

PBT Initiative Overview

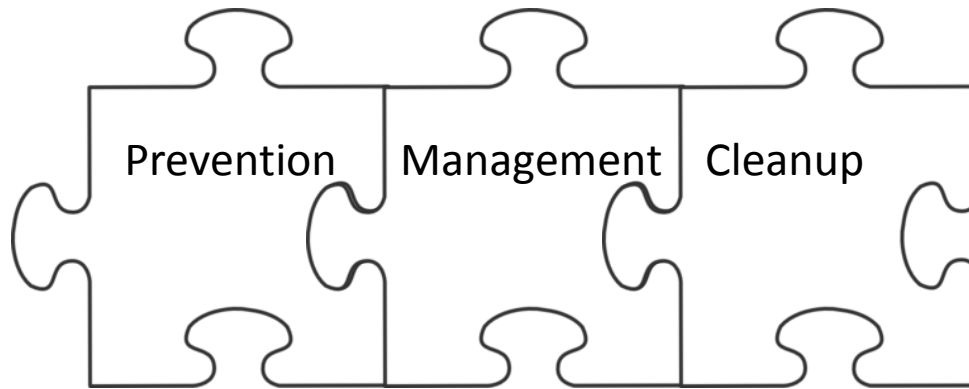
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Toxics Reduction

Prevention is the smartest, cheapest and healthiest approach to protect Washington's environment and our communities.



Toxics Reduction

- Product Laws
- Phase out PBTs
- Gather Information
- Safer Alternatives



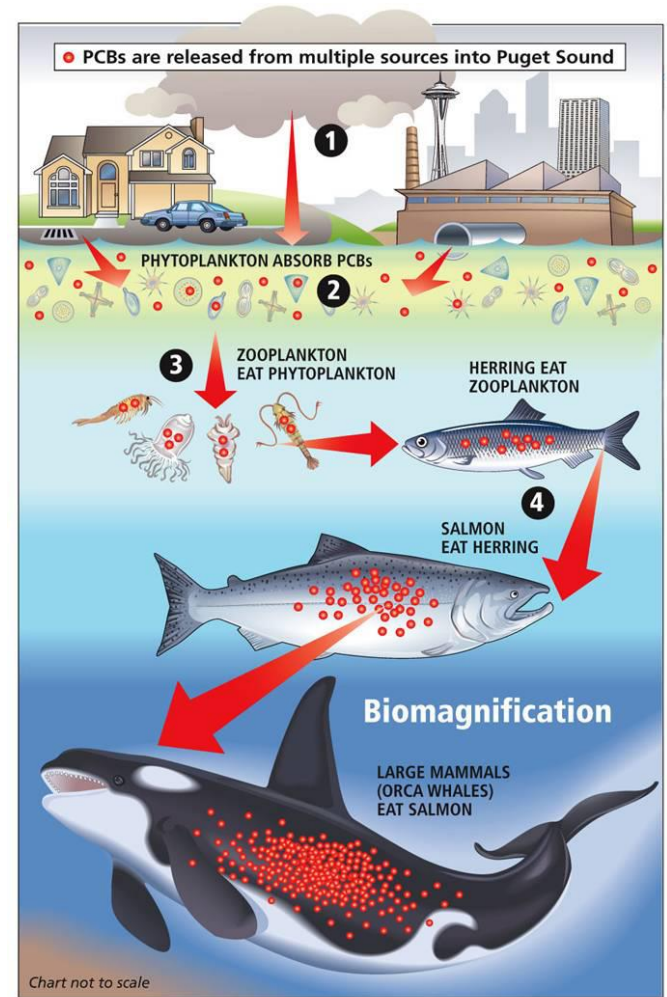
PBT's

- 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.



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



What is a Chemical Action Plan?

- Identifies sources of the most problematic chemicals impacting Washington
- Provides recommendations on how to reduce or eliminate the most important sources
- Looks at all sources, from industrial sewer pipes to everyday products
- Builds on collaborative stakeholder input



Why are CAPs important?

- Get to the root causes of toxic pollution
- Fill in gaps in how we address toxic chemicals
- Preserve our investments in management and cleanups



What's in a CAP?

