

The webinar will begin shortly.

Safer Products for Washington: Vinyl flooring (9:30 a.m.) Carpets and rugs (12 p.m.)

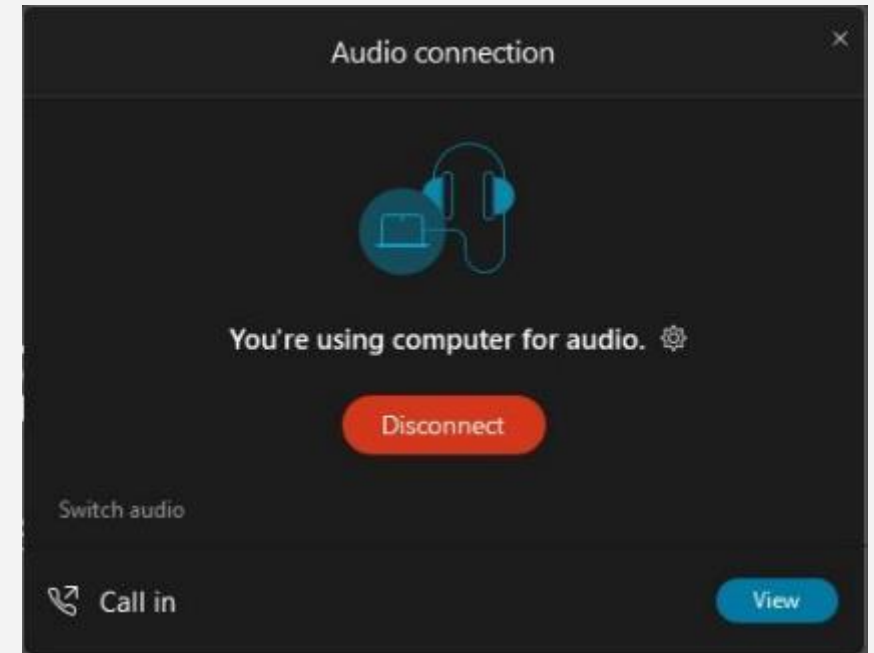
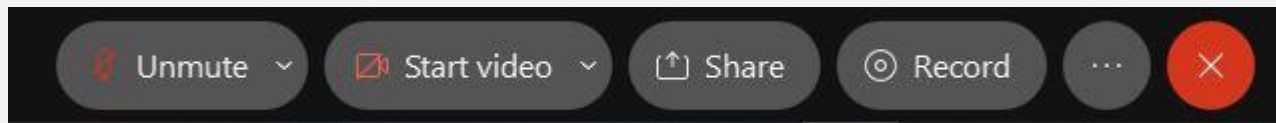
Implementing RCW 70A.350: The Pollution Prevention for Healthy People and Puget Sound Act

AUGUST 17, 2021



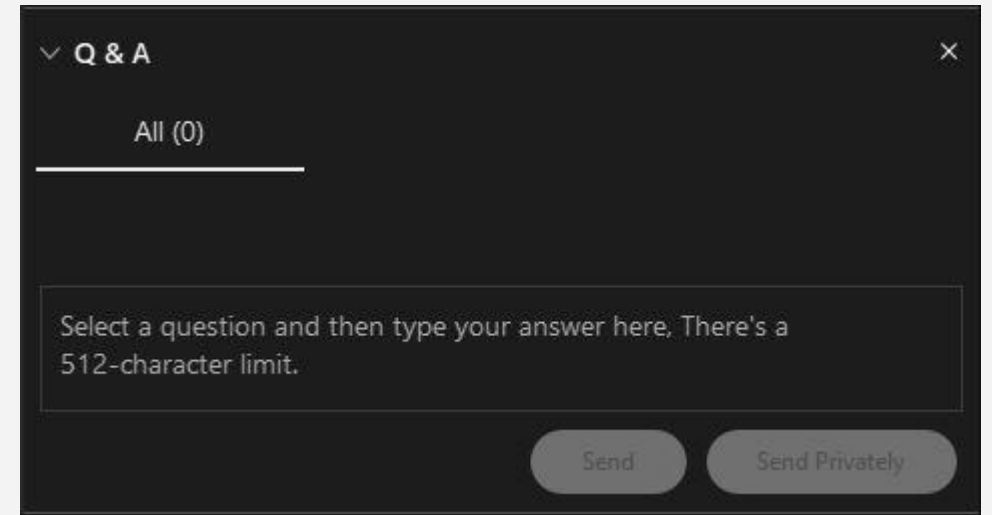
Audio connection logistics

- For audio connection, we recommend using your computer speaker.
- If you are unable to join using computer audio, use “Call in” to access dial-in information.
- To open the audio options, select the three dots icon in the menu at the bottom of your screen.



Webinar logistics

- All lines are muted.
- Questions and input go in the Q & A box.
 - Ask anytime, we will address at the end.
- Technical difficulty issues go in the chat box.
- To open the chat box, select the chat button at the lower right hand side of your screen.
- In the event of major technical difficulties, we will reschedule the webinar.
- **NOTE:** Any reference in this presentation to persons, organizations, services, or activities does not constitute or imply endorsement, recommendation, or preference by the Washington State Department of Ecology.



Safer Products for Washington:

Vinyl flooring

From Ecology: Cheryl Niemi, Marissa Smith, Saskia van Bergen, Craig Manahan, Sascha Stump, Rae Eaton, Kimberly Goetz, Stacey Callaway, Lauren Tamboer, Amber Sergent.

From Health: Holly Davies, Elinor Fanning, Emily Horton.



Today's schedule

1. 9:30—Recap: Safer Products for Washington background
 2. 9:40—Vinyl flooring
 3. 10:20—Questions and discussion on vinyl flooring
- 11:30—Break
1. 12:00—Recap: Safer Products for Washington background
 2. 12:10—Carpets and rugs
 3. 12:50—Update on leather and textile furnishings
 4. 1:00—Questions and discussion on carpets and rugs + furnishings
 5. 2:00—Overview of all product categories





Section 1. Safer Products for WA background



Safer Products for WA background

- Pollution Prevention for Healthy People and Puget Sound Act, signed into law May 2019.
- Act aims to reduce exposures to priority chemicals resulting from the use of consumer products.
- Act sets requirements for Ecology to:
 - Report to Legislature.
 - Consider and use information in specific ways.
 - Enact rulemaking (if needed).
- Safer Products for Washington is the implementation program for RCW 70A.350.

Safer Products for WA Implementation Process



A reminder: Phase 2 priority products

Priority chemical or chemical class	Priority product in the report
Flame retardants	Electric and electronic equipment
Flame retardants	Recreational polyurethane foam
PCBs	Paints and printing inks
PFAS	Carpet and rugs
PFAS	Aftermarket stain- and water-resistance treatments
PFAS	Leather and textile furnishings
Phenolic compounds (alkylphenol ethoxylates)	Laundry detergent
Phenolic compounds (bisphenols)	Thermal paper
Phenolic compounds (bisphenols)	Food and drink cans
Phthalates	Flooring
Phthalates	Personal care products



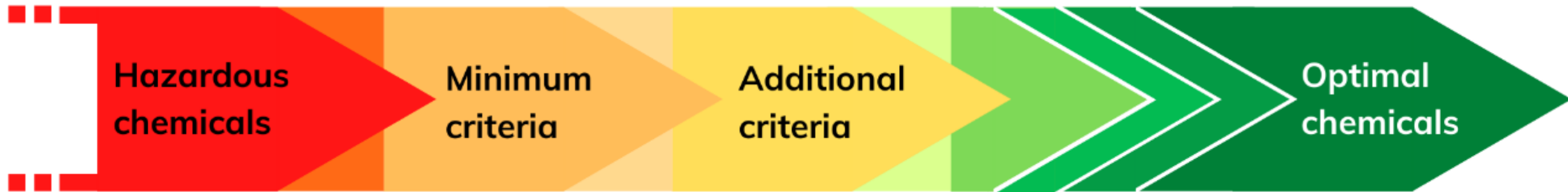
Regulatory determinations

- In order to restrict the use of a priority chemical, **safer** alternatives must be **feasible** and **available**.
 - The restriction must:
 - Reduce a significant source or use of priority chemical(s).
- OR**
- Be necessary to protect sensitive species or sensitive populations.



