

The webinar will begin shortly.

Safer Products for Washington

Implementation Phase 2: Draft Report on Priority Consumer Products

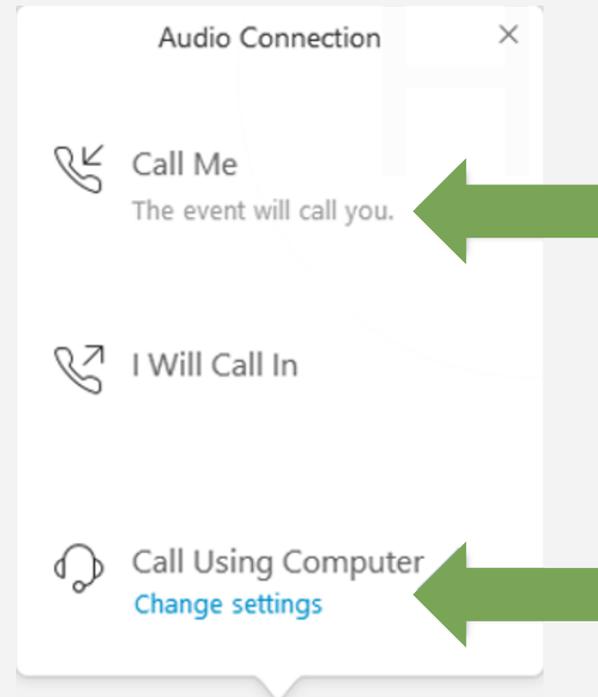
Implementing RCW 70.365: The Pollution Prevention for Healthy People and Puget Sound Act

FEBRUARY 19, 2020



A few logistics

- Please choose “Call Me” or “Call Using Computer.”
- This helps us identify you during our Q & A at the end of the webinar.
- All lines are muted.
- All questions should be typed into the Q & A or chat box.



Safer Products for Washington

Draft Report on Priority Consumer Products

From Ecology, Cheryl Niemi, Marissa Smith, Saskia van Bergen, Craig Manahan, Amber Sergent and Lauren Tamboer.
From Health, Holly Davies.



What we'll cover

1. Safer Products for WA history
2. Implementation process
3. Proposed priority products
4. Public comment period and next steps
5. Stakeholder advisory process
6. Questions





Section 1. Safer Products for WA history



Safer Products for WA History

- Pollution Prevention for Healthy People and Puget Sound Act, signed into law May 2019 (RCW 70.365).
- Act aims to reduce exposures to priority chemicals resulting from the use of consumer products.
- Act sets requirements for Ecology to:
 - Report to Legislature at multiple points.
 - Consider and use information in specific ways.
 - Enact rulemaking (if needed).
- Safer Products for Washington is the implementation program for RCW 70.365.
- Ecology has separate (but related), ongoing pollution prevention projects that include alternatives analyses and Chemical Action Plans around PFAS.



Section 2. Implementation process

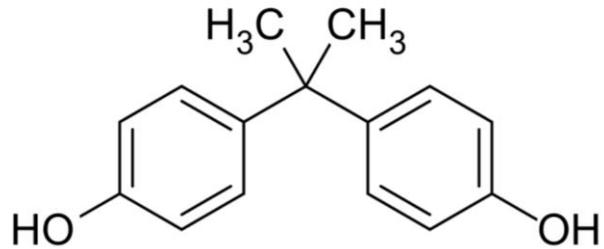
Safer Products for WA Implementation Process



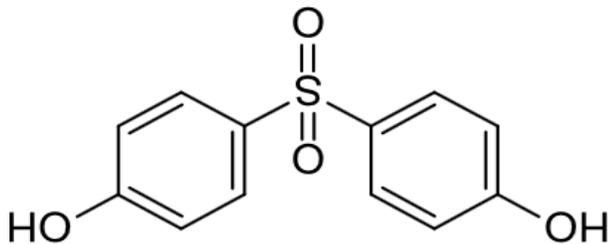
Phase 1: Choose priority chemical classes