- Chemistry
- Sources
- Health effects
 - Human
 - Wildlife
- Environmental data
- Laws and regulations
- Economic analysis
- Recommendations



Process for Preparing CAPs

- Plan and collect information with different programs- Ecy and DOH



- **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



Examples of CAP actions

- Mercury
 - Voluntary agreement with dentists
- PBDE flame retardants
 - Ban on some uses after an alternatives assessment
- Lead
 - Work with Commerce and DOH on assessment and remediation
- PAHs
 - Continue Ecology programs on wood smoke, creosote, diesel emissions
- PCBs
 - Work with OSPI to remove PCB light ballasts from schools



Mercury CAP Implementation

- Agreement with dentists to collect mercury amalgam waste
- 2003 Mercury Education and Reduction Act (RCW 70.95M) banned some uses- thermometers, novelties, etc.
- 2010 Mercury lamp recycling and product stewardship
- Hospitals waste BMPs
- Lowered the detection limit for mercury in water discharge permits
- Auto switch collection
 - 234,500 switches since 2006
- Altogether we've collected more than 14,000 pounds of mercury



Chrysler Light Switches



Rule Update

- WAC 173-333 Chemical Action Plans
- Update definitions, criteria, CAP process
- Amend list of chemicals
- **Participate:** listserv, website, meetings
http://www.ecy.wa.gov/programs/hwt/r/laws_rules/PBT/1512ov.html
kara.steward@ecy.wa.gov



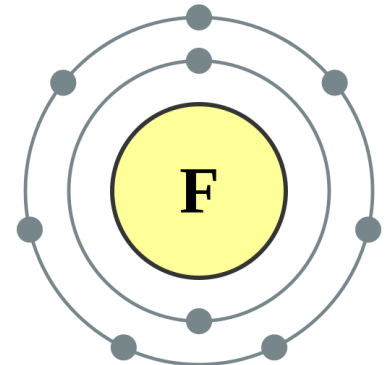
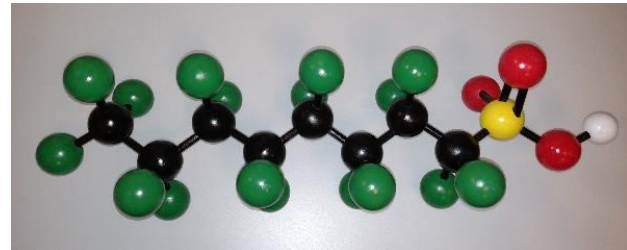
PFAS

preliminary information



Chemistry

- **PFAS** Per- and poly-fluorinated alkyl substances
- Persistent
- Sweden > 3000
- # of carbons
- # of fluorines
- Functional groups
- Polymers and non-polymers
- Pre-cursors



Uses

- Carpets (homes, businesses, cars, and planes)
- Textiles (outdoor clothing and equipment)
- Fire-fighting foam used to put out petroleum fires (aerospace, oil transport, and oil refineries)
- Paper wrappers for fast food and microwave popcorn
- Tubing, seals, wire insulation, and other equipment for cars and planes
- Building materials (metal roof coatings, paint adhesives, and sealants)
- Pesticides
- Cleaning agents
- Printing inks
- Releasing agents
- Metal plating industry
- Fuel additives
- Cosmetics

