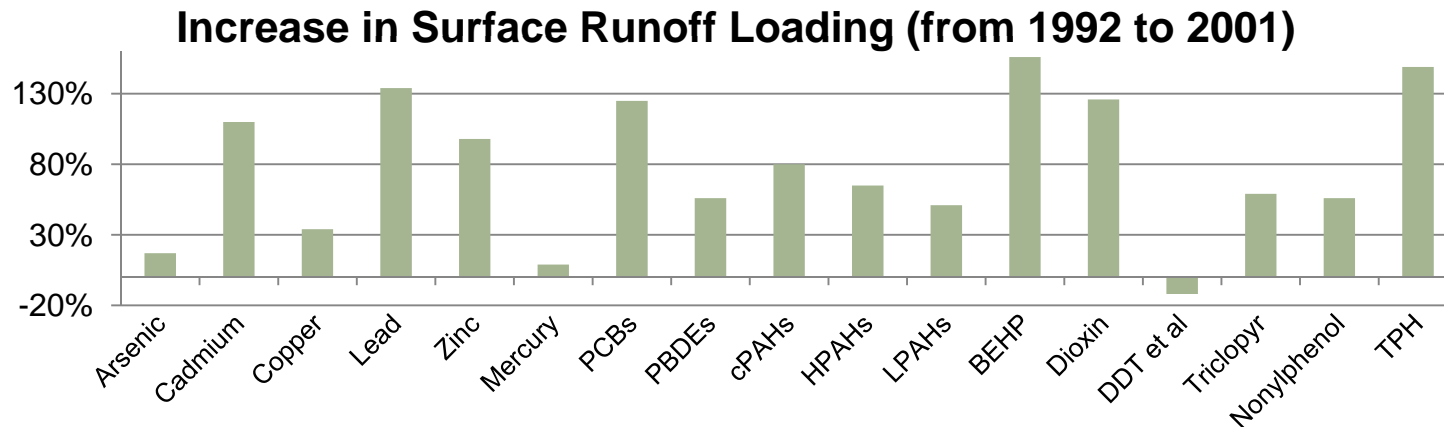
Toxics Loading to Puget Sound: Phase 2 Projects



Surface Runoff and Roadways *and* Permitted Wastewater Dischargers

Key Conclusions

1. Surface runoff pathway provided 70% to 99% of the toxic chemicals.
 - Permitted wastewater dischargers provided only 1.9% to 8.9% as much as surface runoff.
2. Residential land use was the primary source of 14 of 17 toxic chemicals.
 - Residential land use occupied 11.6% of the land, and yielded the third highest unit loading.
 - Field/Forest/Other land use was the primary source of the other three toxic chemicals (arsenic, mercury, and DDT).



3. Regional development (1992 – 2001) increased the total toxic chemical loading to Puget Sound.
 - Quantity is uncertain because different infiltration constants were used.

Surface Runoff and Roadways *and* Permitted Wastewater Dischargers

Policy Recommendations

1. Focus on surface runoff in residential land use areas.
 - Reduce sources (Eliminate or control toxics) → (e.g., safer consumer products)
 - Reduce discharges (Intercept the pathway) → (e.g., low-impact development)
 - Improve consumer education and outreach → (e.g., reframing & social marketing, toxics tax)

**“If you can’t prevent the rain from touching your toxic materials,
at least prevent it from then flowing into the Sound.”**

Science Recommendations

2. Support development of a comprehensive model of the Puget Sound Basin for use by policy-makers.
3. Dissect the sources and pathways of toxic chemicals in surface runoff with sampling and analyses.
 - Locations: Land Uses and Study Areas.
 - Seasonal differences.
4. Require discharge flow measurements, lower reporting limits, and analyses of emerging toxic chemicals.