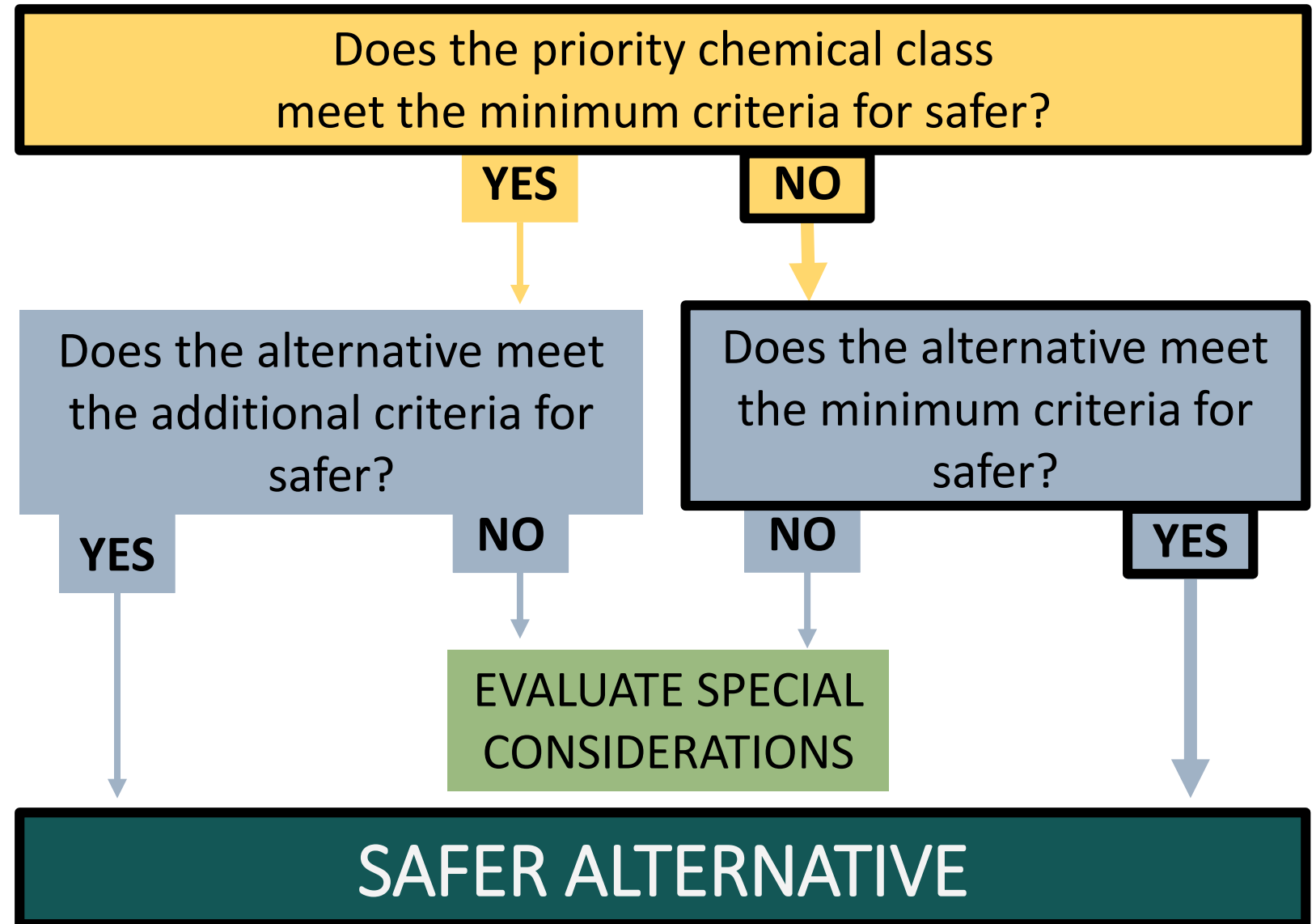
Safer in the law

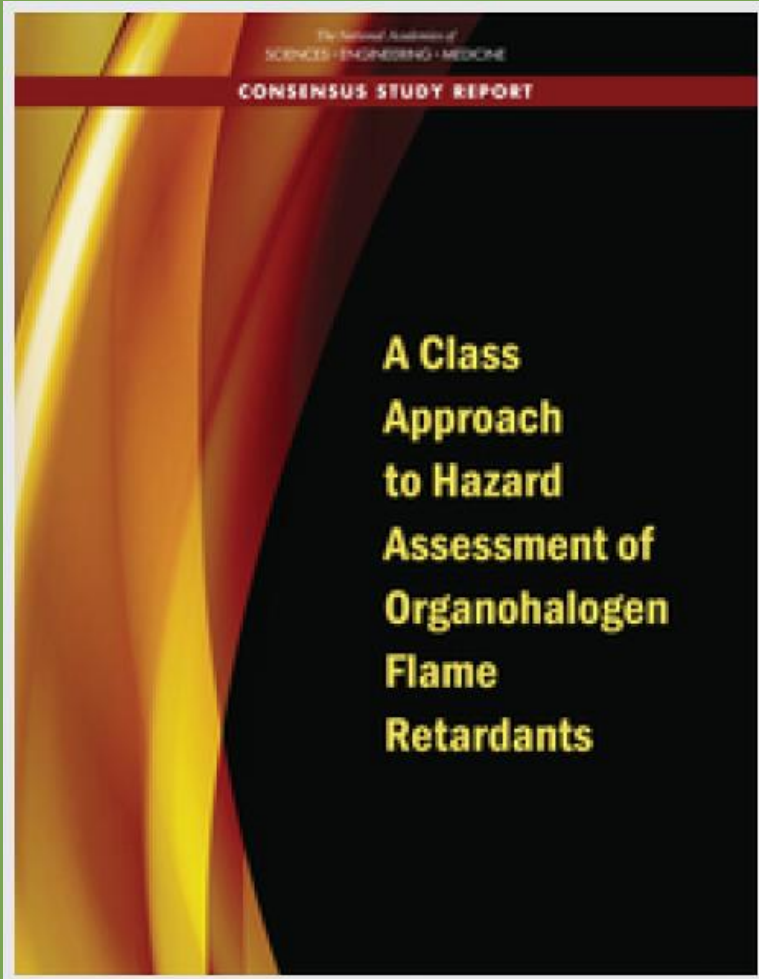
- Safer is defined in the law as “less hazardous to humans or the environment than the existing chemical or process.”
- A safer alternative to a particular chemical may include:
 - A chemical substitute.
 - A change in materials or design that eliminates the need for a chemical alternative.



Criteria for safer is a *spectrum*

Process for identifying safer alternatives





How can we assess classes of chemicals?

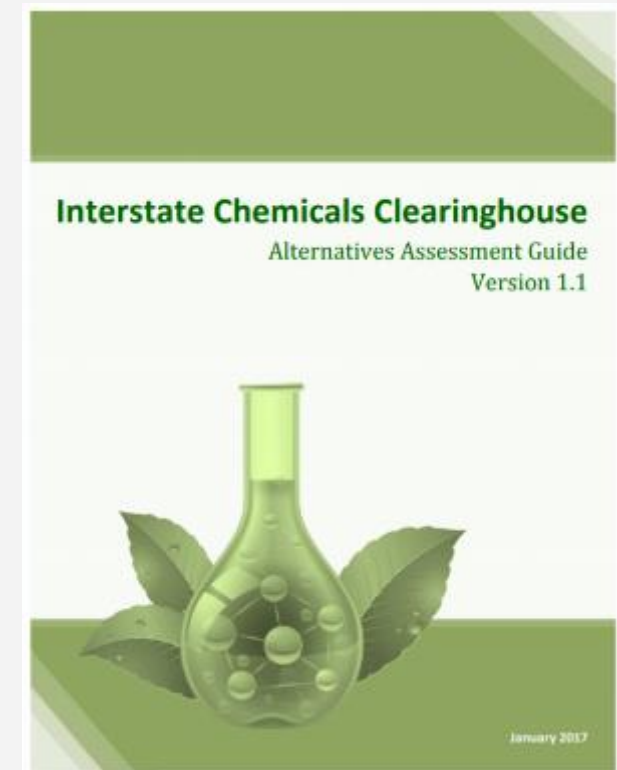
1. If there are all data rich chemicals → Assess the class based on data rich chemicals.
2. If there are all data poor chemicals → Unlikely to be a priority chemical class.
3. If there are data rich and data poor chemicals → Assess the class based on data rich chemicals.
4. If there is variable or discordant hazard data → Three options.

Minimum criteria for safer

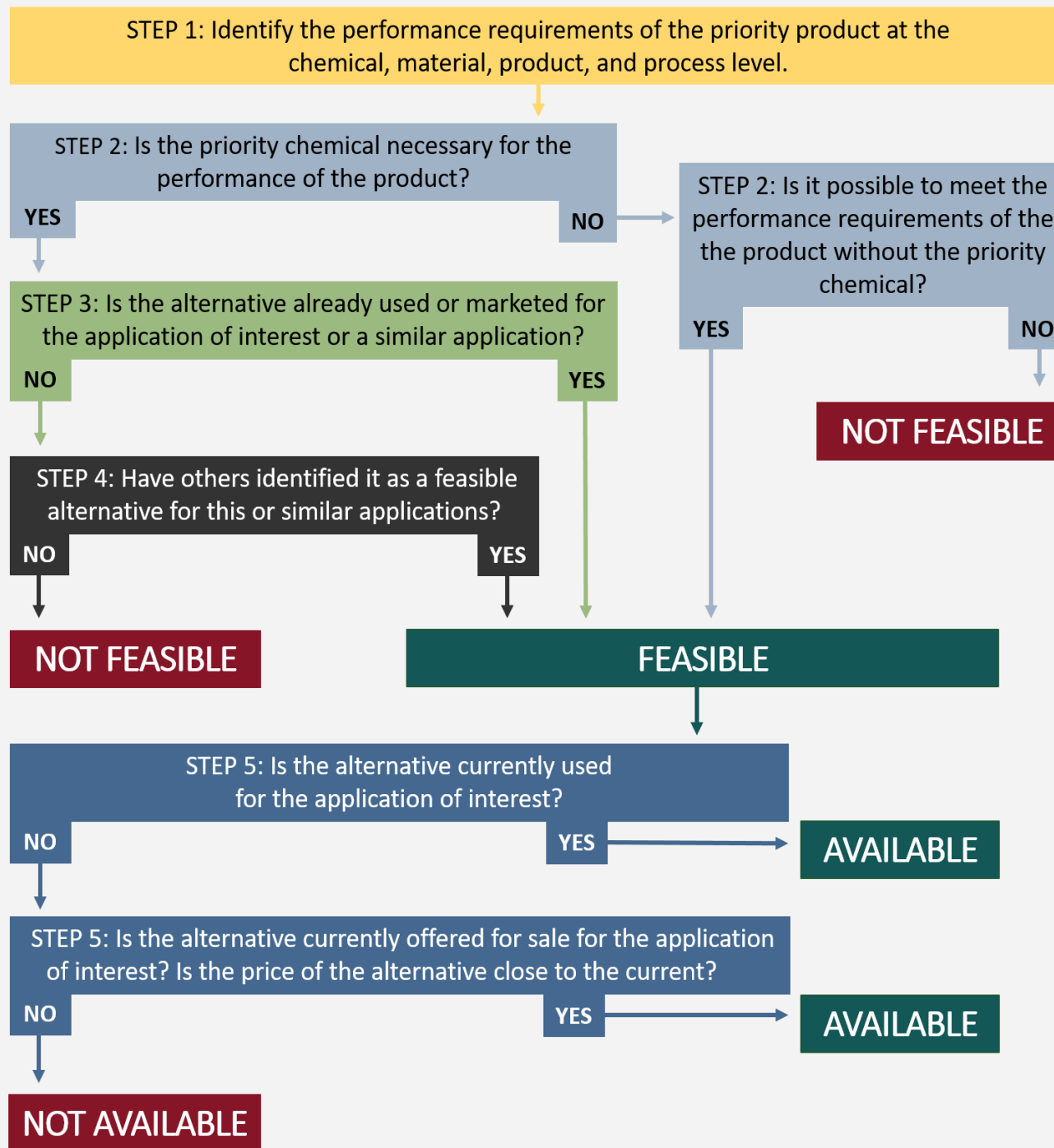
- Chemicals used to function like priority chemicals cannot have:
 - High concerns for carcinogenicity, mutagenicity, reproductive or developmental toxicity, or endocrine disruption.
 - High toxicity in other ways and very persistent and/or very bioaccumulative.
 - Very high persistence and very high bioaccumulation.
- For a full description—see the working draft criteria.

Feasible and available

- RCW 70A.350 requires that Ecology determine that safer alternatives are “feasible and available” before restricting the use of a priority chemical.
- Not defined in the statute.
- IC2 Alternatives Assessment Guide (2017)
 - Modules to assess potential alternatives.
 - Performance module—technical feasibility.
 - Cost and availability module—price competitive and available in sufficient quantity.



Process for identifying feasible and available alternatives





Section 2. Vinyl flooring



Phthalates in vinyl flooring

- In 2019, Legislature listed phthalates as a priority chemical class.
- Identified vinyl flooring products as a significant source or use of phthalates.
- Listed them as a priority product in our 2020 report.
- Identified safer chemical alternatives that are feasible and available in vinyl flooring products.
- **Analysis currently supports a restriction on the use of phthalates in vinyl flooring** consistent with RCW 70A.350.
- We welcome your input!



Vinyl flooring products are a significant source or use of phthalates

- Di(2-ethylhexyl) phthalate (DEHP) has been widely used as a plasticizer in vinyl flooring historically.
- Some vinyl flooring contains DEHP and other phthalates at up to **32% by weight**.
- We estimate 10 – 37 million pounds of phthalates in vinyl flooring purchased in WA annually.



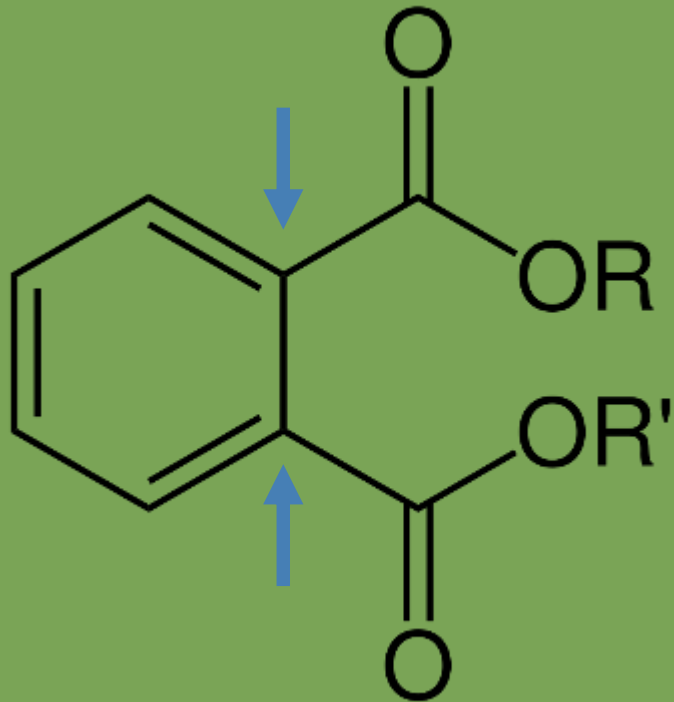
Vinyl flooring products are a significant source or use of phthalates

- Much of the industry has shifted.
- Moved from DEHP and other phthalates to alternative plasticizers (Resilient Floor Covering Institute).
- We received manufacturer data.
- Showed that some vinyl flooring still contains DEHP, and also DINP.



