Washington State Department of Health

WASHINGTON STATE DEPARTMENT OF ECOLOGY

PBT Initiative

Overview

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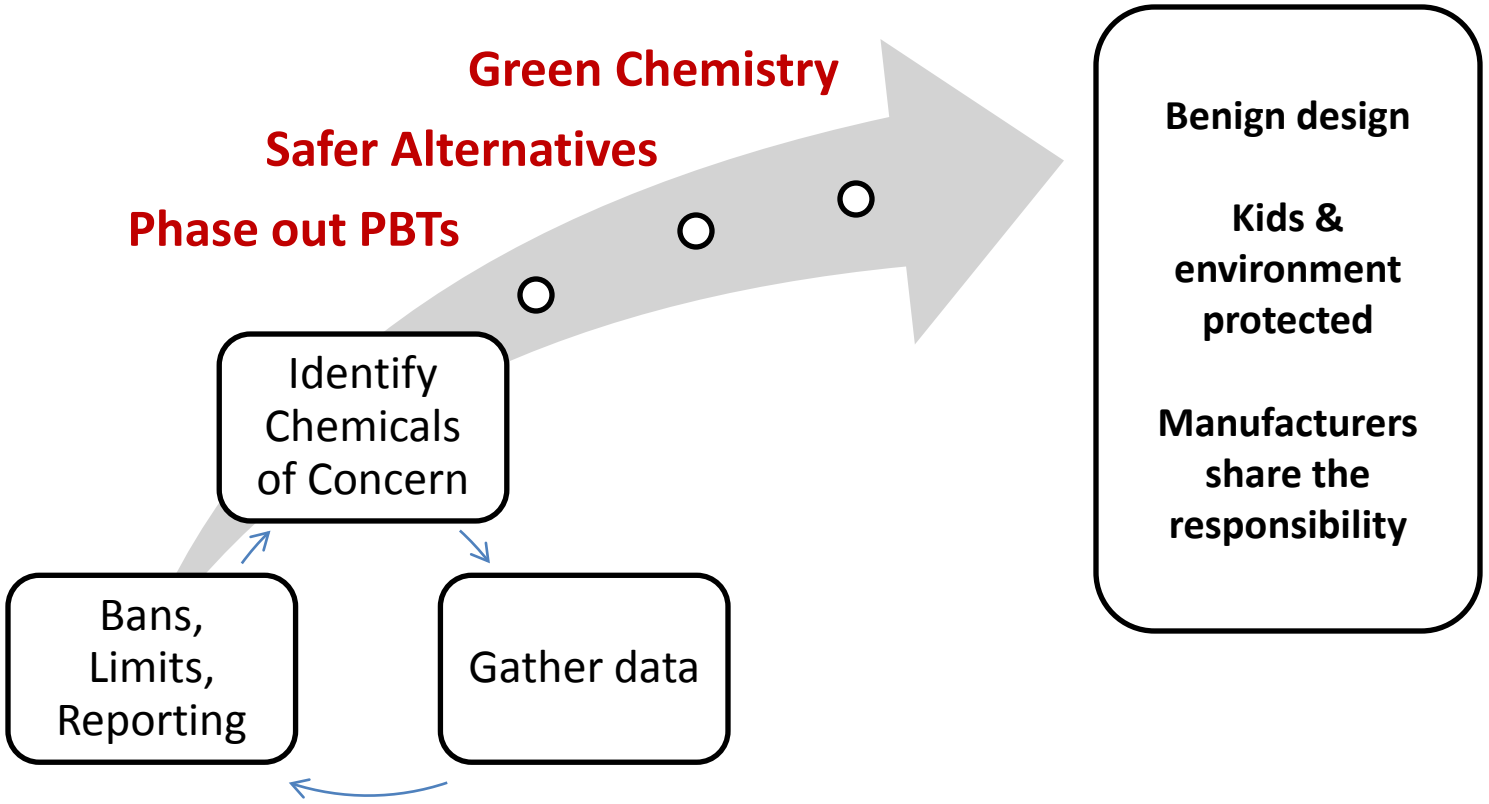
Reducing Toxic Threats

Averting toxic exposures and avoiding future costs is the smartest, cheapest, and healthiest approach.



PBTs

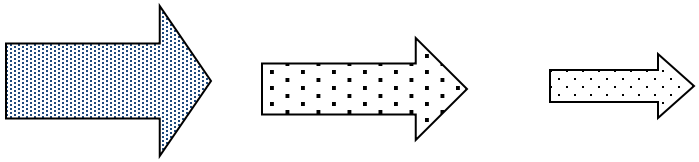
- Persistent- they remain in the environment for a long time
- Bioaccumulative- they build up in organisms and in the food chain
- Toxic- they are harmful to the health of humans and/or other species.

Why are PBTs a priority?