Urban Waters and Local Control Specialists



Ecology's Urban Water Inspections

Since May (May totals)	NWRO	SWRO	ERO	Total YTD
Site Visits	70(50)	157(99)	21(0)	397
"Referral Rate"	50%(50%)	11%(40%)	(0)	%19
Stormwater permit needed	39(10)	7(15)		61
Unpermitted wastewater discharge	9(8)	5(4)		27
Improper hazardous waste disposal	8(10)	6(11)		35
Unpermitted air emissions	5(3)	3(2)		18
Onsite contamination	4(2)	0(0)		6

"Referral rate" = Percentage of the sites with one or more high level compliance issues.
 Numbers in Parenthesis are the reported numbers from the May 08 GMAP.

Data Analysis

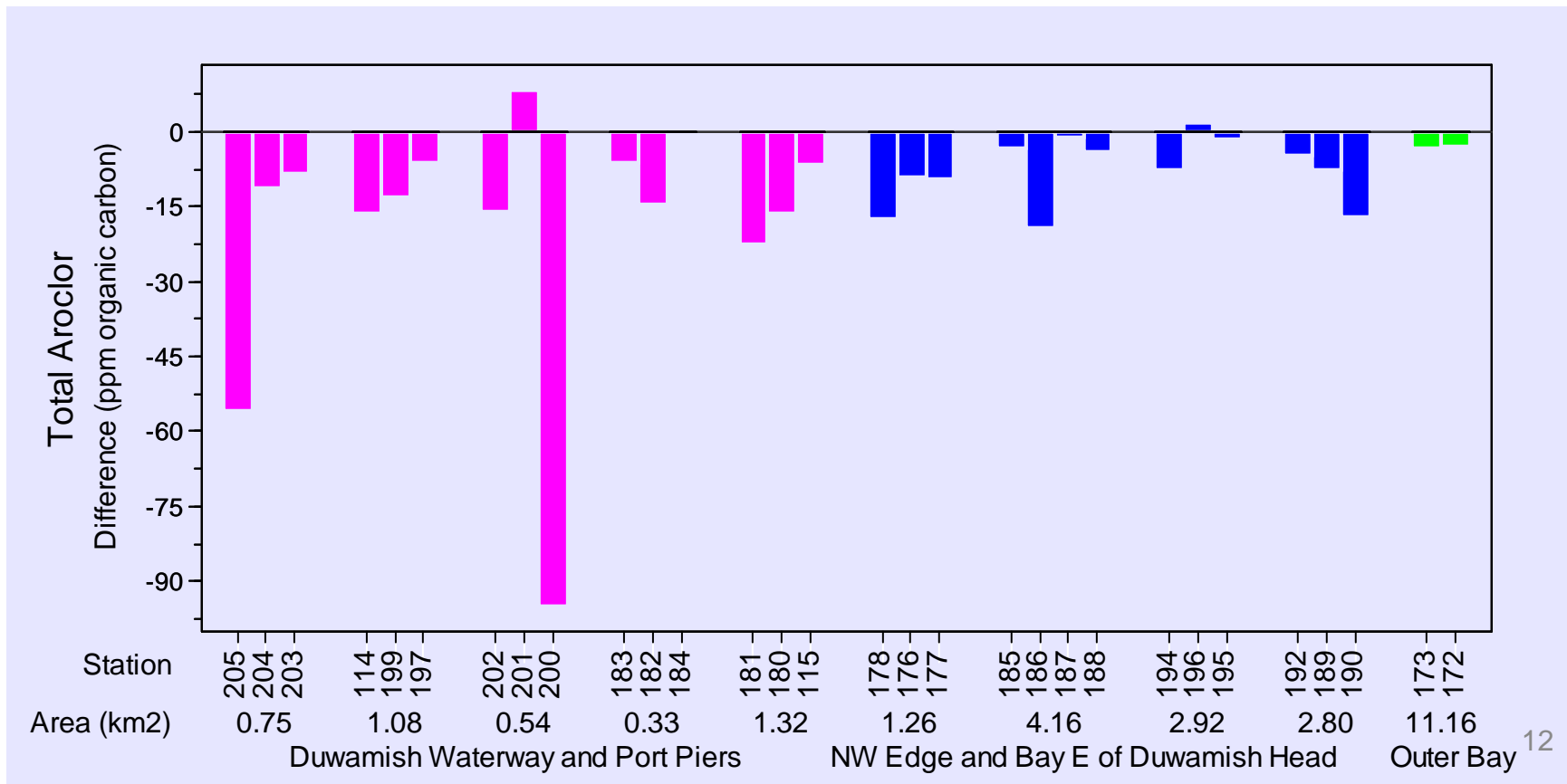
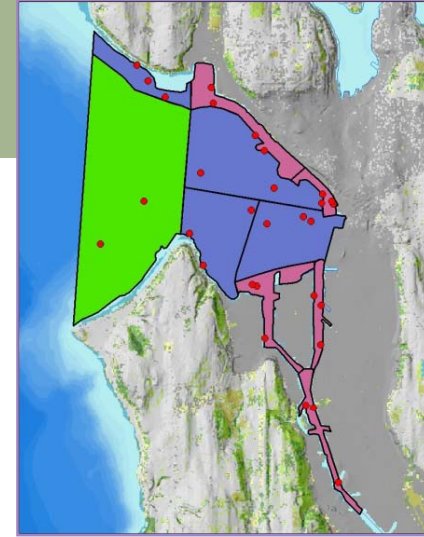
- The Duwamish team is generally visiting larger more complex facilities.
- ERO staff are collecting samples and directing same area site visits by the local source control inspector.
- The Local Source control database became operational Oct 3. This tool is designed to streamline inspection documentation and follow-up as well as facilitate results measurement.
- We are providing data entry for LCS and the staff's backlogged inspections. Site visit numbers may be incomplete.
- Referrals are tracked via ERTs. 9 have come in from Local Source Control inspectors. All in NWRO; 8 to WQ, 1 to HW.