Chemical class	Health hazards from chemicals within the class	Environmental hazards from chemicals within the class	Examples of existing WA laws and regulations on chemicals in the class
Flame retardants	<ul style="list-style-type: none"> • Carcinogenicity • Neurotoxicity • Endocrine disruption 	<ul style="list-style-type: none"> • Pervasive • Persistent • Bioaccumulative • Orca Task Force recommendation 	<ul style="list-style-type: none"> • RCW 70.240 (Children’s Safe Product Act—CSPA) • WAC 173.333 (Persistent Bioaccumulative Toxics PBT) • RCW 70.67 (PBDE Ban)
PCBs	<ul style="list-style-type: none"> • Carcinogenicity • Endocrine disruption • Reproductive and developmental toxicity 	<ul style="list-style-type: none"> • Persistent • Bioaccumulative • Orca Task Force recommendation 	<ul style="list-style-type: none"> • WAC 173.333 (PBT)
PFAS	<ul style="list-style-type: none"> • Immunotoxicity • Reproductive and developmental toxicity • Carcinogenicity • Liver toxicity 	<ul style="list-style-type: none"> • Persistent • Bioaccumulative • Orca Task Force recommendation 	<ul style="list-style-type: none"> • RCW 70.240 (CSPA) • WAC 173.333 (PBT) • RCW 70.75 (AFFF ban) • RCW 70.95G (Food packaging ban)
Phenolic compounds	<ul style="list-style-type: none"> • Endocrine disruption • Neurotoxicity • Reproductive and developmental toxicity 	<ul style="list-style-type: none"> • Pervasive • Persistent • Bioaccumulative • Orca Task Force recommendation 	<ul style="list-style-type: none"> • RCW 70.240 (CSPA) • RCW 70.280 (BPA bottle ban)
Phthalates	<ul style="list-style-type: none"> • Endocrine disruption • Neurotoxicity • Carcinogenicity 	<ul style="list-style-type: none"> • Pervasive • Clean-up site recontamination • Orca Task Force recommendation 	<ul style="list-style-type: none"> • RCW 70.240 (CSPA)

What makes Safer Products for WA different



Bisphenol A (BPA)



Bisphenol S (BPS)

- BPA demonstrates the need for a **class-based** approach to regulating toxic chemicals under Safer Products for WA.
- BPA is an endocrine disruptor.
- “BPA-free” products emerge (water bottles, etc.).
- Substituted with BPS in some products.
- Similar endocrine disruption from BPS compared to BPA.



Approach to chemical class

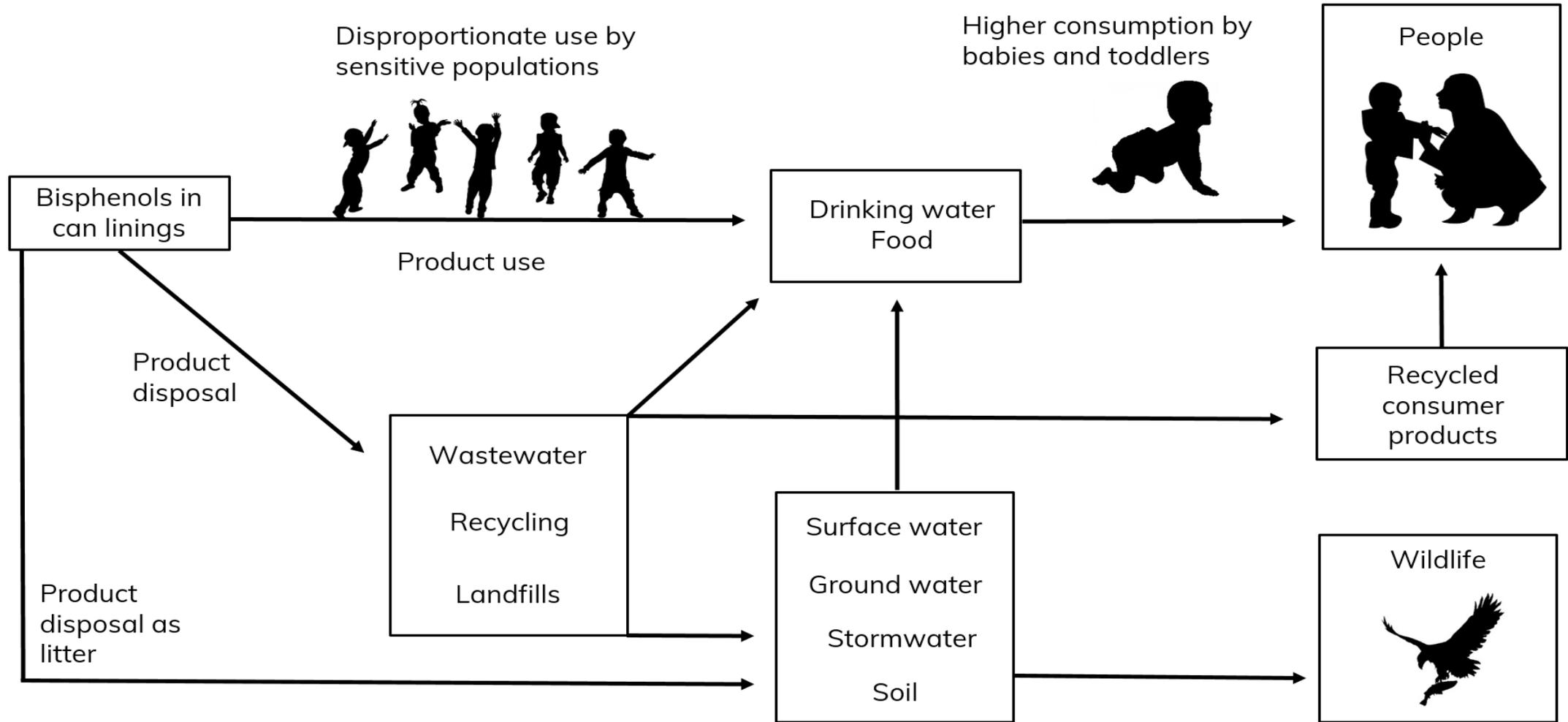
- Law defined the first **five priority chemical classes**.
- Draft priority product report identified **products that are significant sources or uses of chemicals** within these classes.
- In the next phase, we will determine whether **safer alternatives** are available and feasible.
- Regulatory **actions will be based on the availability and feasibility of safer alternatives** and could include a subset or the entire priority chemical class.
- Opportunities for **stakeholder engagement** around these decisions in the next phase of Safer Products for WA.