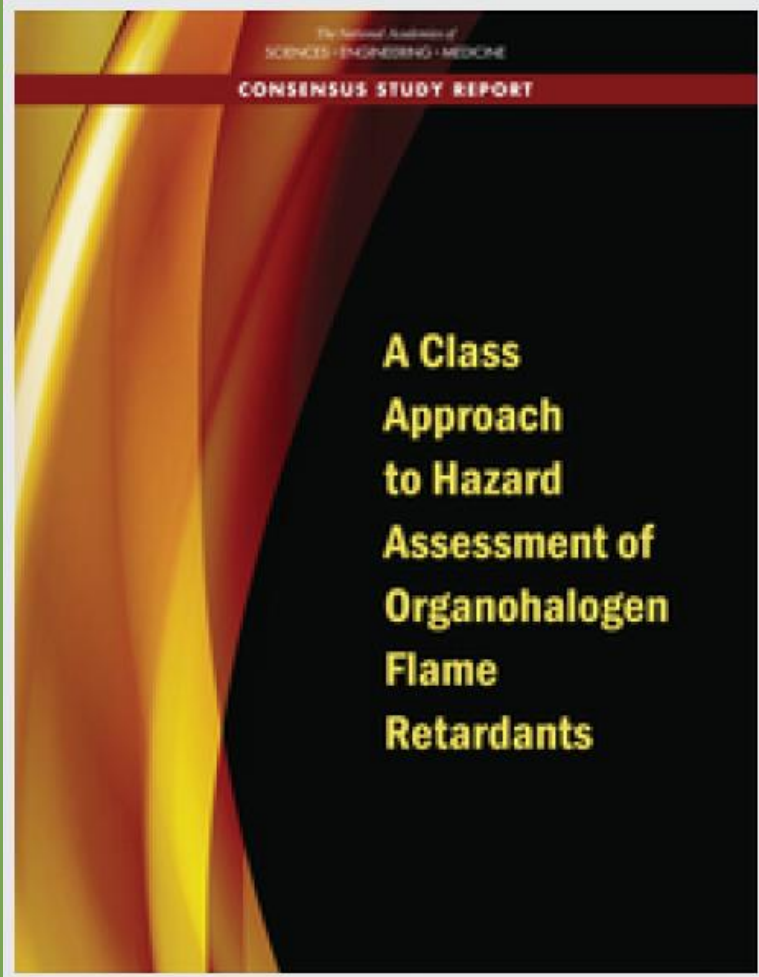
Vinyl flooring products contribute to the potential for exposure to phthalates

- CDC reports over **90% of Americans have measureable levels of phthalate metabolites in their bodies.**
- Children and women often have high exposures.
- Phthalates in flooring can be:
 - Inhaled (off-gassing).
 - Transferred to house dust.
 - Ingested.
- Phthalates can cross the placental barrier.
- Detected in cord blood, amniotic fluid, and breastmilk.



The priority chemical class

- Phthalates are defined in the law as “synthetic esters of phthalic acid.”
- National Library of Medicine defines phthalic acid as a “**benzenedicarboxylic acid consisting of two carboxy groups at ortho positions.**”
- Thus, the definition of this priority chemical class can be clarified to “ortho-phthalates.”



How can we assess classes of chemicals?

1. If there are all data rich chemicals → Assess the class based on data rich chemicals.
2. If there are all data poor chemicals → Unlikely to be a priority chemical class.
3. If there are data rich and data poor chemicals → Assess the class based on data rich chemicals.
4. If there is variable or discordant hazard data → Three options.
 1. Make a conservative decision and use the minimum criteria.
 2. Classify based on the chemicals potentially found in the products.
 3. Identify chemicals that meet the within-class criteria for safer and exclude those.



Identifying data rich chemicals

We identified data rich chemicals by looking for existing hazard assessments:

- GreenScreens®—conducted by a licensed profiler, publicly available or third-party reviewed.
- List Translator—review of Authoritative Lists.
- Other hazard assessment methods are possible, but would need to be:
 - Compatible with our criteria for safer and scoring methodology.
 - Publicly available or third-party reviewed.



Data rich phthalates

We identified 16 data rich phthalates:

- Nine phthalates had publicly available or third-party verified GreenScreen® assessments.
- Seven phthalates were found on authoritative lists that are indicative of hazards that do not meet our minimum criteria for safer.



Hazards of data rich phthalates

- Endocrine disruption
- Reproductive toxicity
- Developmental toxicity
- Carcinogenicity
- Aquatic toxicity



Chemicals of High Concern to Children

- Diethyl phthalate (DEP)
- Diisobutyl phthalate (DIBP)
- Di-n-butyl phthalate (DBP)*
- Di-n-hexyl phthalate (DnHP)
- Butyl benzyl phthalate (BBP)*
- Di-2-ethylhexyl phthalate (DEHP)*
- Di-(2-methoxyethyl) phthalate (DMEP)
- Di-n-octyl phthalate (DNOP)*
- Di-pentyl phthalate (DPP)
- Diisodecyl phthalate (DIDP)*
- Diisononyl phthalate (DINP)*

* = restriction on use in children's products at concentrations greater than 1,000 ppm individual or combined

GreenScreen® Benchmark-1 phthalates that do not meet our minimum criteria for safer

CASRN	Chemical name	Endpoints with high or very high scores	Presence on authoritative lists (non-exhaustive)
84-75-3	Di-n-hexyl phthalate DnHP	Carcinogenicity, reproductive toxicity, developmental toxicity, endocrine disruption and chronic aquatic toxicity	Developmental/reproductive toxicity: Cal EPA Prop 65, EU GHS H360FD
84-61-7	Dicyclohexyl phthalate DCHP	Developmental toxicity, reproductive toxicity, endocrine disruption	Developmental/reproductive toxicity: GHS – EU (H360D) Endocrine activity: EU – SVHC Candidate List
84-75-3	Dihexyl phthalate DHP	Carcinogenicity, developmental toxicity, reproductive toxicity, endocrine disruption, chronic aquatic toxicity	Developmental/reproductive toxicity: Cal EPA Prop 65, US – NIH Repro. & Develop., GHS – EU (H360FD)
117-81-7	Di(2-ethylhexyl) phthalate DEHP	Carcinogenicity, developmental toxicity, reproductive toxicity, endocrine disruption	Carcinogenicity: Cal EPA Prop 65, IARC (2B), US NIH – Report on Carc., US EPA – IRIS Carc. Developmental/reproductive toxicity: Cal EPA Prop 65, US NIH – Repro. & Develop., EU – GHS (H360FD) Endocrine activity: EU – SVHC Candidate List, EU – SVHC Prioritisation List
28553-12-0	Diisononyl phthalate DINP	Carcinogenicity, developmental toxicity, reproductive toxicity, endocrine disruption	Carcinogenicity: Cal EPA Prop 65
26761-40-0	Diisodecyl phthalate DIDP	Developmental toxicity	Developmental/reproductive toxicity: Cal EPA Prop 65, US NIH – Repro. & Develop.

GreenScreen® Benchmark-2 phthalates that meet our minimum criteria for safer

- DEP and DMP meet our minimum criteria for safer but **we did not find these currently used in vinyl flooring products.**
- DPHP was **found very rarely in vinyl flooring products.**
 - Endpoints associated with phthalates as a class—more on this in a moment.

CASRN	Common name	Endpoints of concern
131-11-3	Dimethyl phthalate	Unknown (TCO Certified Positive List)
84-66-2	Diethyl phthalate	Moderate for reproductive toxicity, developmental toxicity, endocrine disruption and aquatic toxicity
53306-54-0	Bis(2-propylheptyl) phthalate (DPHP)	Unknown (TCO Certified Positive list)

Additional phthalates on authoritative lists

CASRN	Phthalate	Endpoints of concern and associated authoritative lists (non-exhaustive)
84-74-2	Di-n-butyl phthalate	<ul style="list-style-type: none"> Developmental/reproductive toxicity: Cal EPA Prop 65, US NIH Reproductive and Developmental monographs Endocrine disruption: EU SVHC List Aquatic toxicity: EU GHS H400
84-69-5	Diisobutyl phthalate	<ul style="list-style-type: none"> Developmental/reproductive toxicity: EU GHS H360Df Endocrine disruption: EU SVHC Authorisation list
131-18-0	Di-n-pentyl phthalate	<ul style="list-style-type: none"> Developmental/reproductive toxicity: EU GHS 360Df Aquatic toxicity: EU GHS H400
85-68-7	Butyl benzyl phthalate	<ul style="list-style-type: none"> Developmental/reproductive toxicity: Cal EPA Prop 65 Endocrine activity: EU SVHC Aquatic toxicity: EU GHS H400
71850-09-4	Diisohexyl phthalate	<ul style="list-style-type: none"> Developmental/reproductive toxicity: EU GHS H360FD, EU SVHC list
71888-89-6	Diisoheptyl phthalate	<ul style="list-style-type: none"> Developmental/reproductive toxicity: EU GHS H360D, EU Annex VI CMRs Category 1B
27554-26-3	Diisooctyl phthalate	<ul style="list-style-type: none"> Developmental/reproductive toxicity: EU GHS H360FD

All other data
rich phthalates in
vinyl flooring

DPHP**

**Hazardous
chemicals**

**Minimum
criteria**

**Additional
criteria**

**Optimal
chemicals**

GreenScreen®
BM-1
Authoritative lists

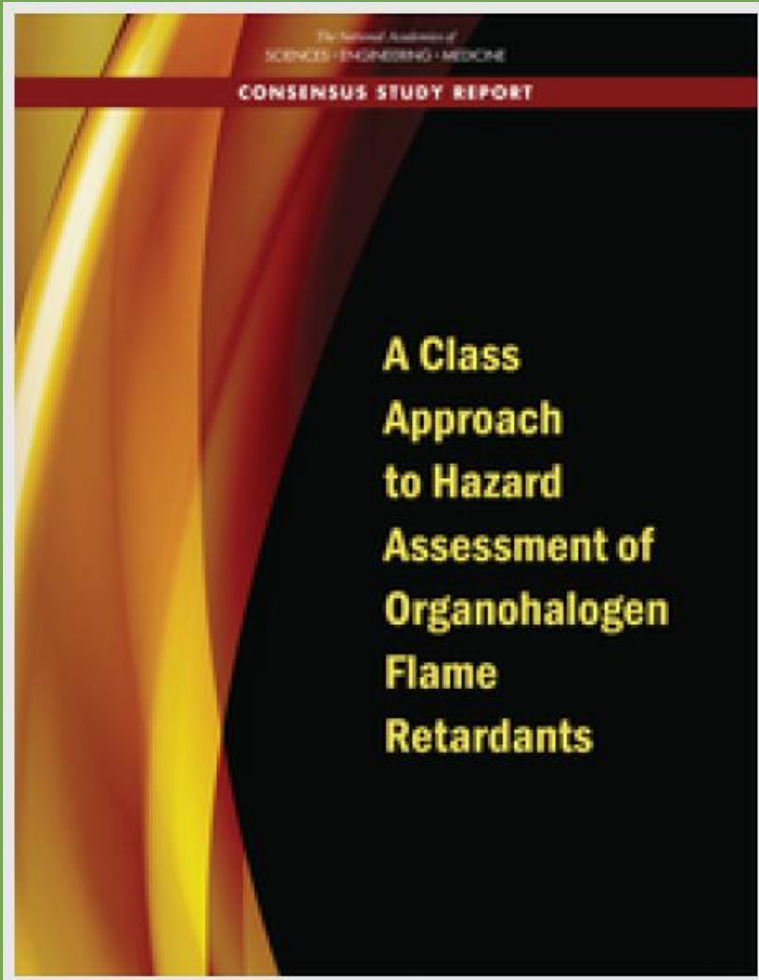
GreenScreen®
BM-2

GreenScreen®
BM-2*
BM-3*

**not all BM-2 meet additional criteria*

***does not meet within-class criteria*

Criteria for safer is a spectrum



How can we assess classes of chemicals?

1. If there are all data rich chemicals → Assess the class based on data rich chemicals.
2. If there are all data poor chemicals → Unlikely to be a priority chemical class.
3. If there are data rich and data poor chemicals → Assess the class based on data rich chemicals.
4. If there is variable or discordant hazard data → Three options.
 1. Make a conservative decision and use the minimum criteria.
 2. **Classify based on the chemicals potentially found in the products.**
 3. Identify chemicals that meet the within-class criteria for safer and exclude those.



Can an alternative chemical within the class ever be safer?

- We only consider within-class alternatives if we do not identify safer alternatives outside the class.
- To confirm they do not share hazard traits with the priority chemical class, they must:
 - Meet the minimum (or additional) criteria for safer.
 - Not be highly persistent or highly bioaccumulative.

Can an alternative chemical within the class ever be safer?



- For hazards associated with the class, the alternative:
 - Cannot have data gaps.
 - Must score low for carcinogenicity, mutagenicity, reproductive or developmental toxicity.
 - Must have data showing it doesn't share a mechanism of action of endocrine disruption.
- **DPHP does not meet our within-class criteria and is not considered a safer alternative.**

Data rich
phthalates in
vinyl flooring

Safer
alternatives

**Hazardous
chemicals**

**Minimum
criteria**

**Additional
criteria**

**Optimal
chemicals**

GreenScreen®
BM-1
Authoritative lists

GreenScreen®
BM-2

GreenScreen®
BM-2*
BM-3*

**not all BM-2 meet additional criteria*

Criteria for safer is a spectrum



EPA SCIL

Chemicals evaluated against the Safer Chemical Ingredients List (SCIL) Master Criteria meet our minimum and additional criteria for safer:

- Functional criteria are modified from the SCIL Master Criteria to identify “best in class” alternatives.
- Sometimes functional criteria meet our minimum criteria for safer.
 - Polymer criteria meets our minimum criteria
 - Surfactant criteria does not meet our minimum criteria
- Listed in the CleanGredients database: Chemicals and formulations evaluated against the Safer Choice criteria.

