Focus on the **PBT Rule**

from Ecology's Solid Waste & Financial Assistance Program

Chapter 173-333 WAC "Persistent Bioaccumulative Toxins" goes into effect on Feb. 13, 2006.

What are PBTs and why should I be concerned?

Persistent, bioaccumulative toxins (PBTs) are a group of chemicals that threaten the health of people and the environment. They raise special challenges for our society and the environment because:

- PBTs remain in the environment for a long time without breaking down (*persistent*).
- Animals and people accumulate PBTs in their bodies, primarily from the food they eat. As these chemicals move up the food chain, they increase in concentration and linger for generations in people and the environment (*bioaccumulative*).
- Exposure to PBTs has been linked to a wide range of toxic effects in fish, wildlife and humans, including effects on the nervous system, reproductive and developmental problems, immune-response suppression, cancer, and endocrine disruption *(toxic).*
- PBTs can travel long distances and generally move easily between air, water and land.

Because of the unique threat that PBTs pose, special attention is necessary to identify and implement actions that will reduce and eliminate threats to human health and the environment. The PBT rule is part of the state's efforts to protect the people of Washington, as well as protect our environment, by reducing exposure to these chemicals. It is the first rule of its kind in the U.S.

What does this rule do?

Governor Locke (Executive Order 04-01) and the 2004 Legislature (House Bill 2459) directed the Department of Ecology to develop a rule that establishes specific criteria for identifying PBTs and a clear process for developing chemical action plans to address their effects.

The rule is procedural. It will help the Department of Ecology (Ecology) set its internal priorities when addressing PBTs. The rule contains a list of chemicals defined as PBTs, lays out a process to prioritize and schedule future Chemical Action Plans (CAPs) and establishes procedures for developing CAPs (CAPs are the main way specific reduction actions and activities will be developed and implemented). Ecology will develop CAPs in collaboration with other agencies and experts for specific high-priority chemicals.

Multiyear schedule

The rule outlines a process for Ecology, in consultation with the Department of Health (Health), to develop a "multiyear schedule" for the preparation of CAPs. This requires prioritizing chemicals for action and explaining the rationale for their ranking, and laying out timelines for completion.

Once drafted, the preliminary schedule will be open for public review and comment. Ecology and Health will only select chemicals/chemical groups for which there are opportunities for reducing or phasing out the uses, releases or exposures of the PBT beyond levels required under other federal or state laws or regulations. The schedule for CAPs will be reviewed and updated at least once every three years.

How the rule was developed

To help craft the PBT rule, Ecology worked with an advisory committee, representing business, agricultural, environmental, government, academic/scientific and community interests. Numerous individuals and organizations also took advantage of the public comment period and public hearings to provide input on the draft rule.

What are sources of PBTs?

PBTs come from diverse sources and are primarily man-made. Sources include disposed thermometers, thermostats and fluorescent lamps (mercury); wood-stove smoke; auto exhaust; used motor oils (PAHs); textile, carpet and leather protection (PFOS); flame retardants used in electronic, upholstery and carpet padding products (PBDEs); and ammunition, fishing sinkers and tire-balancing weights (lead).

Some persistent toxins have been banned for more than 30 years, but their presence remains in land and water across the globe. For example, good cleanup technologies don't yet exist for addressing PCB contamination in sediments and water. In Puget Sound, for example, the PCBs in sediment build-up in orca whales and other marine life.

What PBTs are identified in the rule?

The following chemicals and chemical groups are on the PBT List, as well as two metals of concern:

Metals	**Flame Retardants**	**Banned Pesticides**	**Organic Chemicals**
Methyl-mercury	PBDEs	Mirex	1,2,4,5-TCB
	Tetrabromobisphenol A	Aldrin/Dieldrin	Perfluorooctane sulfonates
	Hexabromocyclododecane	Chlordane	Hexachlorobenzene
	Pentachlorobenzene	DDT/DDD/DDE	Hexachlorobutadiene
		Heptachlor epoxide	Short-chain chlor paraffins
Combustion By-Products		Toxaphene	Polychlorinated naphthalenes
PAHs		Chlordecone	
PCDD	**Banned Flame Retardant**	Endrin	**Metals of Concern**
PCDF	Hexabromobiphenyl	**Banned Organic Chemicals**	Cadmium
PBDD/PBDF		PCBs	Lead

What else is Ecology doing about PBTs?

Ecology is addressing the PBT problem in many different ways, including:

- Ecology has been working for a number of years to reduce emissions and exposures from PBTs. These actions have often been largely separate regulatory activities aimed at different parts of the environment (air, land or water), and Ecology continues to work to ensure more coordination between these activities.

- In December 2000, Ecology released its *Proposed Strategy to Continually Reduce Persistent, Bioaccumulative Toxins (PBTs) in Washington State*. The *PBT Strategy* is intended to guide the continual reduction of risks to human health and Washington's environment from exposures to PBTs. The *PBT Strategy* enables Ecology and other appropriate agencies to harness all of their tools – regulatory, voluntary, enforcement and compliance – and direct them at a group of chemicals of common concern.

- Two CAPs have been completed: one for mercury (in February 2003) and one for polybrominated diphenyl ethers, or PBDEs (in January 2006). Both were developed jointly with the Department of Health.

- Reducing the threat of toxics is one of Ecology Director Jay Manning's four priorities for action. His Action Plan emphasizes prevention, in addition to the work of cleaning up existing toxic sites.

How can I find out more about PBTs?

For more information on the rule and PBTs, go the Ecology Web site, http://www.ecy.wa.gov/programs/eap/index.html#pbt, and view items of interest under "PBT Strategy."