Why we chose these products

- Volume of the priority chemical in the product.
- Volume of the product sold in WA state.
- Potential exposure to sensitive populations or species via the product.
 - Product lifespan.
 - Potential barriers to replacement.
 - Disproportionate use.
- Presence in the environment via the product.
- Other regulatory actions in place elsewhere.
- Whether safer alternatives are available and feasible.
- Whether the chemical is already identified in a Chemical Action Plan or in other information under several other WA laws.

How do we think about exposure potential?





Safer Products for WA goal: Reduce exposure and use of priority chemical classes

- Exposures to priority chemicals come from a wide variety of sources.
- The draft priority products contribute to total exposures.
- All these exposures add up and can cause adverse impacts.
- Safer Products for WA is focused on reducing exposure to priority chemicals.
- Employs alternatives assessment principles to move away from hazardous chemicals when possible.
- This is different from a risk assessment.
- We have not assessed whether there are health risks associated with the draft priority products.

Phase 2

Priority consumer products

Identify products that are significant sources of exposure to people and the environment.

Where we are now

- **September 2019:** Shared products we were researching, opened our doors to meetings and feedback.
- **January 2020:** Draft priority product report shared the results of our continued research.
- **February and March 2020:** We encourage additional feedback during the public comment period through March 2.

June 1, 2020



**WHAT
CONSUMER
PRODUCTS
CONTAIN THESE
CHEMICALS?**

Phase 2

Priority consumer products

Identify products that are significant sources of exposure to people and the environment.

Reminders at this phase

- This report is a **draft**.
- Priority products are candidates for continued research.
- Potential regulatory actions will be discussed in the **next** phase, and could include:
 - No action.
 - Restriction.
 - Reporting requirement.

June 1, 2020



WHAT
CONSUMER
PRODUCTS
CONTAIN THESE
CHEMICALS?



Section 3. Products we propose

Phase 2: Identify priority consumer products

Priority chemical or chemical class	Priority product in the draft report	Example concerns
Flame retardants	Electric and electronic equipment	Contributes to house dust concentrations and kids' exposures, introduces flame retardants to many other products made from recycled materials
PCBs	Printing inks	Largest current source of PCBs, concern over environmental release and lasting impacts
PFAS	Carpet	Contributes to house dust concentrations and kids' exposures, 1-2 tons of PFAS in carpets sold annually in WA
PFAS	Aftermarket carpet treatments	Contributes to house dust concentrations and kids' exposures, exposures from application, manufacturers recommend retreating every 2 years
Phenolic compounds (alkylphenol ethoxylates)	Laundry detergent	Largest current use of APEs, environmental release and aquatic toxicity
Phenolic compounds (bisphenols)	Thermal paper	May contribute up to 15% of BPA exposure in people
Phenolic compounds (bisphenols)	Food and drink cans	Largest source of human exposure to BPA, 2.5 billion cans sold annually in WA
Phthalates	Flooring	Contributes to house dust concentrations and kids' exposures
Phthalates	Cosmetic fragrances	One of the largest source of phthalates to Puget Sound, concerns over disproportionate exposures