ChemFORWARD

- Non-profit that developed a method for assessing chemicals using the Cradle to Cradle Certified™ scoring system.
- Chemicals are binned into bands—based on hazard endpoints and physical/chemical properties.
 - Evaluates:
 - All intentionally added chemicals, at any concentration.
 - Residuals, impurities, or other unintentional contaminants at concentrations greater than 100 ppm.
 - Known environmental transformation products.
- ChemFORWARD and C2CC™ methodology is available online.
- Assessments conducted by board certified toxicologists, independently reviewed.
- Data requirements depend on the level of assessment, with bands A, B, and C meeting our criteria.

TCO Certified

- TCO Certified Accepted Substance List—“positive list” of safer alternatives.
- Lists **plasticizers** that achieved a Benchmark score of 2, 3, or 4 in a hazard assessment by a licensed GreenScreen® profiler.
- Third-party review by TCO Certified.
- Meet our minimum (BM-2) or additional criteria (BM-3, BM-4) for safer.

Safer alternatives to phthalates in vinyl flooring

Alternative	Existing hazard evaluations	Safer conclusion
Di(2-ethylhexyl) terephthalate (DEHT, DOTP) (CASRN: 6422-86-2)	<ul style="list-style-type: none"> GreenScreen® Benchmark-3_{DG} (ToxServices, 2021) TCO Certified Positive List Listed in CleanGredients 	Meets minimum criteria ✓
Glycerides, castor-oil mono-, hydrogenated, acetates (COMGHA) (CASRN: 736150-63-3)	<ul style="list-style-type: none"> ChemFORWARD Band C SCIL Green Circle (surfactant criteria) 	Meets minimum criteria ✓
1,2-Cyclohexane dicarboxylic acid, diisononyl ester (DINCH) (CASRN: 166412-78-8)	<ul style="list-style-type: none"> GreenScreen® Benchmark-2 (ToxServices, 2018) TCO Certified Positive List 	Meets minimum criteria ✓

Safer alternatives to phthalates in vinyl flooring

Alternative	Existing hazard evaluations	Safer conclusion
Dipropylene glycol dibenzoate (DGD) (CASRN: 27138-31-4)	<ul style="list-style-type: none"> • GreenScreen® Benchmark-2 (ToxServices, 2019) • SCIL Green Circle • TCO Certified Positive List 	Meets minimum criteria ✓
Acetyltributyl citrate (ATBC) (CASRN: 77-90-7)	<ul style="list-style-type: none"> • GreenScreen® Benchmark-3 (ToxServices, 2018) • TCO Certified Positive List 	Meets minimum criteria ✓
Di(2-ethylhexyl) adipate (DEHA) (CASRN: 103-23-1)	<ul style="list-style-type: none"> • GreenScreen® Benchmark-2 (ToxServices, 2018) • TCO Certified Positive List 	Meets minimum criteria ✓
Soybean oil, epoxidized (ESBO) (CASRN: 8013-07-8)	<ul style="list-style-type: none"> • GreenScreen® Benchmark-3 (Scivera, 2019) • TCO Certified Positive List 	Meets minimum criteria ✓

DEHT / DOTP

Alternative	Existing hazard evaluations	Safer conclusion
Di(2-ethylhexyl) terephthalate (DEHT, DOTP) (CASRN: 6422-86-2)	GreenScreen® Benchmark-3 _{DG} (ToxServices 2021)	Meets minimum criteria ✓

Di(2-ethylhexyl) terephthalate / Dioctyl terephthalate (DEHT / DOTP)

Cancer	Mutagenicity	Repro. Toxicity	Dev. Toxicity	Endocrine Activity	Acute Toxicity	Systemic Toxicity	Neurotoxicity	Sensitization	Irritation	Aquatic Toxicity	Persistence	Bioaccumulation
L	L	L	L	DG	L	L	L/DG	L	L	L	vL	L

- vL = very low
- L = low
- DG = data gap

- No hazard flags.
- Endocrine disruption is a data gap—cites lack of data on thyroid effects.
- Worst-case—could score moderate for endocrine disruption.



Function of phthalates in vinyl flooring

- Phthalates function chemically as **plasticizers** in vinyl flooring products.
- Plasticizers impart favorable characteristics to plastics—such as **softness and flexibility**.
- To be feasible, alternatives will need to serve the function of plasticizers.
- To be available, the alternative could be either:
 - Identified by an authoritative body as favorable.
 - Currently used in vinyl flooring products on the market.



Current use of safer alternatives

To determine current use of safer alternative plasticizers in vinyl flooring, we utilized several sources including:

- Declare. Product Database
 - declare.living-future.org/
- Health Product Declaration (HPD) Database
 - hpd-collaborative.org/
- Material Health Statements (MHS)
- Data manufacturers provided



Feasible and available: Identifying uses of alternatives

Two transparency labels help identify product ingredients and their functions:

- **Declare. Database:** Chemical ingredients and functions.
 - GreenScreen® example: A declare label could tell you DEHT is used as a plasticizer in vinyl plank flooring.
- **Health Product Declarations:** Chemical ingredients, functions, and hazard assessment scores.



Feasible and available alternatives

- Alternatives:
 - Di(2-ethylhexyl) terephthalate (**DEHT/DOTP**)
 - 1,2-Cyclohexane dicarboxylic acid, diisononyl ester (**DINCH**)
 - Glycerides, castor-oil mono-, hydrogenated, acetates (**COMGHA**)
- Marketing materials from multiple chemical manufacturers identify these as plasticizers suitable for use in flooring applications.



Feasible and available alternatives

- DOTP/DEHT is currently used by more than ten manufacturers in vinyl flooring products.
- Examples include:
 - AHF
 - Altro
 - Armstrong
 - Aspecta
 - Mannington Mills
 - Metroflor
 - Milliken
 - Mohawk
 - Novalis
 - Forbo
 - Signature
 - Tarkett
 - Teknoflor
 - And more!



Feasible and available: Additional chemical alternatives

- Typically found in mixtures with other plasticizers:
 - Dipropylene glycol dibenzoate (**DGD**)
 - Acetyltributyl citrate (**ATBC**)
 - Di(2-ethylhexyl) adipate (**DEHA**)
 - Soybean oil, epoxidized (**ESBO**)
- All found in vinyl flooring products currently marketed based on Declare Labels and Health Product Declarations.



Alternative resilient flooring products

Other types of resilient flooring may also be safer alternatives:

- PVC-free resilient flooring.
- Linoleum.
- Solid wood floors.
- Ceramic tiles.



Conclusion

- Safer alternatives to phthalates in vinyl flooring are feasible and available.
- At this time, we did not find any evidence that the alternatives identified are not feasible for any specific types of vinyl flooring products.
- **Analysis supports a potential restriction on the use of phthalates in vinyl flooring.**

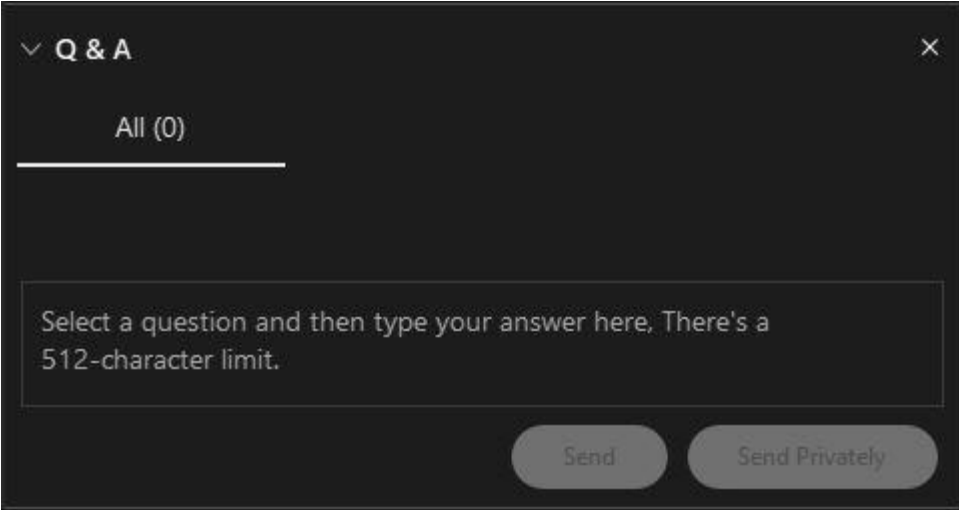


Section 3. Vinyl flooring discussion

Questions? Input to share?

Type in the Q & A box or raise your hand to unmute.

- Direct your question to everyone using the drop down arrow.
- If you need more than 512 characters, ask your question or give your input verbally.
- Raise your hand and we will unmute you to give your input.
 - If you're dialing in via phone, dial *3 to raise your hand.



Q & A

All (0)

Select a question and then type your answer here, There's a 512-character limit.

Send Send Privately

Vinyl flooring

Feedback category

Feedback from stakeholders during the August 17 discussion

Analysis process

- DINP revised GreenScreen® adjusted certain endpoints to low.
- Recommend considering phthalates as asthmagens.

Performance and availability of alternatives

- Ecology should consider linoleum (made with linseed oil) as a safer alternative given the many concerns associated with vinyl flooring manufacturing.
- Center for Environmental Health created a list of resilient flooring products that aligns with Health Care Without Harm's flooring criteria:
<https://docs.google.com/spreadsheets/d/1xKE387smYu9gYcYOHr5qoNEo8BNQOKjmhVwzHGovz1g/edit?usp=sharing>

Potential regulation

- Recommend restriction clearly only apply to ortho-phthalates (to minimize confusion).
- TSCA pre-emption is a possibility for restrictions. Agree that TSCA will not affect reporting requirements, but it definitely will impact restrictions.
- How will phthalates in recycled products be considered? Flooring manufacturers have set limits on chemicals (phthalates, heavy metals, etc.) in recycled material. Recycled vinyl flooring is typically made from old vinyl flooring
- A restriction would make it very difficult to incorporate recycled content. Reporting requirements on the other hand buys you enough time to phase these phthalates out if that is ultimately the goal. Adding up the amount of legacy phthalates in vinyl flooring may help us to establish a threshold for recycled products.
- Can we include health data consideration to help avoid regrettable substitutes?
- Resource indicates restrictions don't promote increased recycling:
https://www.plasteurope.com/news/Closure_of_operation_in_Italy_Phthalates_issue_under_REACH_brings_do_t240095/

Vinyl flooring continued

Feedback category	Feedback from stakeholders during the August 17 discussion
Potential regulation continued	<ul style="list-style-type: none">• Mind the Store supports restricting ortho-phthalates as a class. It's great to see Ecology considering such a restriction.• Vinyl flooring can be used outdoors as well—will our restriction affect outdoor flooring?• Ecology should consider setting limits on phthalates in recycled vinyl flooring, to ensure people and the environment continue to be protected and to work toward a clean circular economy.*
Other feedback	<ul style="list-style-type: none">• Many groups recommend avoiding PVC flooring products to avoid other regrettable outcomes (environmental justice considerations, use of other harmful chemicals).• Thank you for your excellent work on these priority products that will result in protection of public and environmental health.• Could you consider the use of PFAS in vinyl flooring?• This Healthy Building Network has useful information on PFAS used in the manufacture of chlorine gas used to make vinyl/PVC flooring and other products: https://healthybuilding.net/reports/20-chlorine-building-materials-project-phase-2-asia-including-worldwide-findings• PFAS can also be used in membranes in the product process.• For resilient flooring PFAS is not utilized in products. In review with manufacturers, any coatings used no longer use PFAS. Note that product selection—including vinyl products—can prevent unintentional premature failures that we have seen when product assumptions are made as perceived more sustainable. The priority chemical pathway provides clear evaluation of alternatives being readily available and suitable for equal function.• There are methods in Europe used to remove legacy chemicals from recycled products (example: Microwave Solutions).• How does outreach to highly impacted, low-income communities occur? TV ads are expensive but worthwhile to connect with certain groups. (EPA's Toxic Release Inventory is doing similar work and offered to connect.)

*Multiple stakeholders shared the same feedback.

Where are we at on the other products?