WHAT	WHO	WHEN	STATUS
1000 site visits by 16 local jurisdictions (10 counties, 4 cities)	Local Source Control partners	June 2009	603(33) completed

Toxics Monitoring: Urban Waters Initiative



Elliott Bay/Lower Duwamish Changes in Total PCB Aroclors 1998 vs. 2007



Toxics Monitoring: Urban Waters Initiative



Parameter	Bay-Scale Change
Metals:	
As, Cd, Cr, Cu, Ni	No change
Ag, Hg, Pb, Sn	Decrease
Zn	Increase
Most PAHs	Decrease
Most PCB Congeners	Decrease
Total PCB Aroclors	Decrease
Sediment Toxicity	Decrease
Infaunal Communities	Improving

Prevention of Air Toxics: Diesel and Woodstoves



Emission Source	Fuel Standards	Engine Standards
On-Road Trucks	2006	2007
Off-Road/Construction Equip	2010	2011
Locomotive	2014	2015
Marine	2014	2014
Ocean Going Vessels	2016	

Emission Source	Federal Standards	State Standards
Wood Stoves	1988	1991

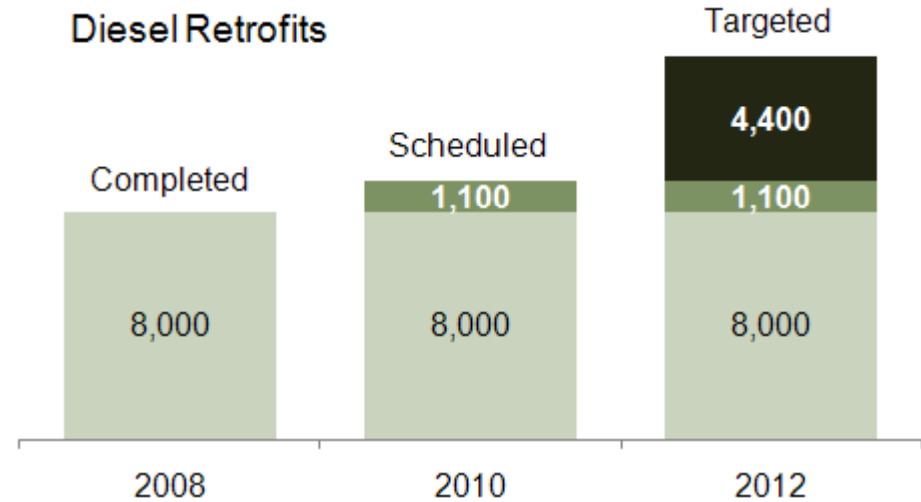
- Standards mean new units emit low levels of toxics, but legacy fleet is still dirty.
- Normal fleet “turnover” takes a long time.
- We need to speed replacement of legacy fleet – retrofits, change-outs, regulations.