Electric and electronic equipment

- Specific flame retardants used vary by product category.
 - Historically, OctaBDE and DecaBDE were used.
 - Newer flame retardants include DBDPE, TTBP-TAZ, TBBPA and RDP.
- Concentration ranges for halogenated flame retardants are between 2% and 25%.
- Electric and electronic enclosures...
 - Include computers, monitors, televisions, AV game equipment, vacuum cleaners, etc.
 - Include device casings of the products, not inaccessible electronic components.
- An average household has 30 items with enclosed electronic circuitry.
- From 2014 to 2018, between 4 and 6 million pounds of plastic enclosures were collected yearly by Washington state's E-Cycle program.



Electric and electronic equipment

- Flame retardants migrate out of the casing and collect in house dust.
 - Flame retardants in surface wipes of electronic enclosures are correlated with household dust samples.
 - Characteristics of electronics in the home are associated with flame retardant concentrations in house dust.
 - TCP and TPP concentrations in house dust are associated with proximity to electronics.
- People, especially sensitive populations such as children and workers, can be exposed to flame retardants used in electronics.
- PBDEs, DBPE, TBBPA and BTBPE have been found in Washington's environment.
- Persistent and bioaccumulative—PBDEs have been phased out but we still see elevated concentrations of PBDEs in orca and their prey species.



Printing inks

- PCBs have historically been used intentionally in a wide range of products, such as electronic equipment, caulking, and carbon copy paper.
- Most intentional uses, often termed “legacy” uses, have been banned in the U.S. since 1979.
- Inadvertent PCBs (iPCBs) are not intentionally added to products, but are unintended byproducts of the manufacturing process.
- Pigments used in inks often contain iPCBs.
- These inks are used widely in many products.
- Inks are the largest source of iPCBs in current products.
- Up to 56 million pounds of printing ink are used per year in Washington.



Printing inks

- Food is the main source of PCB exposure for the general population.
- PCBs from inks may enter fish through stormwater and wastewater effluent, thus leading to human dietary exposure.
- PCBs are found widely in environmental media, and have the potential to bioaccumulate to harmful concentrations in aquatic and aquatic-dependent animal and plant life.



Carpet and rugs

- PFAS provide stain and dirt resistance in carpet.
- PFAS from carpet make a significant contribution to PFAS exposure.
 - Homes and offices with carpet can have higher concentrations of various PFAS.
 - Children with carpets in their bedrooms have higher concentrations of some PFAS and their metabolites in their bodies.
- PFAS from carpet can be released into the environment.
 - PFAS from carpet are released into the environment through the disposal of carpet in landfills.
 - PFAS from indoor carpet can accumulate in house dust and can be tracked into the outdoor environment or released into wastewater through the laundering process.



Carpet and rugs

- We estimate that:
 - PFAS are found in over half of the carpets in Washington.
 - More than 1,400 U.S. tons of PFAS are found in carpets sold annually in WA.
 - Carpet contributes around 6,000 U.S. tons of PFAS to WA landfills—and over 7 U.S. tons of PFAS to the environment—through illegal dumping each year.
- Some major retailers, including Lowe’s and Home Depot, have already phased out the sale of carpet containing PFAS.



Aftermarket carpet treatments

- PFAS in aftermarket carpet care prevent staining and reduce wear and tear.
- Aftermarket treatments do not last as long as mill-treated carpets, and manufacturers recommend retreatment every two years.
 - The need for reapplication suggests PFAS in aftermarket treatment wear off, accumulating in our homes and workplaces.
- We estimate that up to 2,500 U.S. tons of aftermarket carpet treatments are used and disposed of in WA each year.



Aftermarket carpet treatments

- People can be exposed during product application and as it wears off.
- Infants and children can be disproportionately exposed due to their proximity to the floor.
- Partially-used containers of aftermarket treatments can release PFAS into the environment after their disposal.