Priority product	Priority chemical class	Status
Leather and textile furnishings	PFAS	Update today!
Laundry detergent	APEs	Identified safer, feasible, available alternatives to APEs.
Paints	PCBs	Identified paints with lower PCB concentrations as safer, feasible, and available
Thermal paper	Bisphenols	Pergafast™ 201 (CAS 232938-43-1) and electronic receipts are safer, feasible, and available alternatives.
Recreational foam	Flame retardants	Evaluating whether flame retardant free foam is feasible.
Can linings	Bisphenols	Identified safer, feasible, and available beverage can linings, looking for food can alternatives.

Have ideas or input on any of these products? Please reach out! We'd love to hear from you!

Where are we at on the other products?

Priority product	Priority chemical class	Status
Personal care and beauty products	Phthalates	Identified safer, feasible, and available alternatives.
Aftermarket treatments	PFAS	Identified safer, feasible, available alternatives for aftermarket treatments used for fabric upholstery and furniture, as well as carpet. Evaluating alternatives for outdoor gear and leather products.
Carpets and rugs	PFAS	Update today!
Printing inks	PCBs	Conducting product testing study, working on identifying inks with lower PCB concentrations.
Electric and electronic products	Flame retardants	Conducting product testing study, evaluating alternatives listed on TCO's positive list (GreenScreen® BM-2 or higher).

Have ideas or input on any of these products? Please reach out! We'd love to hear from you!



Stakeholder involvement next steps

- Final product-specific webinar August 31.
- Make sure you are on our email list!
- Share your input on our potential regulatory determinations.
 - Send us an email.
 - Invite us to present to your group.
 - Set up a meeting with our team.
- Formal public comment period on draft regulatory actions report (Fall 2021 – Winter 2022).

Webinar resumes at 12 p.m.

1. 9:30—Recap: Safer Products for Washington background
2. 9:40—Vinyl flooring
3. 10:20—Questions and discussion on vinyl flooring

11:30—Break

1. 12:00—Recap: Safer Products for Washington background
2. 12:10—Carpets and rugs
3. 12:50—Update on leather and textile furnishings
4. 1:00—Questions and discussion on carpets and rugs + furnishings
5. 2:00—Overview of all product categories



Safer Products for Washington: Carpets and rugs

From Ecology: Cheryl Niemi, Marissa Smith, Saskia van Bergen, Craig Manahan, Sascha Stump, Rae Eaton, Kimberly Goetz, Stacey Callaway, Lauren Tamboer, Amber Sergent.

From Health: Holly Davies, Elinor Fanning, Emily Horton.



Today's schedule

1. 9:30—Recap: Safer Products for Washington background
 2. 9:40—Vinyl flooring
 3. 10:20—Questions and discussion on vinyl flooring
- 11:30—Break
1. 12:00—Recap: Safer Products for Washington background
 2. 12:10—Carpets and rugs
 3. 12:50—Update on leather and textile furnishings
 4. 1:00—Questions and discussion on carpets and rugs + furnishings
 5. 2:00—Overview of all product categories





Section 1. Safer Products for WA background



Safer Products for WA background

- Pollution Prevention for Healthy People and Puget Sound Act, signed into law May 2019.
- Act aims to reduce exposures to priority chemicals resulting from the use of consumer products.
- Act sets requirements for Ecology to:
 - Report to Legislature.
 - Consider and use information in specific ways.
 - Enact rulemaking (if needed).
- Safer Products for Washington is the implementation program for RCW 70A.350.

Safer Products for WA Implementation Process



A reminder: Phase 2 priority products

Priority chemical or chemical class	Priority product in the report
Flame retardants	Electric and electronic equipment
Flame retardants	Recreational polyurethane foam
PCBs	Paints and printing inks
PFAS	Carpet and rugs
PFAS	Aftermarket stain and water resistance treatments
PFAS	Leather and textile furnishings
Phenolic compounds (alkylphenol ethoxylates)	Laundry detergent
Phenolic compounds (bisphenols)	Thermal paper
Phenolic compounds (bisphenols)	Food and drink cans
Phthalates	Flooring
Phthalates	Personal care products



Regulatory determinations

- In order to restrict the use of a priority chemical, **safer** alternatives must be **feasible** and **available**.
 - The restriction must:
 - Reduce a significant source or use of priority chemical(s).
- OR**
- Be necessary to protect sensitive species or sensitive populations.



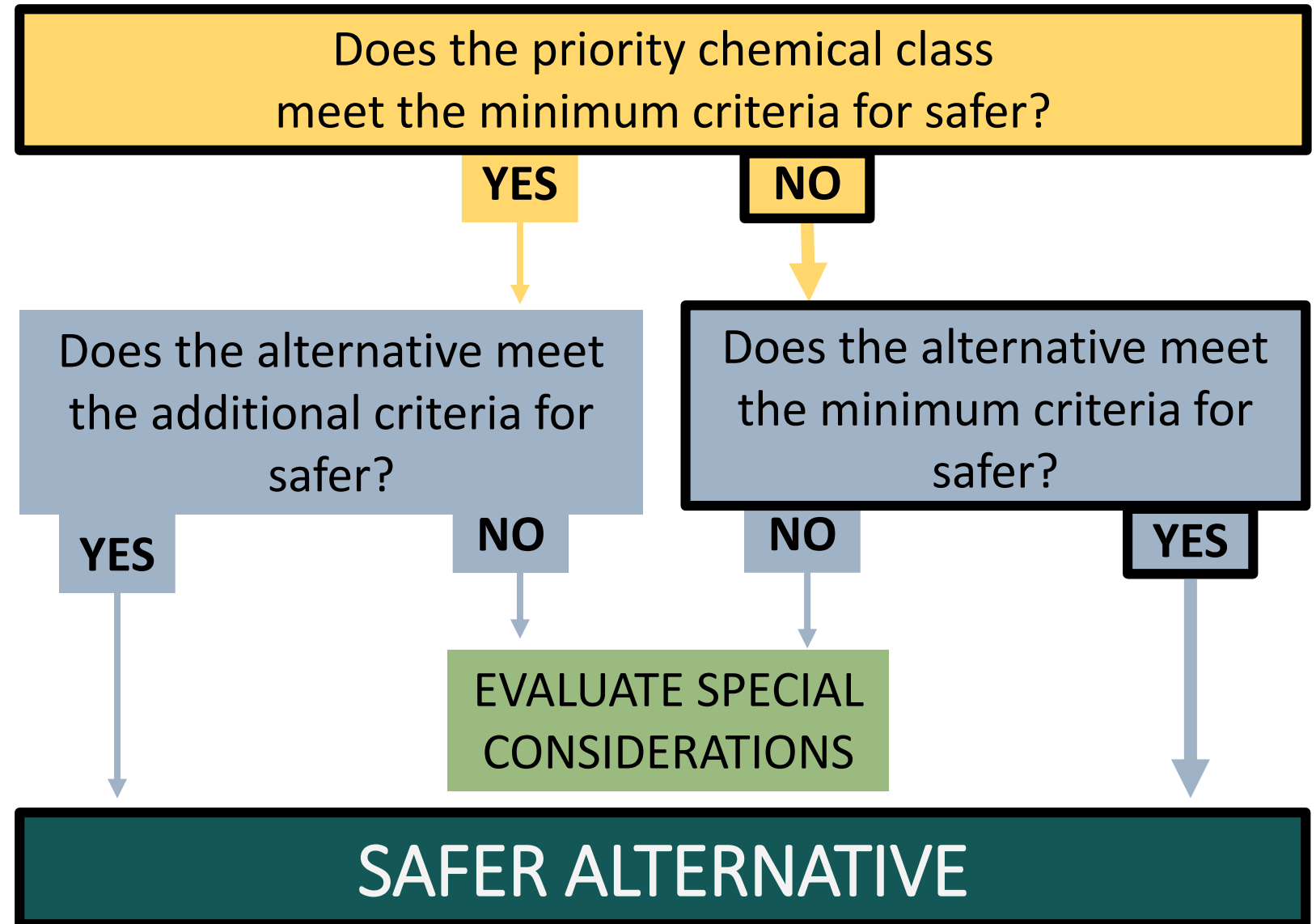
Safer in the law

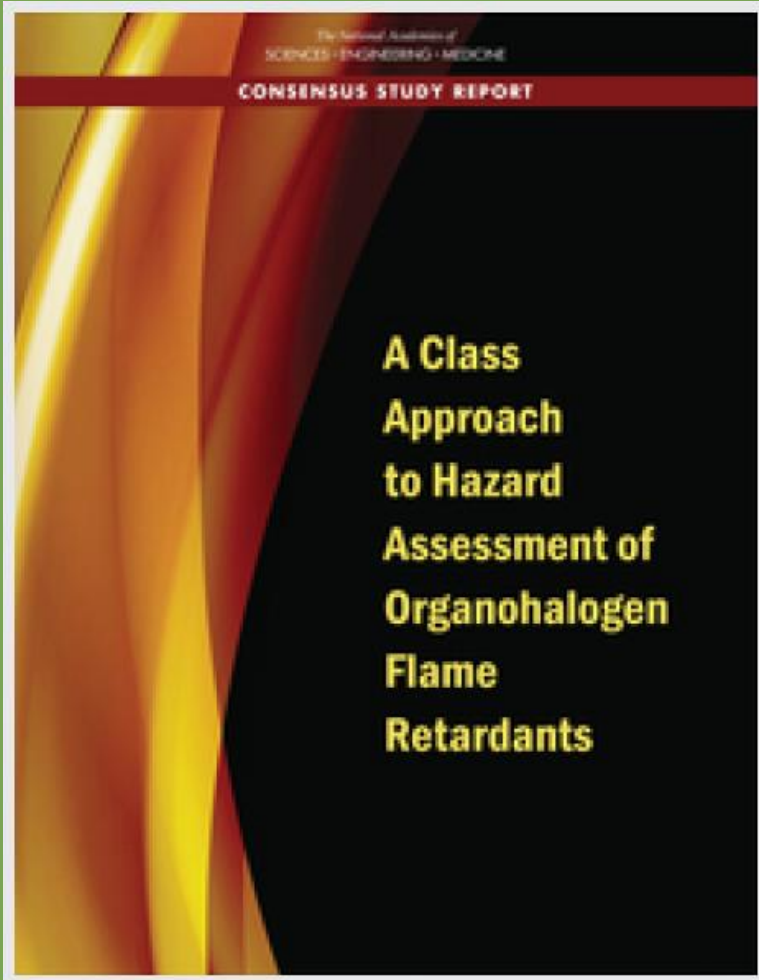
- Safer is defined in the law as “less hazardous to humans or the environment than the existing chemical or process.”
- A safer alternative to a particular chemical may include:
 - A chemical substitute.
 - A change in materials or design that eliminates the need for a chemical alternative.



Criteria for safer is a *spectrum*

Process for identifying safer alternatives





How can we assess classes of chemicals?

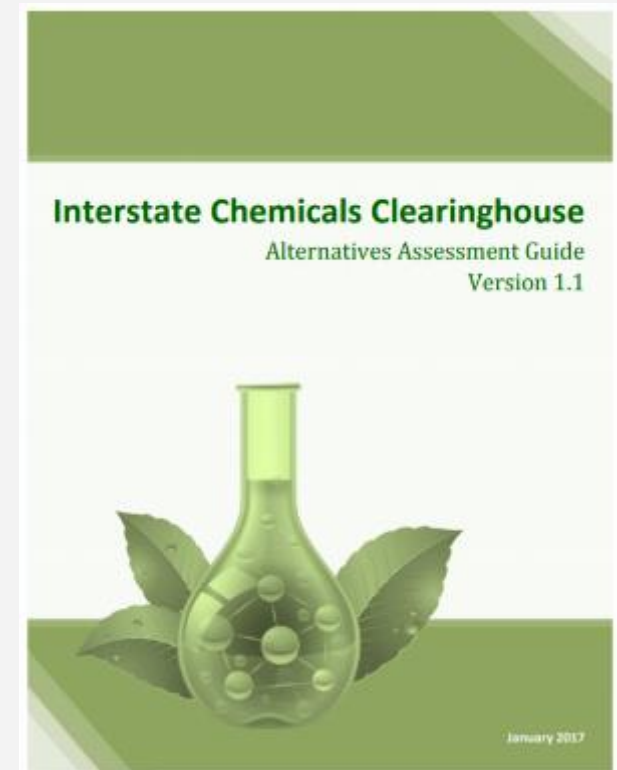
1. If there are all data rich chemicals → Assess the class based on data rich chemicals.
2. If there are all data poor chemicals → Unlikely to be a priority chemical class.
3. If there are data rich and data poor chemicals → Assess the class based on data rich chemicals.
4. If there is variable or discordant hazard data → Three options.