Reducing Exposure to Toxic Diesel & Wood Smoke



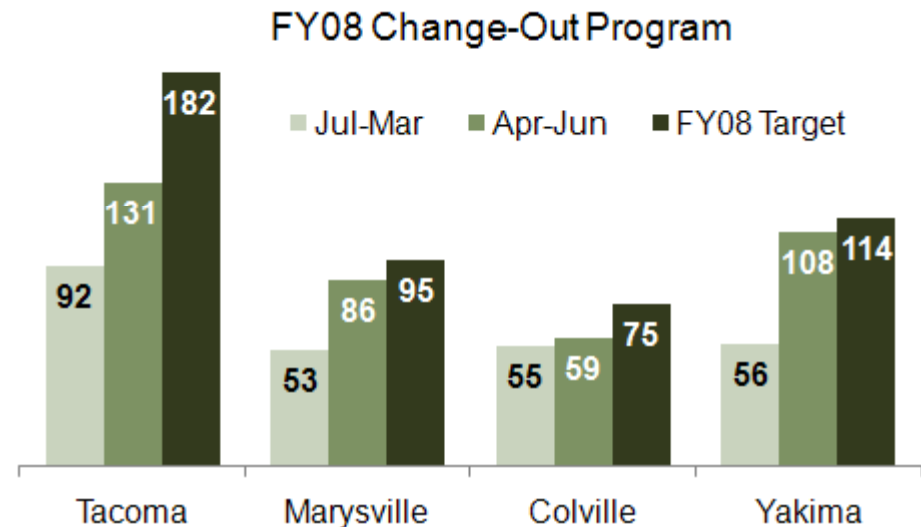
Diesel Retrofit

- Improves emissions prior to fleet turnover.
- Eligible public owned fleets, done this biennium.
- Public purpose fleets (port, refuse) targeted.
- 90% of engines are held in the private sector.
- 09-11 Budget requests include:
 - low-interest loans for drayage fleets.
 - anti-idling rules.
 - pilot for construction engines.



Wood Stove Change-outs

- Incentives to replace existing, high-polluting devices.
- Thousands of devices in at-risk areas.
- \$500K completed FY 08, \$1.5 M started FY 09.
- FY 09-11 Request: \$2.0 M for change-out, \$500K for education on proper burning.
- At least this level needed in future biennia.
- Change-outs needed to make burn bans effective.



Performance Measures for Toxics (Current Measures)



Cleanup	Manage	Prevent
Hanford groundwater remediation	Citizens exposed to particulate matter	Changed business processes
Hanford chromium removal	Number of woodstoves changed out	
Sites cleaned up	Citizens living where burning is banned	
Sites ranked in Puget Sound	Composting or waste to product	
Soil safety plans/clean ups	Diesel engine retrofits	
Schools cleaned up	Diesel soot emissions	
Water quality cleanup plans	Mercury collected/captured	
	Pounds of hazardous waste generated	
	Technical Assistance visits	
	Small quantity hazardous waste generators	
	PBT chemical action plans	
	Electronic product recycling	
	Stormwater monitoring reports submitted	
	Stormwater inspections	
	NPDES facilities over mercury limits	
	NPDES monitoring sediment standards	
	Volume / number oil spills	
	Inspections of oil transfers	

Ecology's Reducing Toxic Threats Initiative

A three-pronged approach focused on prevention