Food and drink cans

- Bisphenols are used in epoxy resin-based can linings to prevent reaction of the food or beverage with the metal can, maintaining food taste and structural integrity of the can.
- BPA can migrate from the can lining to the food.
 - Most BPA migration occurs during can processing.
 - Migration can also occur if cans are dented.
- Food can linings are the largest source of BPA exposure.
- Children and infants can be disproportionately exposed to bisphenols from can linings.
- Certain demographic groups may eat more canned food.

Food and drink cans

- Approximately 2.5 billion cans are sold each year in Washington.
- Bisphenols are present throughout Washington in various environmental media, including:
 - Surface waters.
 - Biosolids.
 - Wastewater treatment plant effluent.
 - Stormwater.

Thermal paper

- Thermal paper includes paper such as **cash register receipts**.
- Bisphenols, such as Bisphenol A (BPA) and Bisphenol S (BPS), are used as developers in the chemical reaction that provides color when using thermal paper.
- Bisphenols are frequently detected in thermal paper at high concentrations (2.8 – 7.1%).
- Approximately 3,300 U.S. tons of thermal paper are used per year in Washington.

Thermal paper

- Over 88% of BPS exposure for most humans may come from thermal receipts.
- BPA transfers from receipts to skin and can penetrate the skin to such a depth that it cannot be washed off.
- Exposure to bisphenols in thermal paper is particularly relevant for adolescent children and retail workers, especially cashiers.
- Bisphenols are present throughout Washington, in all forms of environmental media.
- These compounds enter the environment through treated wastewater, recycling paper, and sewage sludge.



Laundry detergent

- Alkylphenol ethoxylates (APEs) are used as surfactants in laundry detergents.
- The surfactants in detergents help water to get a hold of grease, break it up, and wash it away.
- Laundry detergents are likely the largest use of APEs in commerce.
- APEs are mostly found in detergents marketed for commercial or industrial use.
 - Hospitals, hotels, and nursing homes (on-premises laundries).
- Approximately 2 million pounds of laundry detergent are used per year in Washington state.

Laundry detergent

- APEs are found in wastewater treatment plant influent and effluent.
- AP compounds and APEs have been found in Washington's environment, and are a concern for aquatic toxicity.
- Some drinking waters in WA are contaminated with APEs.
- Exposure to APEs in laundry detergent is particularly relevant for workers handling laundry detergent.



Vinyl flooring

- Phthalates in vinyl flooring soften plastic and increase flexibility and durability.
- We estimate that:
 - Over half of vinyl flooring may contain phthalates.
 - Concentrations range from 9 – 32% by weight.
 - Vinyl flooring sold in WA each year contributes 5,000 – 18,500 U.S. tons of phthalates to our homes and workplaces.
- NGO data support major retailers' recent agreement to move away from selling vinyl flooring with ortho-phthalates.
- We are working on confirming this trend, and will take all new data into account as it becomes available.



Vinyl flooring

- Phthalates can leach out over time, allowing for dermal exposure and contaminating house dust.
- Children are disproportionately exposed to chemicals in flooring and house dust.
- Preschools with vinyl flooring have higher concentrations of phthalates in dust.
- Children with vinyl flooring in their homes have higher concentrations of phthalate metabolites in their urine.

Cosmetic fragrances

- Phthalates in fragrances are used as:
 - Solvents to keep ingredients well-blended.
 - Fixatives that help extend the scent lifetime.
- We estimate that fragrances are the single largest source of phthalate releases into the Puget Sound Basin.
- Data suggest that fragrances contribute 17 U.S. tons of phthalates to Washington's environment each year.

Cosmetic fragrances

- Phthalates in fragrances can be inhaled, absorbed dermally, ingested, or transferred to house dust.
- Use of fragrances is associated with an increase in the concentration of urinary phthalate metabolites.
- Women of color have higher phthalate levels from exposure attributable to fragrances in beauty products.
- A study of cosmetics and perfume sales clerks found elevated levels of phthalate metabolites in urine after working shifts.



Phase 3

Regulatory actions

Determine whether to require notice, restrict/prohibit, or take no action.

Availability and feasibility of safer alternatives

- Alternatives are available for all of these priority products.
- In Phase 3, we will determine whether these alternatives are safer and feasible.