Minimum criteria for safer

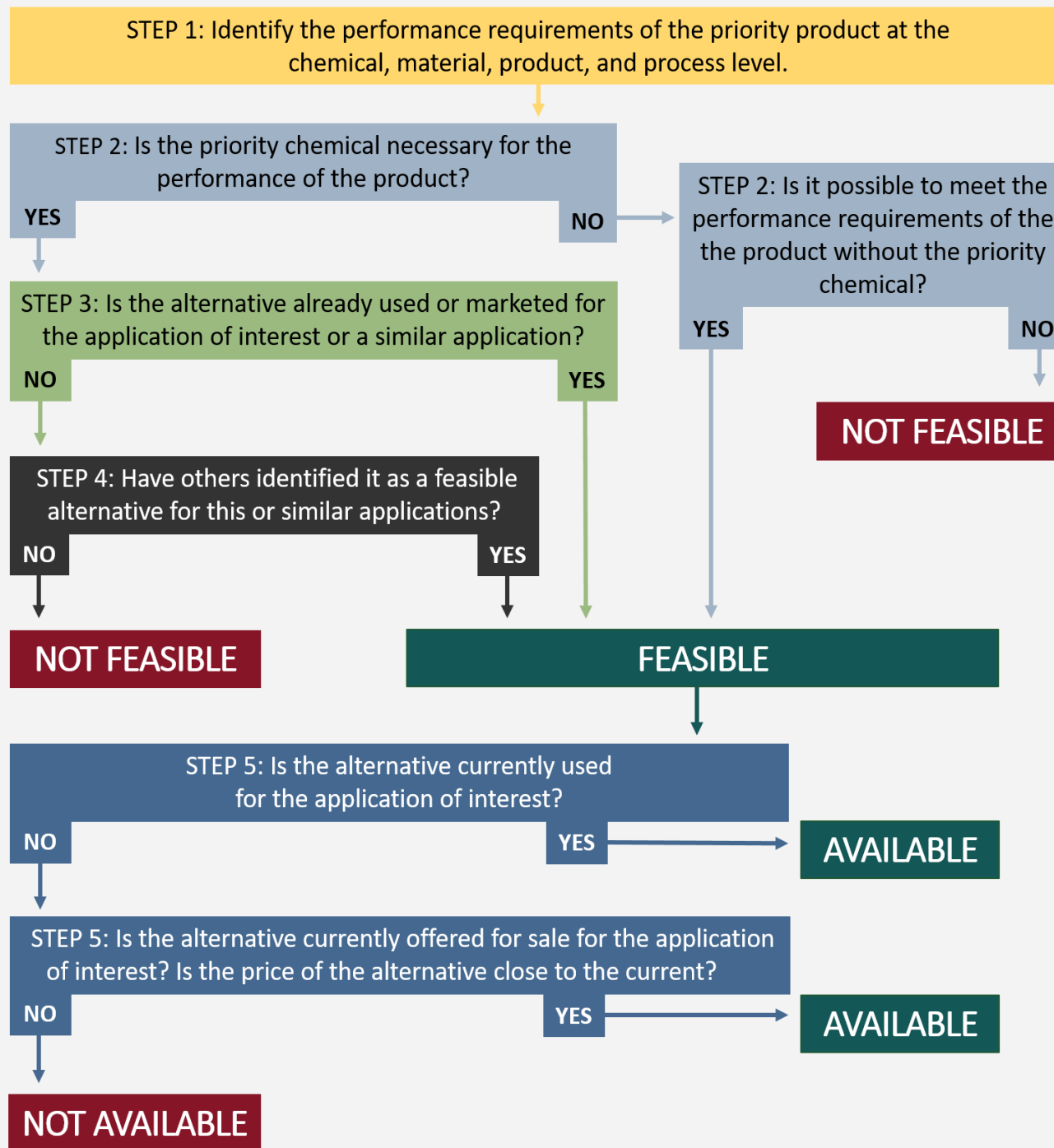
- Chemicals used to function like priority chemicals cannot have:
 - High concerns for carcinogenicity, mutagenicity, reproductive or developmental toxicity, or endocrine disruption.
 - High toxicity in other ways and very persistent and/or very bioaccumulative.
 - Very high persistence and very high bioaccumulation.
- For a full description—see the working draft criteria.

Feasible and available

- RCW 70A.350 requires that Ecology determine that safer alternatives are “feasible and available” before restricting the use of a priority chemical.
- Not defined in the statute.
- IC2 Alternatives Assessment Guide (2017)
 - Modules to assess potential alternatives.
 - Performance module—technical feasibility.
 - Cost and availability module—price competitive and available in sufficient quantity.



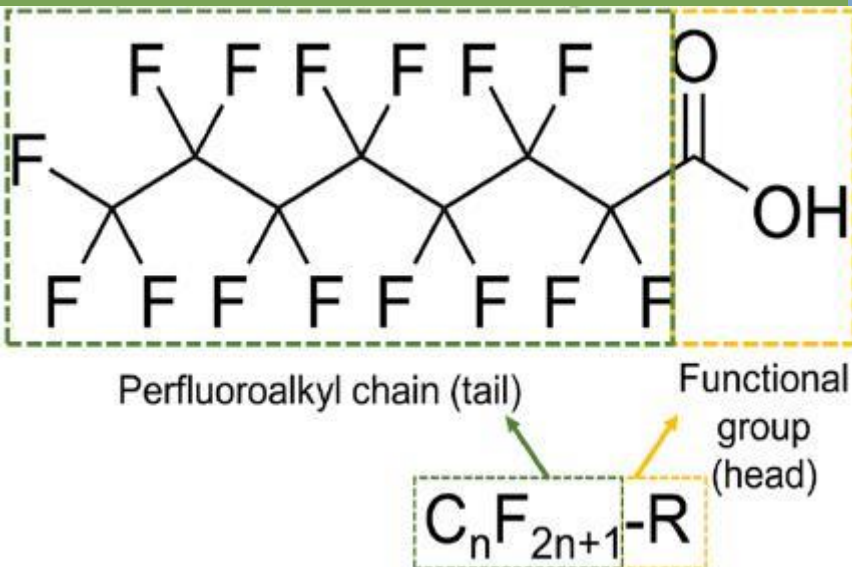
Process for identifying feasible and available alternatives





Section 2. Carpets and rugs

Scope of the priority chemical class



Perfluororalkyl acid (PFAA)
example structure
(Blake and Fenton, 2020).

- RCW 70A.350.010 defines “perfluoroalkyl and polyfluoroalkyl substances” or “PFAS chemicals” as **a class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom.**
- Carbon-fluorine bond defines the class—hard to break, causing PFAS to be very highly persistent.
- Accumulate over time, increasing exposure to sensitive populations and species.
- Voluntary agreements to phase out PFAS and restrictions on the use of some PFAS have led to regrettable substitutions.



PFAS in carpets and rugs

- In 2019, Legislature listed PFAS as a priority chemical class.
- Identified carpets and rugs in residential and commercial settings as a priority product.
- They are a significant source or use of PFAS.
- Identified alternatives that are safer, feasible, and available.
- **Analysis currently supports a restriction on the use of PFAS in carpets and rugs** consistent with RCW 70A.350.
- We welcome your input!



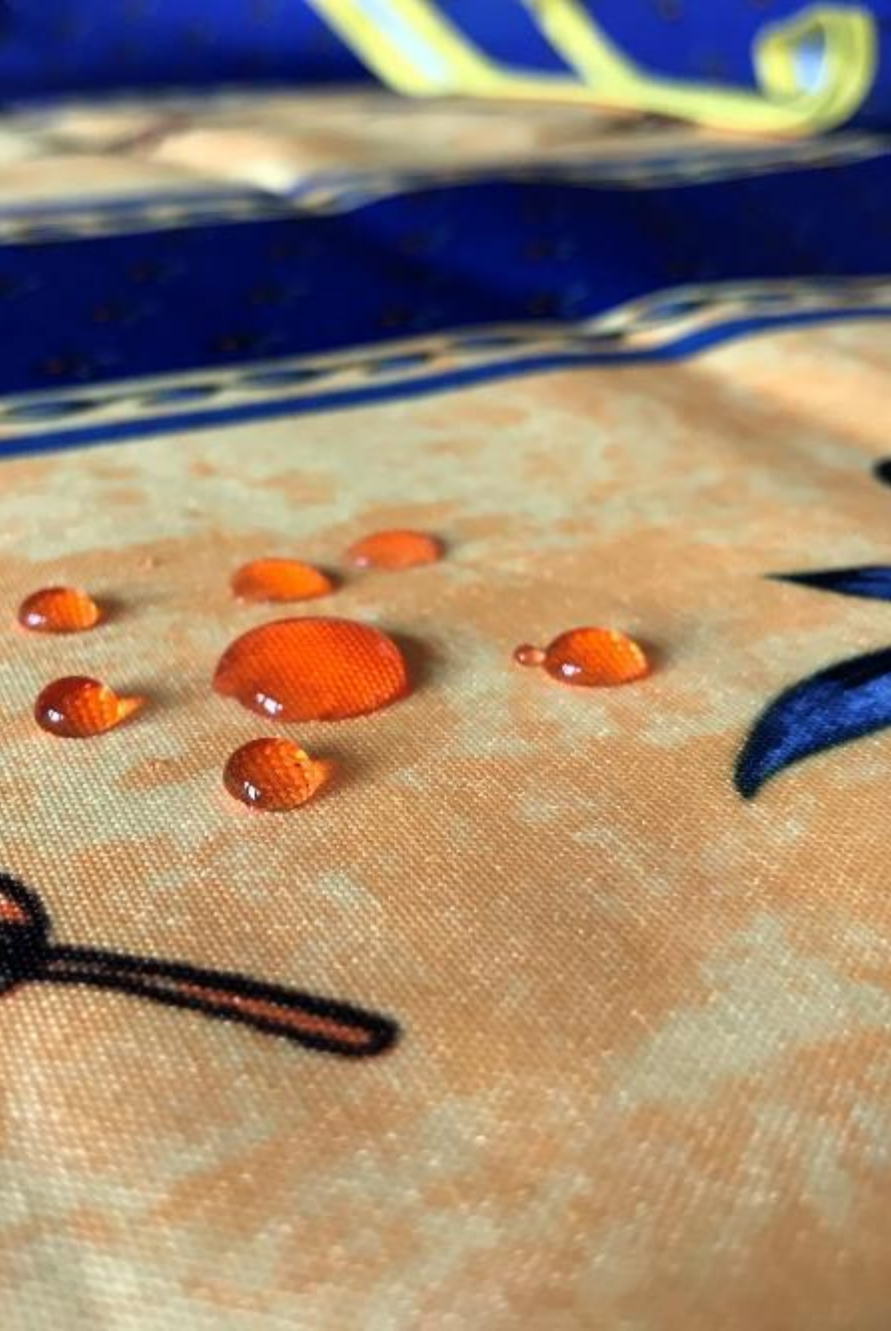
Carpets and rugs are a significant source of PFAS

- PFAS in carpets and rugs contribute to the amount of PFAS in our homes, workplaces, and environment.
- We estimate that 36,000 – 58,000 metric tons of PFAS-treated carpet end up in Washington landfills each year.
- People can be exposed to PFAS as carpet degrades and PFAS end up in dust.



Carpets and rugs are a significant source of PFAS

- Children and infants spend more time on the floor, and have more hand-to-mouth activity.
- Disproportionately exposed to PFAS that accumulate in dust.
 - Epidemiological studies show children living in homes with treated carpet and furniture have higher PFAS exposure.
- Restriction on the use of PFAS in carpets and rugs would reduce a significant source of PFAS exposure.



Hazards of PFAS

- All PFAS are persistent, or break down to persistent PFAS.
- Many bioaccumulate.
- Many have reproductive and developmental toxicity and/or systemic toxicity (including immunotoxicity, neurotoxicity, and thyroid).
- Some are toxic to aquatic organisms.



PFAS regulation in WA

- As a class, in some **food packaging** applications (RCW 70A.222) and **firefighting foam** (RCW 70A.400).
- WAC 171-333-310 lists PFOS and its salts as **persistent, bioaccumulative, toxic** chemicals.
- WAC 173-334-130 identifies PFOS and PFOA as **chemicals of high concern to children**.