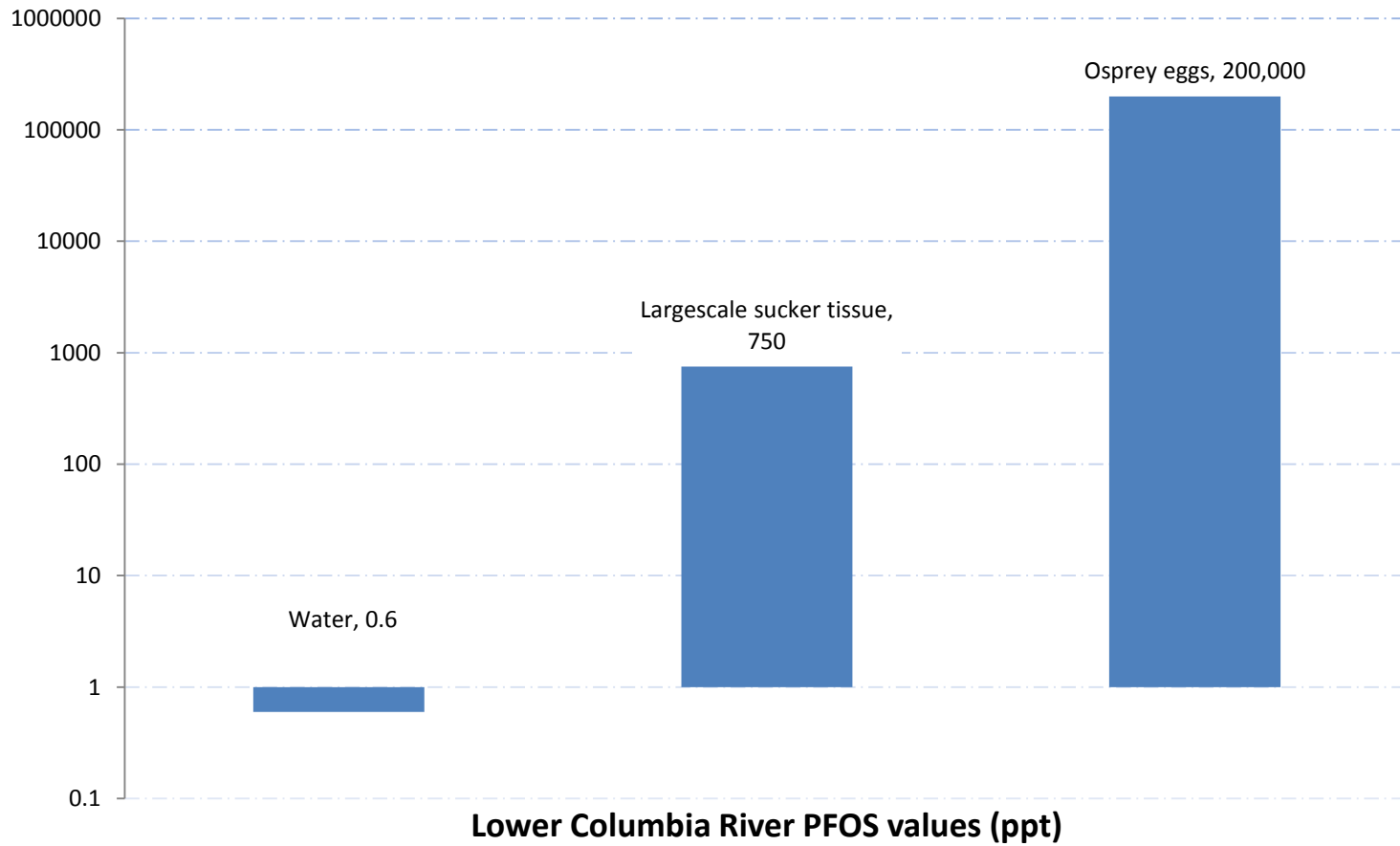


Exposure in Washington

- 2009 Ecology study
 - Surface water, WWTP, fish, osprey eggs
- Drinking water (EPA UCMR3)
 - Fort Lewis and Dupont
- CDC biomonitoring
 - Widespread human exposure
- Superfund and DoD sites



2009 Ecology study



Health Effects

- Inc. blood cholesterol levels
- Liver damage
- Immune system
- Developmental effects
- Cancer uncertain

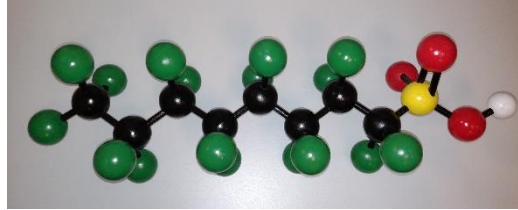


Regulations

- Stockholm Convention
- EU water quality
- Norway ban on PFOA
- EPA SNURs on 271
- EPA 2010/2015 PFOA stewardship program
- EPA provisional drinking water advisory, state and international drinking water levels
- EPA soil screening level
- Washington persistent dangerous waste (WAC 173-303-100)



Proposed Scope



Long chain perfluoroalkyls,
precursors, related substances, and
intended substitutes