June 1, 2022



**DO WE NEED
TO REGULATE
WHEN THESE
CHEMICALS ARE
USED?**



Section 4. Public comment period, next steps

**Priority Consumer Products
Draft Report to the Legislature**

*Safer Products for Washington
Implementation Phase 2*

January 2020
Publication 20-04-004

Report on priority products: Public review

- **Public review:** January 18 – March 2, 2020
- Ecology is accepting comments through eComments or via email or written comment.
 - eComments is the preferred method.
<https://ecology.wa.gov/Events/HWTR/SPWA-stakeholder-engagement/Draft-report-on-priority-consumer-products>

**Priority Consumer Products
Draft Report to the Legislature**

*Safer Products for Washington
Implementation Phase 2*

January 2020
Publication 20-04-004

Report on priority products: Next steps for finalizing

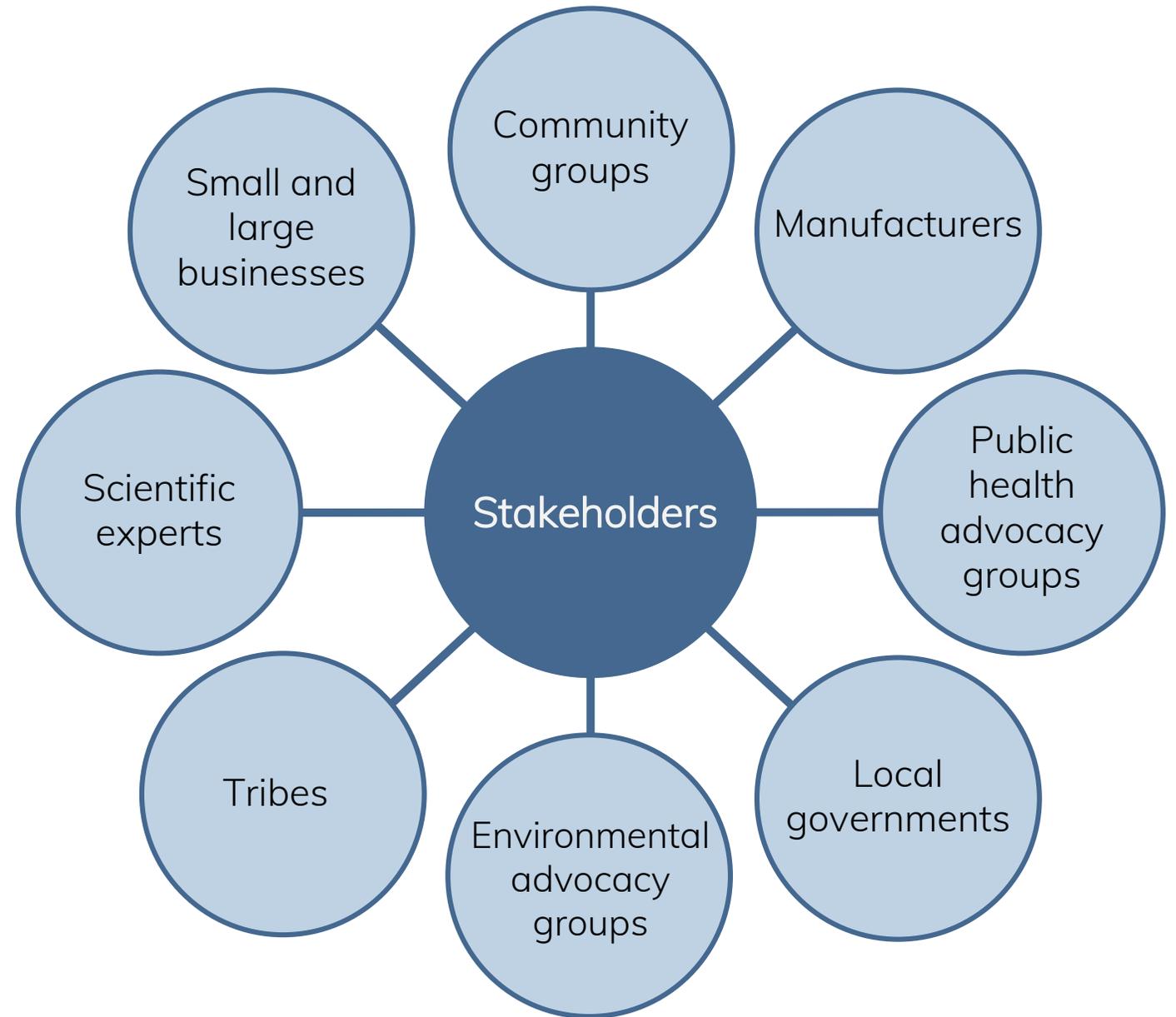
- We will review comments we receive and modify the report.
- We will submit a draft report to the legislature on June 1, 2020.
 - After the report is sent to the legislature, we will share it on our implementation site. bit.ly/SaferProductsWA
- We will announce the report to our email list.
 - Please join our email list to stay up-to-date.
<http://listserv.ecology.wa.gov/scripts/wa-ECOLOGY.exe?SUBED1=SAFERPRODUCTSWA&A=1>