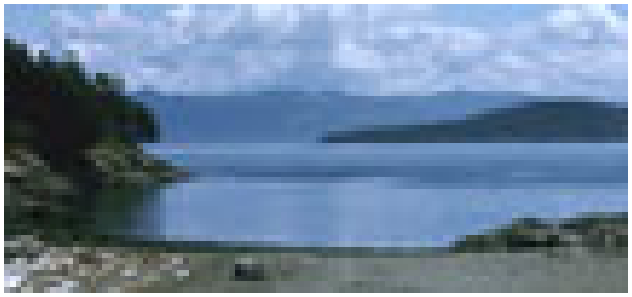
- Travel long distances and cross media
- Span the boundaries of programs, geography and generations.
- Traditional single-media approaches won't solve the whole problem.
- We need to address PBTs through integrated use of all agency tools and programs.

Non-PBT chemical release

Sources



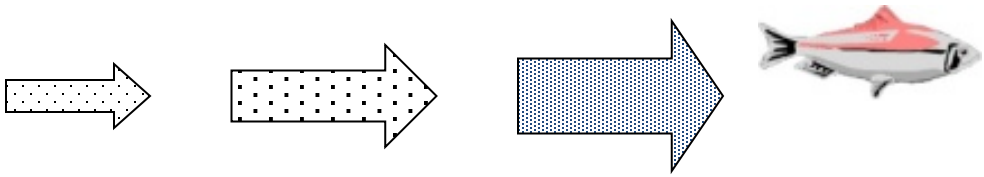
Degradation and Dispersal



Environment

PBT chemical release

Sources



Increasing Concentrations

2006 PBT Rule on PBTs
(Chapter 173-333 WAC)

- Goal is to reduce and phase-out PBT uses, releases, and exposures in Washington
- PBT criteria
- List of 27 individual PBTs and groups
- Chemical Action Plans (CAPs)
  - Process to prioritize and schedule
  - Content
- Procedural rule

PBT list

Chemicals

Aldrin

Chlordane

Chlordecone (kepone)

DDT

Dieldrin

Endrin

Heptachlor/heptachlor expoxide

Hexabromobiphenyl

Hexabromocyclododecane

Hexachlorobutadiene

Methyl mercury (2003)

Mirex

Pentachlorobenzene

Short-chain chlorinated paraffins

Tetrabromobisphenol A

Toxaphene

Chemical Groups

PCBs (2014)

PFOS and its salts

PBDEs (2006)

PAHs (2012)

Polybrominated dibenzodioxins and furans

Polychlorinated dibenzo-p-dioxins

Polychlorinated dibenzofurans

Polychlorinated naphthalenes

Metals of concern

Cadmium

Lead (2009)

Chemicals in red have completed CAPs
Chemicals in blue have planned CAPs

What is a CAP?

Plan that identifies, characterizes, and evaluates uses and releases of a PBT and recommends actions to protect human health and the environment

What's in a CAP?

- Health effects
  - Human
  - Wildlife
- Chemistry
- Sources
- Laws and Regulations
- Policy Options
  - costs
- Recommendations
  - Agency actions
  - New laws
  - Education
  - Partners

Process for Preparing CAPs

- Plan and collect information with
  - Different programs within Ecology and DOH
  - Other experts
- **Work with external advisory committee**
- Review and collect more information
- Develop draft recommendations
- Public review and comment on draft CAP
- Final recommendations/Final CAP
- Implementation

Actions Since 2003 Mercury CAP

- Legislation
  - 2003 Mercury Education and Reduction Act (RCW 70.95M) banned some uses- thermometers, novelties, etc.
  - 2010 Mercury lamp recycling and product stewardship
- State agency actions
  - Collection and proper disposal of more than 14,000 pounds of mercury
  - Lowered the detection limit for mercury in water discharge permits
  - **An agreement with dentists to collect mercury amalgam waste**
- Continued challenges
  - Air deposition from inside and outside the state
  - Continued presence of mercury in the environment, especially in fish

Actions Since 2006 PBDE CAP

- 2007 legislation
  - **Banned specific flame retardants in some uses- residential upholstered furniture, computers, etc.**
- EPA worked with industry on a voluntary phase out by 2012.
- Continued Challenges
  - Safer alternatives
  - Continued presence of PBDEs in the environment

Actions since 2009 Lead CAP

- Legislation
  - Commerce got delegation from EPA for the new rule on lead-safe renovation
  - Ban on sale and installation of lead wheel weights
- State agency actions
  - **Metals project focusing on lead, mercury and cadmium through our pollution prevention planning**
  - Fish & Wildlife banned the use of lead fishing tackle in 13 loon nesting lakes
  - DOH emphasis on Healthy Homes, education and outreach
- Continued challenges
  - Lead-based paint is the largest exposure source for children.
  - Widespread use of lead in products.

Actions since 2012 PAH CAP

- Continue State Agency Actions
  - **Increase use of more efficient wood stoves and burning practices**
  - Expand outreach on reducing fuel consumption and eliminating drips and leaks
  - Continue anti-idling education
  - Continue the diesel reduction strategy
  - Support federal actions on cleaner burning
  - Continue creosote piling removal
  - Investigate releases from creosote treated railroad ties and roofing materials
  - Continue anti-smoking programs
- Continued challenges
  - Inefficient combustion