Identifying data rich chemicals

- We identified data rich chemicals by looking for existing hazard assessments:
 - GreenScreen® and List Translator (LT):
 - GreenScreens®—conducted by a licensed profiler, publicly available.
 - List Translator reviews authoritative lists and identifies chemicals that would likely be Benchmark-1 chemicals.
- Other hazard assessment methods are possible, but would need to be:
 - Compatible with our criteria for safer and scoring methodology.
 - Publicly available or third-party reviewed.
- Identified 15 data rich PFAS that either score **LT-1** or **GreenScreen® Benchmark-1**.



**not all BM-2 meet additional criteria*

Criteria for safer is a spectrum

Hazards of data rich chemicals—LT-1 PFAS

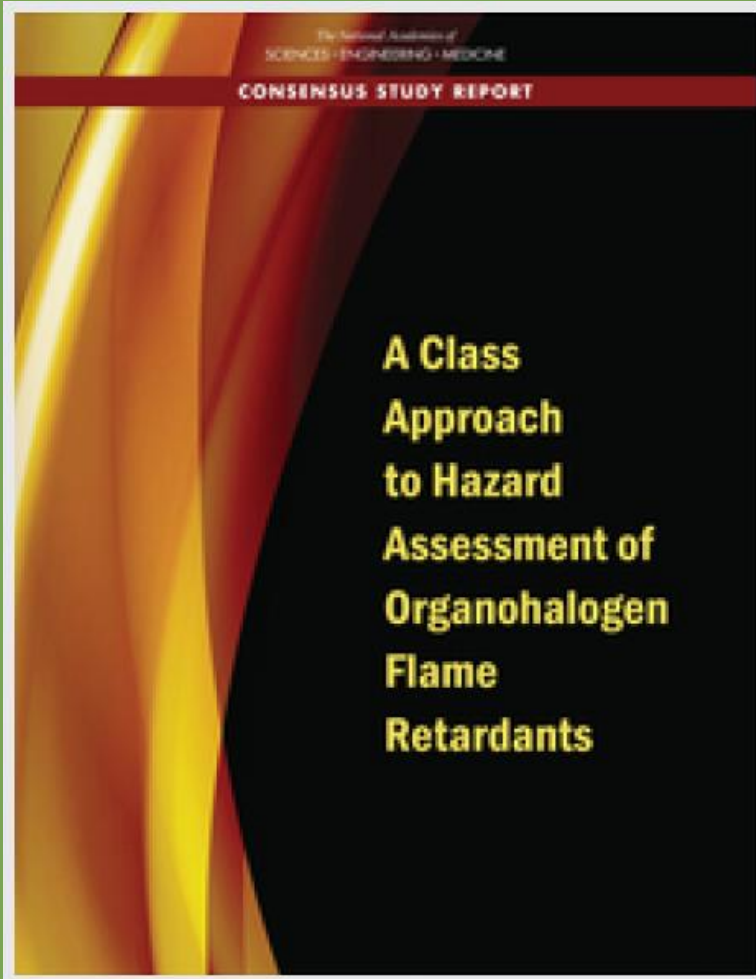
CAS#	Common name	Hazards	Example authoritative lists
335-67-1	Perfluorooctanoic acid	Developmental toxicity, systemic toxicity, PBT	Cal EPA Prop 65, EU GHS (H360D, H362, H372), UNEP Stockholm Conv.—Persistent Organic Pollutants (Proposed PBT)
375-95-1	Perfluorononanoic acid	Reproductive and developmental toxicity, PBT	EU GHS (H362 , H360f), EU Annex VI CMR (Category 1B), EU SVHC Authorisation List PBT Candidate
1763-23-1	Perfluorooctanesulfonic acid	Reproductive and developmental toxicity, PBT	Cal EPA Prop 65, EU Annex VI CMR (Category 1B), UNEP Stockholm Conv.—Persistent Organic Pollutants (PBT)
3825-26-1	Ammonium perfluorooctanoate	Reproductive and developmental toxicity	EU GHS (H360D, H362), EU Annex VI CMR (Category 1B)
2795-39-3	Potassium perfluorooctanesulfonate	Reproductive and developmental toxicity, PBT	EU GHS (H360D, H362), EU Annex VI CMR (Category 1B), OSPAR PBT
29081-56-9	Ammonium perfluorooctanesulfonate	Reproductive and developmental toxicity, PBT	EU GHS (H360D), EU Annex VI CMR (Category 1B), OSPAR PBT
116-14-3	Tetrafluoroethylene	Carcinogenicity	Cal EPA Prop 65, IARC Group 2A, MAK Group 2, NIH (report on carcinogens—reasonably anticipated to be carcinogenic)

Hazards of data rich chemicals—GreenScreen® BM-1 PFAS

CAS#	Common name	Endpoints of concern (H or vH)
116-15-4	Hexafluoropropylene	Carcinogenicity , neurotoxicity (single), systemic toxicity (single and repeat), skin and eye irritation, and persistence
86508-42-1	Perfluorocarbon compounds	Persistence and bioaccumulation
297730-93-9	3-Ethoxyperfluoro(2-methylhexane)	Persistence, bioaccumulation , and chronic aquatic toxicity
29420-49-3	Perfluorobutanesulfonate, potassium salt	Persistence , eye irritation
27905-45-9	1,1,2,2-Tetrahydroperfluorodecyl acrylate	Persistence, bioaccumulation , neurotoxicity (repeat), and systemic toxicity (repeat)
9002-84-0	Polytef	Persistence, systemic toxicity
307-24-4	Perfluorohexanoic acid	Persistence , skin and eye irritation, and systemic toxicity (single)
647-42-7	2- Perfluorohexylethanol	Acute toxicity, systemic toxicity (single and repeat), aquatic toxicity (acute and chronic), and persistence



Criteria for safer is a *spectrum*



How can we assess classes of chemicals?

1. If there are all data rich chemicals → Assess the class based on data rich chemicals.
2. If there are all data poor chemicals → Unlikely to be a priority chemical class.
3. If there are data rich and data poor chemicals → Assess the class based on data rich chemicals.
4. If there is variable or discordant hazard data → Three options.



Conclusion on the hazards of PFAS

- PFAS as a class do not meet our minimum criteria for safer.
- Alternative chemicals used to replace PFAS must meet our minimum criteria for safer.
- Alternative processes that avoid the use of PFAS or alternative chemicals are safer—provided they do not contain any known regrettable substitutions.



Identifying safer alternatives

- Can leverage many existing hazard assessments, certifications, and labeling programs when identifying safer alternatives.
- Chemicals evaluated against the Safer Chemical Ingredients List (SCIL) Master Criteria meet our minimum and additional criteria for safer.
 - Functional criteria are modified from the SCIL Mater Criteria to identify “best in class” alternatives.
 - Sometimes functional criteria meet our minimum criteria for safer.
 - Example: Polymer criteria passes our minimum criteria for safer.



Identifying safer alternatives continued

- Chemicals with Cradle to Cradle™ Material Health scores of silver, gold, or platinum can meet our minimum criteria for safer.
- We need to confirm:
 - No very persistent and very bioaccumulative chemicals were used (version 3.0 only).
 - No exposure adjustments were made.
 - Chemicals used to replace priority chemicals were evaluated (silver material health certificates only).
- **Alternatives processes where no chemicals are used to replace priority chemicals are safer**—as long as the alternative does not contain hazardous chemicals that would be regrettable substitutions.



Function of PFAS in carpets

- PFAS function in carpet is to **maintain the appearance** and **enhance the cleanability**.
- PFAS maintains the appearance and enhances the cleanability of carpets and rugs primarily by limiting how much soil sticks to fiber surface (soil resistance).
- PFAS may also prevent fibers from absorbing liquid and staining.
- Identified four categories of carpets and rugs with this function:
 - Commercial carpet
 - Residential carpet
 - Commercial rugs
 - Residential rugs



Alternative carpets are safer, feasible, and available

Untreated carpet can meet the necessary performance requirements through:

- Solution dyeing and the modification ratio—changing the shape of the carpet fiber to shed soil:
 - **Commercial** carpets: “The broad, rounded structure of this low modification ratio fiber will last against wear and resist soil.”
 - Example: Interface
- Using inherently stain- and soil-resistant fibers:
 - **Commercial** carpet with 80% wool and 20% nylon can have stain- and soil-resistance properties.
 - Example: Dansk Wilton A/S Colortec Rethink



Alternative carpets are safer, feasible, and available

Safer chemical treatments can meet the performance requirements:

- Acrylate copolymer (CAS 25322-90-0)
 - Meets our minimum criteria for safer (SCIL green circle polymer).
 - Mohawk uses this on **commercial and residential carpets**.
- Cradle to Cradle™ Platinum Material Health Certificate (with additional declaration).
 - EcoEnsure used by Tarkett on commercial and possibly residential carpets.
- Additional Cradle to Cradle™ Certified PFAS-free options.
 - Determining whether they meet our criteria for safer.



Alternative rugs are safer, feasible, and available

Untreated rug fabrics:

- Ruggables—polyester and washable, available online.
- Burrow—olefin, polypropylene, and wool, available online.
- Ikea—polyester or wool, available in store and online.
- Interface offers untreated commercial rugs.

Commercial **rugs with safer treatments**:

- Acrylate copolymer (CAS 25322-90-0)
 - Meets our minimum criteria for safer (SCIL green circle polymer).
 - Mohawk uses this on commercial rugs.



Alternative processes for keeping carpets and rugs clean

- Carpet and rugs can be cleaned using Safer Choice cleaning products that provide stain resistance.

Safer Choice carpet care products are safer, feasible, and available

Alternative	Product name	Product manufacturer	Priority products	Qualifying language
Proprietary sulfonated anionic aqueous polymer	Bissell Advanced Clean + Protect	BISSELL Homecare, Inc.	Home carpets	StainProtect™ Technology to keep carpets cleaner longer
Proprietary sulfonated anionic aqueous polymer	Bissell Clean + Protect	BISSELL Homecare, Inc.	Home carpets	StainProtect™ Technology to keep carpets cleaner longer
Proprietary anionic polymer	EncapuGuard GREEN	Bridgepoint Systems (Bridgewater Company)	Business carpet	Post cleaning protective treatment that provides soil resistance, stain protection, wicking prevention, and neutralizing
Proprietary anionic polymer, Anionic detergent polymer, Functionalized anionic polymer	TOTALCARE® Green Carpet Stain & Soil Remover – Concentrate	SHAW®	Home and business carpet	Provides protection against reoccurring spots.

Summary of alternatives identified

Product type	Alternatives identified	Conclusion
Commercial carpet	<ul style="list-style-type: none">• Untreated carpets (Interface)• Safer chemical treatments (Mohawk)• Safer Choice carpet cleaners	Safer, feasible, and available
Residential carpet	<ul style="list-style-type: none">• Safer chemical treatments (Mohawk)	Safer, feasible, and available
Commercial rugs	<ul style="list-style-type: none">• Untreated rugs (Interface)• Safer chemical treatments (Mohawk)	Safer, feasible, and available
Residential rugs	<ul style="list-style-type: none">• Untreated rugs (Burrow, Ikea)• Washable rugs (Ruggables)	Safer, feasible, and available

Conclusions

- There are safer, feasible, and available alternatives to PFAS in carpets and rugs.
- At this point, **evidence supports a restriction on the use of PFAS in carpets and rugs.**
- We are still evaluating additional alternatives.
 - Will likely add to the safer, feasible, and available alternatives already identified.



Section 3. Leather and textile furnishings update



Leather and textile furniture and furnishings

Previous update—May 18

- Showed that a restriction on the use of PFAS in leather and textile furniture and furnishings would reduce a significant source or use of PFAS.
- Determined what is safer:
 - Chemicals used to replace PFAS must meet the minimum criteria for safer.
 - Alternatives processes where no chemicals are used to replace PFAS must not contain known regrettable substitutions.
- Asked for help identifying alternatives that would meet this criteria.



Leather and textile furniture and furnishings

Today:

- Update on the function of PFAS in furniture and furnishings.
- Identified safer, feasible, and available alternatives to:
 - Leather and textile furniture.
 - Mattress and pillow protectors.
 - Home textiles (table cloths, napkins, towels, bedding, shower liners).
- **Evidence currently supports a restriction on the use of PFAS in leather and textile furniture and furnishings.**
- We welcome your continued input!



Function of PFAS in leather and textile furniture and furnishings

PFAS serve two main functions that vary slightly by product category:

1. Increase the **cleanability** of the product

- Indoor home and commercial furniture.
- Most home textiles (table cloths, napkins, curtains, bedding, towels, etc.)