Section 5. Stakeholder advisory process

Stakeholder advisory process

- By June 2020, we must create a stakeholder advisory process.



Stakeholder advisory process

- **Broad outreach to grow our email list**
 - 175 emails to organizations and individuals.
 - 200 people joined our email list.
 - Representation from all required stakeholder groups.
- **Annual implementation webinars** (current phase, next steps, feedback opportunities)
- **Regular research and progress updates**
 - Webinars, emails, materials shared to our implementation site.
 - Opportunities for you to ask questions and make suggestions.
- **Open door for meetings** with interested parties
 - 6 meetings to date.
 - Light notes will be posted to our implementation site.
- **Public comment periods** before submitting reports to the legislature
 - Current public comment period on draft priority products is open.
 - Next will be in January 2022.

Where to find us



SaferProductsWA@ecy.wa.gov



Ecology.WA.gov/ToxicsInProducts



bit.ly/SaferProductsWA



Chapter 70.365 RCW





Section 6. Questions

Questions?
Type them
in the chat
box.

Priority chemical or chemical class	Draft priority product	Major concerns
Flame retardants	Electric and electronic equipment (device casings)	Human exposure, volume used, recycling
PCBs	Printing inks	Environmental release
PFAS	Carpet	Human exposure, volume used
PFAS	Aftermarket carpet treatments	Human exposure, volume used
Phenolic compounds (bisphenols)	Food and drink cans	Human exposure, volume used
Phenolic compounds (alkylphenol ethoxylates)	Laundry detergent	Environmental release
Phenolic compounds (bisphenols)	Thermal paper	Human exposure, volume used
Phthalates	Flooring	Human exposure
Phthalates	Cosmetic fragrances	Volume used

Thank you for joining us!



SaferProductsWA@ecy.wa.gov



Ecology.WA.gov/ToxicsInProducts



bit.ly/SaferProductsWA (Find links to everything here!)



End of presentation.

Safer Products for WA Implementation Process

The implementation process for Safer Products for Washington involves **four major phases**.

1. Phase 1. May 8, 2019: What chemicals are we most concerned about?

- The first five priority chemical classes are PFAS, PCBs, phthalates, phenols, and flame retardants.

2. Phase 2. June 1, 2020: What consumer products contain these chemicals?

- This phase identifies priority consumer products that are significant sources of exposure to people and the environment.

3. Phase 3. June 1, 2022: Do we need to regulate when these chemicals are used?

- This phase determines regulatory actions—whether to require notice, restrict/prohibit, or take no action.

4. Phase 4. June 1, 2023: What rules do we need to keep people and the environment safe?

- This phase includes restrictions on the use of chemicals in products or reporting requirements. Rules are effective after at least one year.

After these four phases are completed, the **5-year cycle repeats**, and we return to Phase 1 to identify a new set of priority chemical classes.

How do we think about exposure potential?

Food and drink can linings expose people and the environment to bisphenols through a number of exposure pathways.

1. Through **product use**—which may be disproportionate for sensitive populations—bisphenols can be released into drinking water and food, which can expose people to these chemicals. Babies and toddlers consume more food and drinking water relative to their body weight, meaning they can be disproportionately exposed to bisphenols.
2. Through **disposal of the food cans**, bisphenols can make their way to wastewater, recycling, and landfills, where they can leach into environmental media such as surface water, ground water, stormwater, and soil, and can end up in our food and drinking water or in recycled consumer products. These pathways can expose both people and the environment to bisphenols.
3. Lastly, when food and drink cans are **disposed as litter**, bisphenols can end up in environmental media such as surface water, ground water, stormwater, and soil, releasing bisphenols into the environment and reaching our food and drinking water supplies.