2. Increase the **cleanability** of products and act as a **barrier to water**

- Outdoor furniture
- Mattress and pillow protectors
- Shower liners



Residential furniture: alternative processes and materials to increase cleanability

- Designing furniture to be more cleanable:
 - Using **inherently stain resistant fabric** like olefin, polypropylene, and wool (Examples: Burrow and Sabai).
 - Using upholstery (like polyester) that can be **removed and washed** (Examples: Levity and Ikea).
 - Using **wipeable materials** without topical protectors like full-grain leather or polyurethane (Example: Ikea).
- Adding washable covers to protect existing furniture from dirt and stains:
 - Example: Ikea and others.



Commercial furniture: alternative processes to increase the cleanability

- **Feasible options that do not need topical treatments:**
 - Untreated fabric
 - Examples: Maharam, Humanscale
 - Inherently stain-resistant fabrics
 - Example: Carnegie Xorel commercial wall coverings (Cradle to Cradle™ Material health certificate platinum)
 - Wipeable fabrics for high touch surfaces
 - Example: Polyurethane (Maharam)
- **Examples of availability:**
 - Healthier Hospitals Initiative suppliers.
 - Kaiser Permanente banned PFAS from furniture and moved to using wipeable and non-woven upholstery.

Alternative processes to increase the cleanability of furniture

EPA Safer Choice cleaning product name	Product manufacturer	Priority products	Qualifying language
Fabric and Rug Cleaner Maximum Strength	Guardian Protection Products	Upholstery or carpet	Water based oxidizer cleaner. Works on all washable fabrics and rugs with cleaning codes W or WS.
Upholstery Stain Remover – Gold & Upholstery Stain Remover – Purple	Crypton, Inc.	Upholstery	Professional strength, ready-to-use cleaner is built to remove tough stains. Use [Crypton Gold] in combination with Crypton Purple for stains like mayo and salad dressing.
Revitalize Miracle Spotter	Ecolab, Inc.	Upholstery	An excellent multi-purpose spotter ideal for both common and the "unknown" spots and stains.
Crypton leather/vinyl treatment	Crypton, Inc.	Home and business leather/vinyl cleaner for furniture	Removes Dirt, Crayon, Dye Transfer. Our chemically-balanced cleaner is specially formulated to safely clean treated leather and vinyl.

EPA Safer Choice upholstery cleaner can be used to treat and remove stains if they occur.



Alternative processes to increase the cleanability of home textiles

- Untreated products can meet the performance needs:
 - Untreated table cloths, napkins, curtains, bedding, towels, etc. (Example: Ikea)
 - Products can be washed and stain treatment can be used if needed.
- Untreated mattress and pillow protectors with waterproof polyurethane barriers:
 - Examples: Ikea and Naturepedic

Alternative processes to increase the cleanability of home textiles

EPA Safer Choice cleaning product name	Product manufacturer	Priority products	Qualifying language
Fabric and rug cleaner maximum strength	Guardian Protection Products	Home washable fabrics	Cleans ink, newspaper transfer, highlighter, grape juice, red soda, lipstick, cosmetics, iodine, blood, sun block, wine, mustard, and much more.
Fabric and rug cleaner stain spotter	Guardian Protection Products	Home washable fabrics	Cleans food, beverage, liquor, protein, chocolate, tea, ketchup, coffee, blood, milk, butter, vomit, jelly, oil and much more.
Emergency Stain Rescue	Emergency Stain Rescue LLC	Home and business fabric and upholstery	This on-the-spot stain solution quickly & safely rescues your clothes, carpets, and upholstery from life's inevitable accidents.
Krud Kutter	Rust-Oleum Corporation	Indoor, outdoor, automotive, marine surfaces.	The most effective and safe all purpose remover available. Excellent laundry stain remover—it's color fast and fabric safe.

Home textiles are washable with EPA Safer Choice stain treatment products.



Alternative processes to increase the water resistance of home textiles

- Untreated mattress and pillow protectors use a polyurethane barrier
 - Naturepedic—“Keeps your mattress clean without chemical worries.”
 - Ikea—“...with a waterproof layer that prevents liquid from passing through.”
- Polyethylene vinyl acetate shower curtain liners provide water resistance without topical chemical treatments.
 - Available at many major retailers.



Alternative materials and processes to increase the cleanability and water resistance of outdoor furniture

- Switch to materials that are already water-repellent to replace PFAS:
 - Outdoor cushion covers made with “water-repellent” fabric.
 - Subrella—available on Ikea products.
 - Outdoor furniture made from alternative materials that do not require waterproofing.
 - Loll Designs makes recycled high density polyethylene outdoor furniture (Cradle to Cradle™ Material Health Silver).
- Use EPA Safer Choice outdoor furniture cleaners if additional cleanability needed.

Summary of safer, feasible, available alternatives

Product category	Alternatives identified	Conclusion
Residential and commercial furniture	<ul style="list-style-type: none"> • Untreated furniture • Removeable and washable upholstery • Inherently stain resistant fabric • Wipeable fabric • Use of stain removers 	Safer alternatives are feasible and available
Outdoor furniture	<ul style="list-style-type: none"> • Inherently water-resistant yarn • Alternative materials (polypropylene) 	Safer alternatives are feasible and available
Home textiles (table cloths, napkins, bedding, towels)	<ul style="list-style-type: none"> • Untreated fabric • Use of stain removers 	Safer alternatives are feasible and available
Home textiles (mattress and pillow protectors)	<ul style="list-style-type: none"> • Polyurethane barriers for water resistance 	Safer alternatives are feasible and available
Home textiles (shower liners)	<ul style="list-style-type: none"> • Polyethylene vinyl acetate for water resistance 	Safer alternatives are feasible and available



Conclusion

- There are safer, feasible, and available alternatives to PFAS in furniture and furnishings.
- We identified safer alternatives for all reported applications of PFAS in leather and textile furniture and furnishings.
 - Furniture (residential, commercial, and outdoor).
 - Home textiles (including table cloths, napkins, curtains, bedding, towels, mattress protectors, and shower liners).
- At this point, **evidence supports a restriction on the use of PFAS in leather and textile furniture and furnishings.**

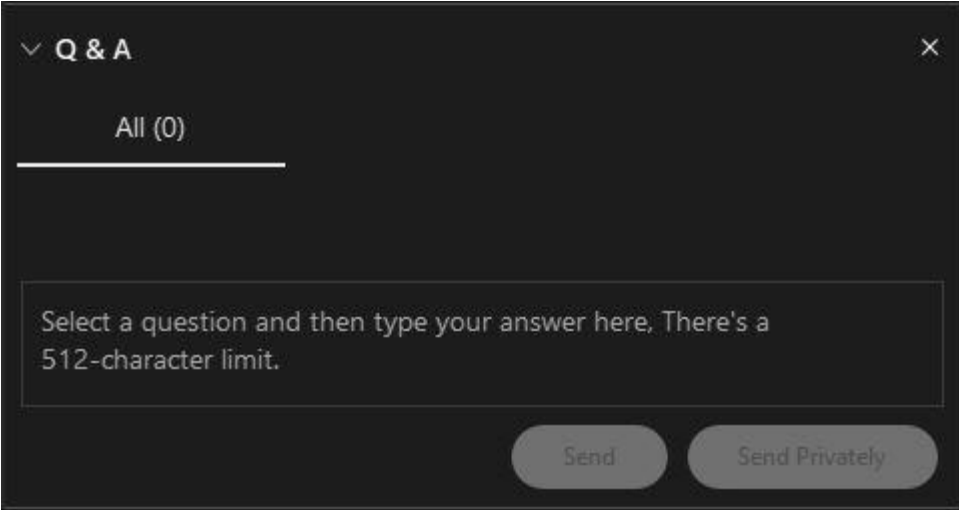


Section 4. Carpets and rugs + furnishings discussion

Questions? Input to share?

Type in the Q & A box or raise your hand to unmute.

- Direct your question to everyone using the drop down arrow.
- If you need more than 512 characters, ask your question or give your input verbally.
- Raise your hand and we will unmute you to give your input.
 - If you're dialing in via phone, dial *3 to raise your hand.



Q & A

All (0)

Select a question and then type your answer here, There's a 512-character limit.

Send Send Privately

Carpets and rugs

Feedback category	Feedback from stakeholders during the August 17 discussion
Analysis process	<ul style="list-style-type: none">This is a list of healthier furniture and fabric that do not contain PFAS, nor flame retardants, added antimicrobials, volatile organic compounds, or polyvinyl chloride, and is harmonized with Health Care Without Harm's criteria. https://docs.google.com/spreadsheets/d/1GNHY84rgGX7rxgWg7ukYWZWBx8bVu43_ONAMAHInngI/edit#gid=1163922567
Potential regulation	<ul style="list-style-type: none">How are you planning to enforce these proposed regulations?Could there be enforcement officers like with parking enforcement? Not sure how that would work. But it would be directed towards manufacturers who don't provide samples of their ingredients to test.So compliance officers/personnel—could there be full time people in these positions? Would you be willing to go to the Legislature for a budget request in the future (maybe revenue might change in the future...)?I like the manufacturers sending in test results idea. Is there currently personnel who does this review? I would be willing to be supportive in going to the Legislature for the budget.
Other feedback	<ul style="list-style-type: none">Regarding carpet and rugs, my understanding is that most, if not all, of the major carpet manufacturers have all moved away from PFAS and have typically switched to cationic yarn. They say that this change has happened at both the residential and commercial levels. Do you have recent research (2020 and 2021) to support that claim?Thank you for your excellent work on these priority products that will result in protection of public and environmental health.

Where are we at on the other products?

Priority product	Priority chemical class	Status
Laundry detergent	APEs	Identified safer, feasible, available alternatives to APEs.
Paints	PCBs	Identified paints with lower PCB concentrations as safer, feasible and available
Thermal paper	Bisphenols	Pergafast™ 201 (CAS 232938-43-1) and electronic receipts are safer, feasible, and available alternatives.
Recreational foam	Flame retardants	Evaluating whether flame retardant free foam is feasible.
Can linings	Bisphenols	Identified safer, feasible, and available beverage can linings, looking for food can alternatives.

Have ideas or input on any of these products? Please reach out! We'd love to hear from you!

Where are we at on the other products?

Priority product	Priority chemical class	Status
Personal care and beauty products	Phthalates	Identified safer, feasible, and available alternatives.
Aftermarket treatments	PFAS	Identified safer, feasible, available alternatives for aftermarket treatments used for fabric upholstery and furniture, as well as carpet. Evaluating alternatives for outdoor gear and leather products.
Printing inks	PCBs	Conducting product testing study, working on identifying inks with lower PCB concentrations.
Electric and electronic products	Flame retardants	Conducting product testing study, evaluating alternatives listed on TCO's positive list (GreenScreen® BM-2 or higher).

Have ideas or input on any of these products? Please reach out! We'd love to hear from you!



Stakeholder involvement next steps

- Final product-specific webinar August 31.
- Make sure you are on our email list!
- Share your input on our potential regulatory determinations.
 - Send us an email.
 - Invite us to present to your group.
 - Set up a meeting with our team.
- Formal public comment period on draft regulatory actions report (Fall 2021 – Winter 2022).

Thank you for joining us!



SaferProductsWA@ecy.wa.gov



ecology.wa.gov/Safer-Products-WA



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



Chapter 70A.350 RCW (formerly 70.365)



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. Restrictions take effect one year after rule adoption.

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.

Process for identifying feasible and available alternatives

- **Step 1:** Identify the performance requirements of the priority product at the chemical, material, product, and process level.
- **Step 2:** Is the priority chemical necessary for the performance of the product?
 - If yes, move to Step 3.
 - If no, is it possible to meet the performance requirements of the product without the priority chemical?
 - If yes, the alternative is feasible, and we move to Step 5 to assess availability.
 - If no, the alternative is not feasible.
- **Step 3:** Is the alternative already used or marketed for the application of interest or a similar application?
 - If yes, the alternative is feasible, and we move to Step 5 to assess availability.
 - If no, move to Step 4.
- (Continued on next slide.)

Continued: Identifying feasible and available alternatives

- **Step 4:** Have others identified it as a favorable alternative for this or similar applications?
 - If yes, the alternative is feasible, and we move to Step 5 to assess availability.
 - If no, the alternative is not feasible.
- **Step 5:** Is the alternative currently used for the application of interest?
 - If yes, the alternative is available.
 - If no, we move to the second part of Step 5.
- **Step 5 (second part):** Is the alternative currently offered for sale for the application of interest? Is the price of the alternative close to the current?
 - If yes to both, the alternative is available.
 - If no (to one or both), the alternative is not available.